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DRAFT BASIC ASSESSMENT REPORT

PROPOSED CULTIVATION OF 11 HECTARES OF LAND TO PLANT MACADAMIA AND AVOCADO TREES ON ERF 385, SEVEN PASSES ROAD, HOEKWIL, GEORGE MUNICIPALITY, WESTERN CAPE

Date: June 2025

Compiled by: Samantha Teeluckdhari (2023/6443)
Reference: 16/3/3/1/D2/30/0006/25
Assisted by: Lizelle Genade (2023/7793)

EAP Signature: S. Teeluckdhari Candidate Signature: Lgenade

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STATEMENT OF INDEPENDENCE

I, **Samantha Teeluckdhari** of Eco Route Environmental Consultancy, in terms of section 33 of the NEMA, 1998 (Act No. 107 of 1998), as amended, hereby declare that I provide services as an independent Environmental Assessment Practitioner (EAPASA Reg: **2023/6443**) and receive remuneration for services rendered for undertaking tasks required in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended). I have no financial or other vested interest in the project.

Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

JUNE 2025

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

JUNE 2025

(For official use only)	
Pre-application Reference Number (if applicable):	
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number)

Wilderness Fruit (Pty)Ltd. Erf 385 Leopard's Ridge, Hoekwil, Western Cape Province.

Erf Nr: 385
Area (SQM): 2658785.8
SG Code: C02700050000038500000
SG Region: GEORGE
Legal Status: Registered

Preferred Alternative:

The property is zoned Agricultural I. Wilderness Fruit (Pty) Ltd is applying to cultivate 11 hectares of land to plant Macadamia and Avocado Trees on Erf 385, Hoekwil. This would be an expansion of their current agricultural practice on the property.

The property has a dam on site with existing water use rights. Irrigation pipes will be laid within the area; however, the proponent will manage the field as 'dryland', with some water from the dam to be used when fertilizer is required (approximately 10 000m^3 per year). The proponent would make use of the existing pipeline that is feeding the blocks adjacent to the proposed new fields. The crops will be watered mainly by rainwater as the area receives sufficient annual rainfall for the proposed trees.

The laying of irrigation pipes and proposed access road will require a General Authorisation in terms of Section 39 of the National Water Act, Act 36 of 1998.

Alternative 1:

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.

2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 19998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".

3. *Submission of documentation, reports and other correspondence:*

   The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant Competent Authority must be consulted.

   The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

   DEADPEIAAdmin@westerncape.gov.za
   Directorate: Development Management (Region 1):
   City of Cape Town; West Coast District Municipal area;
   Cape Winelands District Municipal area and Overberg District Municipal area.

   DEADPEIAAdmin.George@westerncape.gov.za
   Directorate: Development Management (Region 3):
   Garden Route District Municipal area and Central Karoo District Municipal area

   General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

   All correspondence, comments, requests and decisions in terms of applications, will be issued to either the applicant/requester in a digital format via email, with digital signatures, and copied to the Environmental Assessment Practitioner ("EAP") (where applicable).

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.

5. All applicable sections of this BAR must be completed.

6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.

7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za to check for the latest version of this BAR.

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.

11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.

12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.

13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.

14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-
    Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

    Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS	
CAPE TOWN OFFICE: **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)** (City of Cape Town, West Coast District, Cape Winelands District & Overberg District)	**GEORGE REGIONAL OFFICE:** **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)** (Central Karoo District & Garden Route District)
The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	The completed Form must be sent via electronic mail to: DEADPEIAAdmin.George@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 3) at: E-mail: DEADPEIAAdmin.George@westerncape.gov.za Tel: (044) 814-2006 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan.

	• Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): o Watercourses / Rivers / Wetlands o Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable); o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): o Ridges; o Cultural and historical features/landscapes; o Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

Note: The Appendices must be attached to the BAR as per the list below. Please use a ✓ **(**tick) or a **x** (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	**x**
	Appendix A3:	**Map with the GPS co-ordinates for linear activities**	**x**
Appendix B:	**Appendix B1:**	**Site development plan(s)**	✓
	Appendix B2	**A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;**	✓
Appendix C:	**Photographs**		✓
Appendix D:	**Biodiversity overlay map**		✓
Appendix E:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix E1:	**Final comment/ROD from HWC**	✓
	Appendix E2:	**Copy of comment from Cape Nature**	To be attached in FBAR
	Appendix E3:	**Final Comment from the DWS**	To be attached in FBAR
	Appendix E4:	**Comment from the DEA: Oceans and Coast**	**x**
	Appendix E5:	**Comment from the DAFF**	To be attached in FBAR
	Appendix E6:	**Comment from WCG: Transport and Public Works**	**x**

	Appendix E7:	**Comment from WCG: DoA**	To be attached in FBAR
	Appendix E8:	**Comment from WCG: DHS**	**x**
	Appendix E9:	**Comment from WCG: DoH**	**x**
	Appendix E10:	**Comment from DEA&DP: Pollution Management**	**x**
	Appendix E11:	**Comment from DEA&DP: Waste Management**	**x**
	Appendix E12:	**Comment from DEA&DP: Biodiversity**	To be attached in FBAR
	Appendix E13:	**Comment from DEA&DP: Air Quality**	**x**
	Appendix E14:	**Comment from DEA&DP: Coastal Management**	**x**
	Appendix E15:	**Comment from the local authority**	To be attached in FBAR
	Appendix E16:	**Confirmation of all services (water, electricity, sewage, solid waste management)**	**x**
	Appendix E17:	**Comment from the District Municipality**	To be attached in FBAR
	Appendix E18:	**Copy of an exemption notice**	**x**
	Appendix E19	**Pre-approval for the reclamation of land**	**x**
	Appendix E20:	**Proof of agreement/TOR of the specialist studies conducted.**	✓
	Appendix E21:	**Proof of land use rights**	**x**
	Appendix E22:	**Proof of public participation agreement for linear activities**	**x**
Appendix F:	**Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.**		
Appendix G:	**Specialist Report(s)**		✓
Appendix H:	**EMPr**		✓
Appendix I:	**Screening tool report**		✓

Appendix J:	**The impact and risk assessment for each alternative**	Section H.4 of the report
Appendix K:	**Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline**	✓
Appendix L:	**Water Storage and Use Information**	✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE: REGION 1		GEORGE OFFICE: REGION 3
	(City of Cape Town, West Coast District	(Cape Winelands District & Overberg District)	(Central Karoo District & Garden Route District)

Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Wilderness Fruit (PTY) Ltd	
Name of contact person for Applicant/Proponent (if other):	Basil Jacobs	
Company/ Trading name/State Department/Organ of State:	Wilderness Fruit (PTY) Ltd	
Company Registration Number:	2019/213818/07	
Postal address:	Postnet Suite MW313 Private BagX1828 Middelburg	
		Postal code: 1050
Telephone:	( )	Cell: +27(0) 82 856 3909
E-mail:	basil@wildernessfruit.co.za / admin@wildernessfruit.co.za	Fax: ( )
Company of EAP:	Eco Route Environmental Consultancy	
EAP name:	Samantha Teeluckdhari	
Postal address:	P.O Box 1252 Sedgefield	
		Postal code: 6573
Telephone:	( )	Cell: +27(0) 72 773 5397
E-mail:	samantha@ecoroute.co.za	Fax: ( )
Qualifications:	BSS Geography and Environmental Management	
EAP registration no:	2023/6443	
Duplicate this section where there is more than one landowner Name of landowner:	Wilderness Fruit Pty Ltd	
Name of contact person for landowner (if other):	Basil Jacobs	
Postal address:	Postnet Suite MW313 Private BagX1828 Middelburg	
		Postal code: 1050
Telephone:	( )	Cell: +27(0) 82 856 3909
E-mail:	basil@wildernessfruit.co.za / admin@wildernessfruit.co.za	Fax: ( )
Name of Person in control of the land:	Wilderness Fruit Pty Ltd	
Name of contact person for person in control of the land:	Basil Jacobs	
Postal address:	Postnet Suite MW313 Private BagX1828 Middelburg	
		Postal code: 1050
Telephone:	( )	Cell: +27(0) 82 856 3909
E-mail:	basil@wildernessfruit.co.za / admin@wildernessfruit.co.za	Fax: ( )

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	George Local Municipality	
Contact person:	Clinton Petersen	
Postal address:	PO Box 19, George	
		Postal code: 6530
Telephone	+27(0) 44 801 9182	Cell:
E-mail:	cpetersen@george.gov.za	Fax: ( )

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INLCUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New		Expansion	x
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				
Greenfield. New proposed area for cultivation of crops.					
3.	**For Linear activities or developments**				
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:				
3.2.	Development footprint of the proposed development for all alternatives.				m²
3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.				
3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.				
3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives				
3.6.	**Starting point co-ordinates for all alternatives**				
	Latitude (S)	°	‘	“	
	Longitude (E)	°	‘	“	
	Middle point co-ordinates for all alternatives				
	Latitude (S)	°	‘	“	
	Longitude (E)	°	‘	“	
	End point co-ordinates for all alternatives				
	Latitude (S)	°	‘	“	
	Longitude (E)	°	‘	“	
Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.					
4.	**Other developments**				
4.1.	Property size(s) of all proposed site(s):				2658785.8 m²
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):				±798000 m²
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:				Preferred: 110 000 m² Alternative 1: 150 000m²
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).				

Preferred Alternative:

The clearance of indigenous vegetation (heavily alien plant infested) for the development of a further 11 hectares of agricultural land for the purpose of planting Avocado and Macadamia trees. The property has an existing dam and water use rights. The water to be used for the new field will fall within the existing authorised water use rights (approx. 10 000m³ per year). Irrigation pipes will be laid within the cultivation area and drip irrigation used to water and fertilize the trees when required – the fields are proposed to be watered using rainwater.

Figure 1: Proposed 11ha for Preferred Option

Alternative 1:

Alternative 1 would be to apply for an additional 15 hectares of cultivated land to practise their existing rights to plant Macadamia and Avocado Trees on Erf 385 Hoekwil.

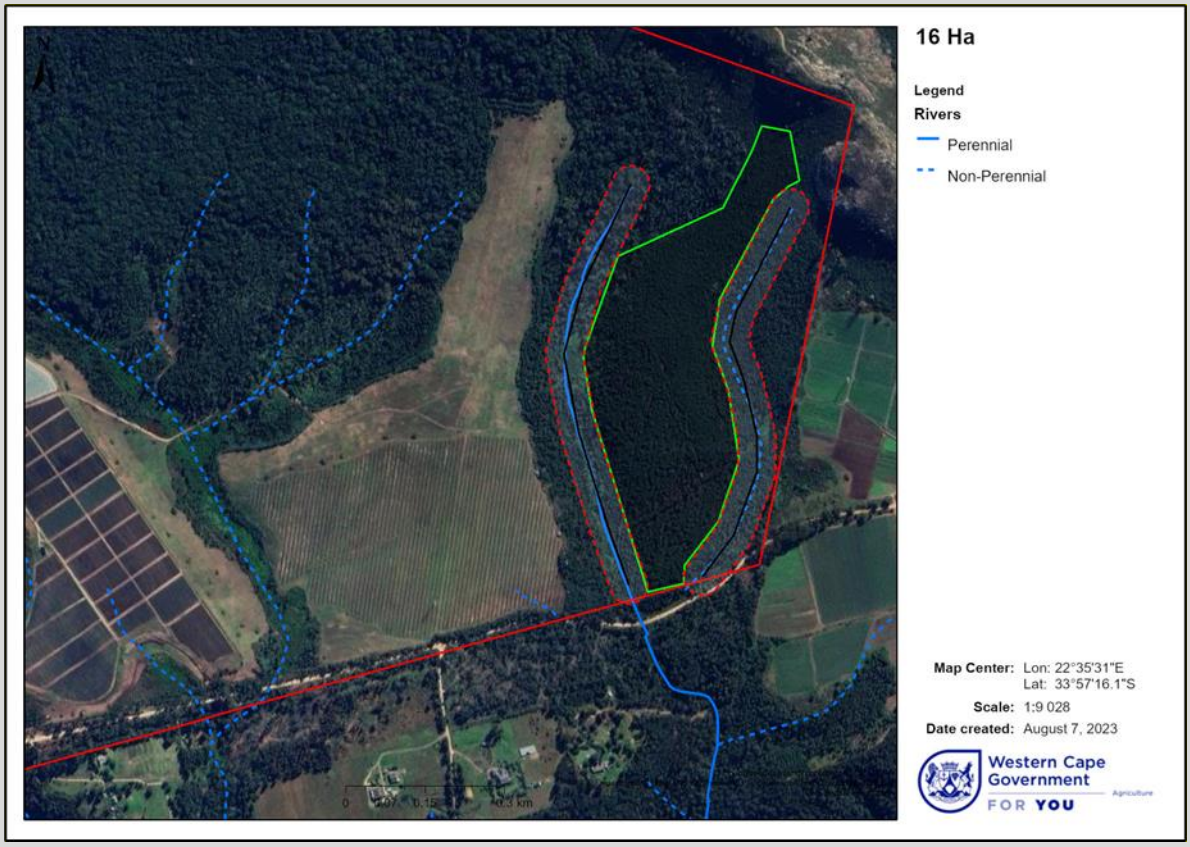

Figure 2: Alternative 1 – 15ha

4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.
There is an existing access road crossing the western wetland; however, it would need to be upgraded as it has been completely inundated and revegetated by wetland plant species.	

4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C	0	2	7	0	0	0	5	0	0	0	0	0	3	8	5	0	0	0	0	0

4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	33°	57‘	14.11”
	Longitude (E)	22°	35‘	47.65”

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	YES	NO

2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) (“ICMA”). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	YES	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) (“NHRA”). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	YES	NO
The National Water Act, 1998 (Act No. 36 of 1998) (“NWA”). If yes, attach a copy of the comment from the DWS as Appendix E3. The laying of irrigation pipes and proposed access road will require a General Authorisation in terms of Section 39 of the National Water Act, Act 36 of 1998.	YES	NO
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (“NEM:AQA”). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	YES	NO
The National Environmental Management Waste Act (Act No. 59 of 2008) (“NEM:WA”)	YES	NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 (“NEMBA”).	YES	NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (“NEMPAA”).	YES	NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	YES	NO

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
None

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.	
National Environmental Management Act (NEMA, Act 107 of 1998)	The proposed activity was assessed through a Basic Assessment Process under NEMA. Sustainable development principles (e.g. protection of biodiversity, efficient use of resources) have been integrated into the site design and mitigation measures.
National Biodiversity Framework & Biodiversity Act (NEMBA)	The development avoids Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) where possible. A 30 m buffer from wetlands and rehabilitation of degraded areas aligns with biodiversity conservation objectives.

	Alien invasive species will be cleared and managed.
National Water Act (Act 36 of 1998)	Water will be sourced from an existing lawful allocation, with no potable water used. Existing water use: the dam on the property was previously lawfully consolidated from 4 dams into 1 in 2019. Stormwater and pesticide runoff are managed through buffers, swales, and no-spray zones. The development avoids construction within wetland areas, and road crossings use culverts to maintain natural flow.
George municipal spatial development framework 2023/27	The site is zoned Agricultural I, and the use of the land for orchards is aligned with the SDF's designation for rural agricultural intensification. The project contributes to local food security, rural economic development, and job creation in line with SDF objectives.
Western Cape Provincial Spatial Development Framework (PSDF)	Supports sustainable resource use (soil, water) and climate-resilient agriculture. The development avoids expansion into natural vegetation, aligning with PSDF biodiversity targets.
Western Cape Biodiversity Spatial Plan (WCBSP 2017 and 2023)	The layout was revised to avoid CBA1, CBA2, and wetland zones. Areas within buffers and no-go zones will be rehabilitated and managed for biodiversity enhancement.
National Development Plan (2030)	The project supports job creation in rural areas, climate-smart agriculture, and low-impact land use, directly contributing to the NDP's goals.

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.	
Guideline on Need and Desirability (DEA&DP, March 2013)	Guided assessment of whether agricultural intensification aligns with local spatial planning, land zoning, and rural development goals. Ensured alignment with George SDF and Western Cape PSDF. Reinforced importance of evaluating alternative site layouts to reduce ecological impacts.
Environmental Impact Assessment (EIA) Guidelines (DEA&DP, 2013)	Informed the Basic Assessment Report (BAR) structure, including detailed impact rating methodology. Ensured a transparent process for evaluating alternatives, public participation, and cumulative impacts.

	Ensured all listed activities under Listing Notices were correctly identified and assessed.
Western Cape Biodiversity Spatial Plan (WCBSP) Guidelines (2017) and now updated 2023	Led to the reduction of the cultivation footprint from 15 ha to 11 ha to avoid Critical Biodiversity Areas (CBAs). Informed the delineation of no-go areas and buffer zones. Reinforced the use of ecological buffers and habitat rehabilitation measures.
Wetland and Watercourse Buffer Zone Guidelines (DWS, 2016 & DEA&DP, 2019)	Established a 30 m vegetated buffer from all watercourses and wetlands. Informed the design of the preferred access road alternative (Alternative B) to minimise hydrological disruption. Guided the stormwater management and pesticide drift mitigation strategies.
Guideline on Public Participation (DEA&DP, 2013)	Ensured the public participation process met legal and procedural standards. Helped structure notification, commenting periods, and inclusion of stakeholder concerns in the final decision-making.
Guidelines for Invasive Alien Plant Management (DEA, 2014)	Informed the plan to remove invasive alien vegetation on-site as part of the ecological offset strategy. Supported integration of rehabilitation measures in non-cultivated areas.

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form
See attached Site Sensitivity Verification Report (Appendix I).

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	The development of— (i)dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or **(ii)infrastructure or structures with a physical footprint of 100 square metres or more;** where such development occurs— **(a) within a watercourse;**	The proposed activity will require the use of irrigation pipes and the construction of an access road which will cross the western wetland on site.

	(b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding— (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.	
19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e)where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.	The proposed activity will require the use of irrigation pipes and the construction of an access road which will cross the western wetland on site.
27	The clearance of an area more than 1 hectare, but less than 20 hectares of indigenous vegetation Is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The clearance of indigenous vegetation to create additional agricultural land of 11 hectares for the planting of macadamia trees and avocado trees, including the necessary infrastructure required.
Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
4	The development of a road wider than 4 metres with a reserve less than 13,5 metres.	The proposed road surface will not be more than 4m wide; however, the road

	i. Western Cape i.Areas zoned for use as public open space or equivalent zoning; **ii. Areas outside urban areas;** **(aa) Areas containing indigenous vegetation;** (bb)Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or iii. Inside urban areas: (aa) Areas zoned for conservation use; or (bb)Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.	structure (to include culverts) may result in the road being wider than 4m overall. The area proposed for the road will be in an area which was previously disturbed and taken over by alien invasive plants; however, there may be some remnants of indigenous vegetation present.
12	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. **a. Western Cape** **i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;** **ii.Within critical biodiversity areas identified in bioregional plans;** iii.Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; iv.On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or v.On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.	The proposed cultivation will require the removal of approximately 11 ha of indigenous vegetation and will partially occur within an endangered ecosystem (Garden Route Shale Fynbos) and a CBA2: Terrestrial area on the southern portion.
14	The development of— (i)dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or **(ii)infrastructure or structures with a physical footprint of 10 square metres or more;** where such development occurs— **(a) within a watercourse;** (b) in front of a development setback; or	The proposed activity will require the use of irrigation pipes and the construction of an access road which will cross the western wetland on site within a CBA2: Terrestrial.

	(c)if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. **a. Western Cape** **i. Outside urban areas:** (aa)A protected area identified in terms of NEMPAA, excluding conservancies; (bb)National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites; (dd)Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee)Sites or areas listed in terms of an international convention; **(ff)Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;** (gg) Core areas in biosphere reserves; or (hh)Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.	

Note:

- The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.
- Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.

List the applicable waste management listed activities in terms of the NEM:WA

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Category A**	Describe the portion of the proposed development to which the applicable listed activity relates.

List the applicable listed activities in terms of the NEM:AQA

Activity No(s):	Provide the relevant **Listed Activity(ies)**	Describe the portion of the proposed development to which the applicable listed activity relates.
		The proposed requires the clearing of Alien Invasive Plant Species. An Alien Invasive Species Management Plan will be included in the BAR.

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.
Preferred Alternative: The clearance of indigenous vegetation (heavily alien plant infested) for the development of a further 11 hectares of agricultural land for the purpose of planting avocado trees and macadamia trees. The property has a dam on site with existing water use rights. Irrigation pipes will be laid within the area and drip irrigation used to water the trees when required.	

Figure 3: Proposed 11ha for Preferred Option

2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.

The property is zoned Agricultural 1 and the proposed activity will be agricultural crop production.

Wilderness Fruit (Pty) Ltd is applying for an extension of their agricultural fields to cultivate 11 hectares of land to plant macadamia and avocado trees on Erf 385, Hoekwil.

3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

No conflict.

4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.

Western Cape Provincial Spatial Development Framework 2014(WCPSDF):

The WCPSDF encourage to capitalise and build on the Western Cape comparative strengths (e.g. Gateway status, knowledge economy, Lifestyle offering) and leverage the sustainable use of its unique spatial assets like farming resources.

It claims farming resources underpins the economy, particularly agriculture which provides food security, sustains rural livelihoods and draws income into the province;

Agriculture, the most space extensive economic activity, only contributes 4% inter- and intra- provincial spatial initiatives based on NDP and other national strategies GDP yet underpins the economies of all districts outside of cape town as their manufacturing sector is involved in the processing of agricultural products.

1. Sustainable Use of Provincial Assets
(section 3.1 of the PSDF: Sustainable Use of Resources)

The project uses existing agricultural zoned land and mainly avoids expansion into high-value conservation areas such as critical biodiversity areas (CBAs) and wetlands.

Maintains ecological integrity through 30 m wetland buffers and alien vegetation clearing.

2. Climate Change Resilience and Resource Efficiency
(section 1.4.5 & section 3.1.4: Water; section 3.1.6: Resource Consumption)

The PSDF promotes climate-resilient development and efficient resource use in the agricultural sector.

The proposed activity will be managed using dryland farming practices with minimal reliance on irrigation, conserving water in a water-scarce province.

The proposal incorporates erosion control, stormwater management, and low-energy farming practices to enhance resilience.

3. Strengthening the Rural Economy
(section 3.2.3: Rural Space-Economy)

The proposed activity supports rural economic diversification, a key PSDF priority.

The proposed activity provides local job opportunities during planting and maintenance.

strengthens agricultural output in a region targeted for agricultural expansion and investment.

4. infrastructure in Harmony with Landscape
(section 3.1.7: Landscape and Scenic Assets)

The PSDF advocates for infrastructure that fits within ecological and scenic landscapes.

The preferred access road (Alternative B) avoids excessive wetland degradation and is designed with culverts to preserve water flow.

5. Green Economy and Low-Carbon Transition
(section 1.4.5: Green Economy Strategic Framework)

The proposed activity supports transition to low-carbon, sustainable agriculture.

The proposed activity allows future potential for solar energy integration, contributing to the Western Cape's "green is smart" objectives.

6. Consistency with Planning Frameworks
(section 1.2.4: Role of the PSDF; section 4.4: Support to Municipal Planning)

The proposal fits within the George Municipal SDF.

The development supports the PSDF's role as a transversal planning tool that guides land use in harmony with local and provincial objectives.

The proposal provides a model for sustainable land management in rural areas.

4.2	The Integrated Development Plan of the local municipality.

George Municipality IDP 2022-2027

The primary sector—dominated by agriculture, forestry, and fishing—accounted for only 3.9 per cent of the economy but remains a critical employer in rural areas.

Agriculture remains vital for local employment,

3.3.1.1 sustainable development goals (SDGS) 2030
Goal 1: end poverty in all its forms everywhere.
Goal 2: end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

The Garden Route growth and development strategy was adopted in 2021 off the bat of an intensive series of engagements between all spheres of government, the private sector and civil society. These engagements were facilitated to co-create a shared vision for the region and identify key priority areas to drive collective action. These priorities are:

3. Resilient agriculture

There are cross cutting local and regional environmental challenges and opportunities recognised in the MSDF. These include:

Ensuring water and food security, agriculture and forestry preservation.

Promote conservation agriculture:
Effectively manage erosion using conservation agriculture methods…management of contour lines.

The George Municipality has identified agriculture as a strategic sector within the broader George economy. The reason for this focus is that agriculture provides economic equity and helps people to prosper. More than 8000 people are working in the agriculture sector in the George municipal area and thus the sector is a major source of employment in the region.

Agriculture impacts global trade because it's tied to other sectors of the economy, supporting job creation and encouraging economic development. Cities with strong agricultural sectors experience employment growth in other sectors, according to the Western Cape Department of Agriculture. Cities with agricultural productivity growth and robust agriculture infrastructure also have higher per capita incomes, since producers in these cities innovate through technology and farm management practices to boost agricultural productivity and profitability.

Retained rural areas include undeveloped (Wilderness), rural and agricultural areas that must be retained, protected and/or improved (e.g., alien clearing). The protection of these areas is critical to ensure that the ecosystems which support life in the George area function optimally and that agriculture as a key driver of the local economy retains its viability.

4.3.	The Spatial Development Framework of the local municipality.

George Municipal Spatial Development Framework 2023/27:

The primary sector –specifically agriculture and forestry – contribute 3.3% to GDPR and 9.8% to employment opportunities.

The WC Department of Agriculture has rated all areas of George, except a few natural (steep/biodiversity/hydrology) areas as relatively high potential agricultural land (high within the Western Cape context), as per their multi-layer, technical data set weighting. The argument that land, outside the urban edge, is not suitable for agriculture and should therefore be used for pockets of urban/tourism/business use, is thus moot.

The recognition of and support for agriculture, as an economic sector, is noted in the discussion of the spatial concept of George (see par. 4.3) the protection of arable and pasture land in the interest of food security, economic growth (agriculture and upstream economic development) and job creation must be balanced with factors such as:

• agriculture footprint (% of area used) and impact on the protection of natural/heritage areas and natural systems (corridors, water security, etc) to be rationalized.

The natural systems (primary, secondary, and localized) found in agriculture areas are often degraded in parts and must be reinstated to assist water security and restore ecological functioning to ensure adaptation to impacts of climate change and the continued sustainable functioning of the rural assets.

The promotion of intensive agriculture practices, agri-processing and small farmer development must be accommodated in the spatial planning of George, in addition to land use management systems/legislation which protect agriculture/forestry land and fishing areas, based on its latent economic- and supply chain value.

4.4.	The Environmental Management Framework applicable to the area.

Environmental Management Framework (EMF) for the Garden Route District 2023/2027:

(iv) Optimise the use of existing resources including such resources relating to agriculture, land, minerals, bulk infrastructure, roads, transportation and social facilities.

All land put under the plough including for orchards, vineyards, forestry plantations, annual crops, pastures, and including irrigation lands shall be reserved for Intensive Agriculture and should not be converted to other purposes.

5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.

Currently in draft PP. Comments and response report to follow.

Specialist input has resulted in the Preferred Alternative.

6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.

Western Cape Biodiversity Spatial Plan (WCBSP 2017)

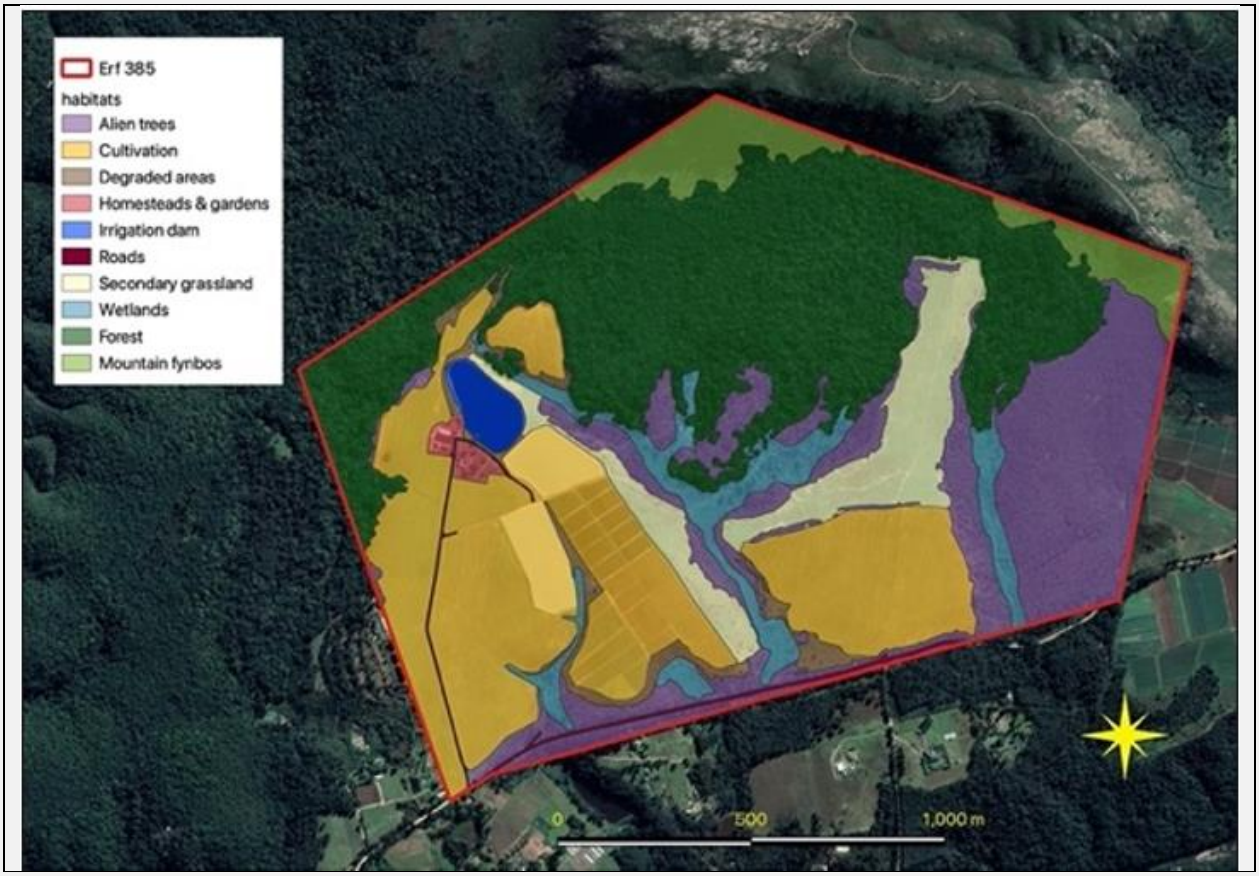

Figure 4: Habitat on site

1. Use of Biodiversity Mapping and Land Use Guidelines

The WCBSP provides spatial datasets identifying Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs).

The development layout was specifically adjusted to avoid CBAs as much as possible and minimise impacts on ESAs.

The original cultivation area was reduced from 15 ha to 11 ha based on mapped sensitivities.

Activities within ESA zones(as per the WCBSP 2017) were subject to more detailed site assessments and design adjustments.

*Since the compiling of the specialist reports, the WCBSP was updated: the activity is no longer within an ESA and the southern portion of the proposed site is now categorised as a CBA. The biodiversity specialist has not deemed it necessary to amend his report as his findings remain unchanged despite the update.

2. Application of the Mitigation Hierarchy

The WCBSP Handbook promotes the hierarchy: Avoid → Minimise → Rehabilitate → Offset.

High-sensitivity wetland and natural vegetation areas were excluded from the development footprint.

Access road alignment (Alternative B) was selected to limit disturbance to aquatic ecosystems.

Areas outside the cultivation footprint, especially within buffer zones, will be rehabilitated with indigenous species and managed for invasive alien clearance.

3. Watercourse and Wetland Protection Buffers

The WCBSP Handbook recommends minimum 30 m buffers around wetlands and rivers, especially in ESAs or areas with intact indigenous vegetation.

A 30 m vegetated buffer has been incorporated between cultivated land and all wetland areas.

No-spray and no-irrigation zones are applied within these buffers to prevent agrochemical and nutrient pollution.

4. Inclusion of Biodiversity-Compatible Land Uses

The WCBSP encourages land uses that maintain ecological functionality, especially in ESAs.

The orchard layout maintains connectivity of ecological corridors, especially for small mammals and pollinators.

Natural drainage and soil characteristics are preserved to maintain hydrological function in the landscape.

5. Site-Specific Ground-Truthing

The Handbook highlights the need for site-specific verification of biodiversity classifications.

Biodiversity specialists conducted field assessments that confirmed CBA and ESA classification in some areas but downgraded others due to historical disturbance.

These findings led to the exclusion of certain zones and informed the final site layout.

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.

This activity does not fall within the context of the ICMA.

8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.

No change.

9.	Explain how the proposed development will optimise vacant land available within an urban area.

The proposed agricultural development at Erf 385, Hoekwil is situated outside the urban edge, on land that is zoned for agriculture and not classified as vacant urban land. Therefore, the question of optimising vacant land within an urban area is not directly applicable to this proposal.

10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.

The proposed macadamia and avocado farming development at Erf 385, Hoekwil is designed to optimise the use of existing resources and infrastructure in the following key ways:

1. Utilisation of Existing Agricultural Zoning and Land Use Rights

The property is already zoned Agricultural Zone I, and agricultural activities are a primary right.

This eliminates the need for rezoning or land use change applications, allowing optimal use of existing land use permissions.

2. Use of Existing Water Infrastructure

The farm has existing lawful water use rights and a constructed on-site dam, which:

Provides water for irrigation.

Reduces demand on municipal or external water infrastructure.

Drip irrigation systems, where applied, will use the existing dam and gravity-fed layout, minimising energy and infrastructure needs.

3. Access Road

The proposal includes the upgrade of an existing access road alignment (Alternative B), rather than constructing an entirely new route.

This reduces the environmental footprint and makes use of already-disturbed pathways.

4. Low-Energy, Low-Input Farming

The development proposes a dryland farming approach which will minimise energy and water use.

Any supplemental irrigation or equipment will use low-energy systems (gravity-fed or low-pressure pumps), making efficient use of the existing energy footprint.

5. Limited Need for New Infrastructure

No new large-scale infrastructure (e.g., processing plants, buildings) is required.

6. Integration with Existing Natural Ecosystem Functions

Vegetated buffer zones, wetlands, and slopes will be protected and integrated into the farming practice.

7. Compliance with Strategic Infrastructure Planning

The site lies within a rural node already supported by regional infrastructure (e.g. roads, services).

It aligns with George Municipality's SDF by using rural land where agriculture is a planned use, reducing demand for extending services into undeveloped areas.

11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
No services are required from the local authority.	
12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.
Please see attached Appendix K.	

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

N/A

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

PPP has been complied with. Proof will be issued with the Final BAR.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

Please consult the I&AP register in Appendix F.

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

N/A

5. if any of the State Departments and Organs of State did not respond, indicate which.

To be included in the Final BAR.

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

To be included in the Final BAR.

Note:

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that *"Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."*

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
  - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
  - if a facsimile was sent, a copy of the facsimile Report;
  - if an electronic mail was sent, a copy of the electronic mail sent; and
  - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?	YES	**NO**
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
N/A			
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		
N/A			

2. Surface water

2.1.	Was a specialist study conducted?	**YES**	NO
2.2.	Provide the name and/or company who conducted the specialist study.		
Dr. James Dabrowski of Confluent Environmental.			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		

Extract from Specialist Aquatic Biodiversity Assessment, Confluent Environmental, May 2025:

Two wetlands and associated streams were identified either side of the proposed cultivated area on Erf 385. These wetlands occur within a catchment area that has been classified as a FEPA and a SWSA. Any further development in the catchment area must therefore be done in a sensitive manner so as to maintain watercourses and the larger Touws River catchment in a good ecological condition. Extensive agricultural activities are one of the main threats to aquatic biodiversity that have been identified in the broader catchment area. Impacts associated with agriculture are primarily related to loss of aquatic habitat due to encroachment of cultivated areas into riparian zones and wetlands and nonpoint source pollution of watercourses by nutrients, sediment and pesticides. All of these impacts can be effectively mitigated through the implementation of adequately sized buffers that protect watercourses from habitat loss but also play and important role in attenuating and filtering nonpoint source pollutants. In this respect, and considering the sensitivity of the catchment area, a mandatory 30 m buffer between watercourses and planned cultivated fields must be implemented. Provided that the buffer and other mitigation measures are implemented, impacts associated with the proposed establishment of cultivated areas are acceptable from an aquatic biodiversity perspective.

Both road crossing alternatives would require infilling of wetland habitat and can also alter the natural hydrological and geomorphological characteristics of the wetland by restricting flow across the road. Mitigation measures must therefore be implemented with a view to ensuring the natural hydrological and geomorphological characteristics of the wetland are maintained. In this respect the road design must continue to allow diffuse flow through the road which can be achieved by installing multiple appropriately sized culverts through the road. Alternative B results in a lower impact and risk to the wetland – and is therefore the recommended alternative.

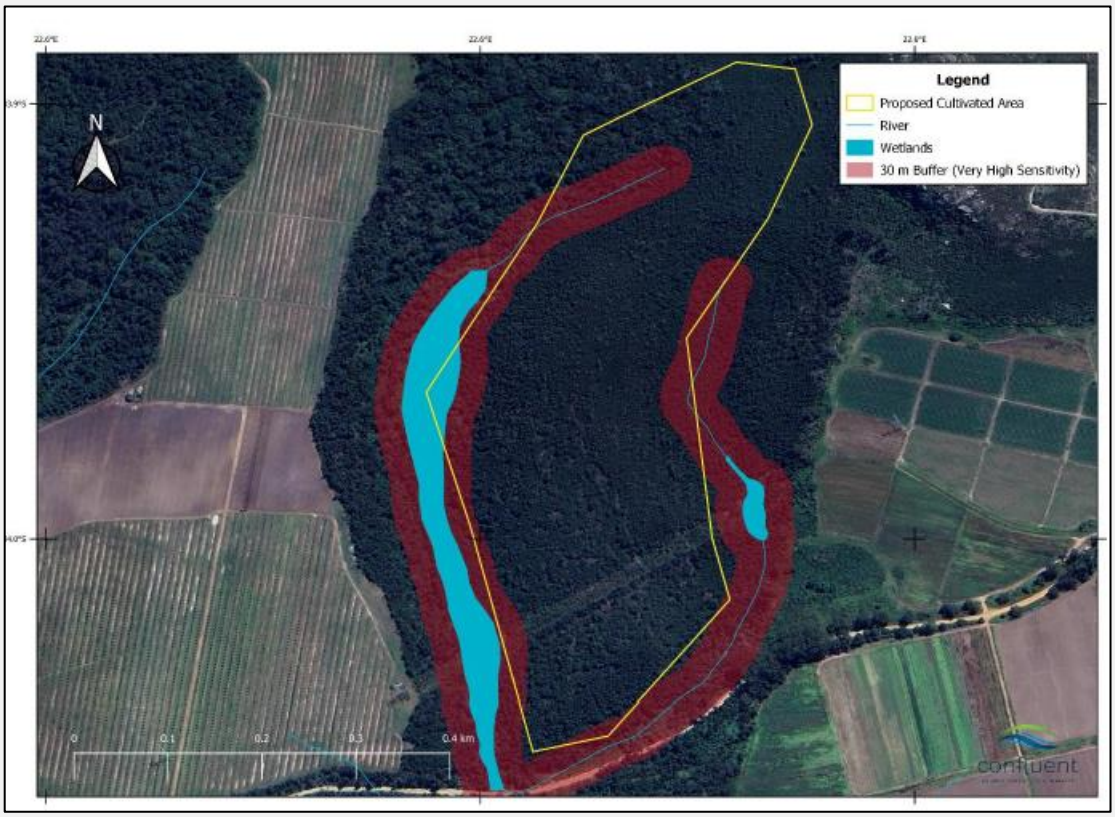

Figure 5: Map indicating watercourse and 30m buffer in relation to proposed cultivation area (as per figure 10 of the aquatic biodiversity assessment, May 2025)

3. Coastal Environment

3.1.	Was a specialist study conducted?	YES	**NO**
3.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
N/A			
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
N/A			
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		
N/A			

4. Biodiversity

4.1.	Were specialist studies conducted?	**YES**	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
Greg Nicolson, Capensis Ecological Consulting			
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		
Cape Farm Mapper, VEGMAP 2018, book resource: The Vegetation of South Africa, Lesotho and Swaziland (VEGMAP)(Mucina & Rutherford, 2006), the Fine Scale Vegetation Map for the Garden Route (Vlok, Euston-Brown, & Wolf, 2008), the Revised National List of Ecosystems that are Threatened and in Need of Protection (Government Gazette, 2022), The Western Cape Biodiversity Spatial Plan (WCBSP) for the George Municipality (CapeNature, 2017), the Red List of South African Plants (Raimondo et al. 2009) etc were all utilised by the specialist in the compilation of his assessment report. The mentioned datasets provided a baseline for the specialist to measure his findings against. His site visit either confirmed or denied the information presented in the datasets. As per the Terrestrial Biodiversity Assessment (May 2024): A site visit was carried out during autumn. The timing of the survey is sub-optimal as many geophytic and annual plant species flower during spring. Some bulbs species were visible, either as their leaves were present or their old flowering parts were still visible. It should be noted however that due to the year-round precipitation experienced in the Garden Route region this limitation is not considered to have had a highly significant effect on sampling efforts.		
4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.		
As per the Terrestrial Biodiversity Assessment (Capensis Ecological Consulting, May 2024): The Western Cape Biodiversity Spatial Plan (WCBSP) for the George Municipality (CapeNature, 2017) is essential to determine the conservation importance of the affected habitats. Ground-truthing is an essential component in terms of determining the habitat condition… The 2017 WCBSP Handbook (Pool-Stanvliet et al., 2017) distinguishes between the various conservation planning categories. Critical Biodiversity Areas are habitats with high biodiversity and ecological value. Such areas include those that are likely to be in a natural condition (CBA 1) and those that are potentially degraded or represent secondary vegetation (CBA 2). Ecological Support Areas are not essential for meeting biodiversity targets. However, they play an important role in supporting the functioning of Protected Areas (PA) or CBAs and are often vital for delivering ecosystem services. A distinction is made between ESAs that are still likely to be functional (i.e. in a natural, near-natural or moderately degraded condition; (ESA 1) and Ecological Support Areas that are severely degraded, or have no natural cover remaining, and therefore require restoration (ESA 2). Other Natural Area (ONA) sites are not currently identified as a priority, but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. Although not prioritised, they are still an important part of the natural ecosystem. Ground-truthing of the assigned CBA and ESA sites are described in the vegetation and discussion section below. The majority of the study area is classified as ESA 1, with smaller areas mapped as CBA 1 (terrestrial) , CBA 2 and ESA 2.		

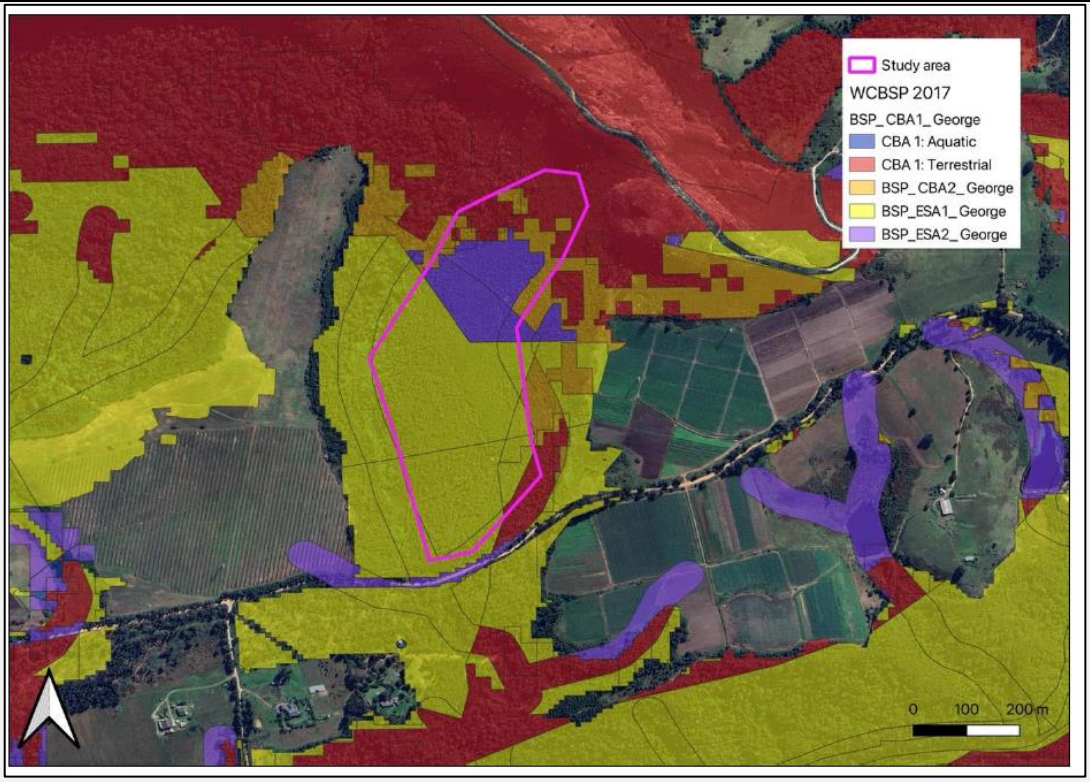

Figure 6: The study area in relation to the Western Cape Biodiversity Spatial Plan (CapeNature 2017) overlaid on a ESRI ™ aerial image (as per Figure 8 of the Terrestrial Biodiversity Assessment, May 2024)

4.5.	Explain what impact the proposed development will have on the site specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.

As per the Terrestrial Biodiversity Assessment (Capensis Ecological Consulting, May 2024):

The WCBSP 2017 assigns the northern parts of the site as CBA 1 and CBA 2. ESA 2 is assigned to the area just to the south of this, and ESA 1 is assigned to the greater part of the central and southern parts of the site. In general the classifications are supported based on the site visit, however, the CBA 1 site in the south-eastern corner of the site is erroneously classified as a forest patch, however, the dense vegetation in this area is invasive species.

Please note that the WCBSP has been updated since the compilation of the above report. The specialist deemed it unnecessary to update his report to reflect the updated conservation map as this would not change his findings and mitigation measures. Refer to email correspondence below –

.

> From a Terrestrial Biodiversity and Plant species perspective, this will not change the finding my the study.
> The central part of the site has now been excluded from the WCBSP and the edges are mapped as CBA 2. This is more accurate than the 2017 version, but we have recommended buffers along the drainage lines that will exclude the greater part of the CBA 2 area from the proposed development.
> So I am happy to leave my report as is.

Figure 7: Email extract between the EAP and the specialist.

4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.

N/A - The proposed development is not within a protected area.

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.

As per the Animal Species Specialist Report (Capensis Ecological Consulting, May 2024)

A total of 40 animal species were observed in the study area, with two being of conservation concern. The two species in question are Campethera notata (Knysna Woodpecker) and Chlorotalpa duthiae (Duthie's Golden Mole). Based on the habitat present at or in close proximity to the site there is the potential for the locality to support four additional SCC, including Afrixalus kysnae, Bradypterus sylvaticus, Sensitive Species 8, and Stephanoaetus coronatus. The direct impact of the proposed development is estimated to have a moderate negative impact without mitigation measures, with the likely loss of C. duthiaea from within the development

footprint, as well as loss of potential habitat for SCC. Should appropriate mitigation measures be followed, including a 50m buffer zone around intact forest habitat and a 30m buffer from aquatic habitats, the impact of the proposed development on SCC present at the site (or potentially occurring SCC) is considered to be low negative. It should be noted that C. duthiaea is highly likely to be lost from within the proposed development footprint as this species is fairly intolerant to soil disturbance, even when accounting for the appropriate mitigation methods. However, the sub-population of this species is unlikely to be heavily impacted as the preferred habitat for this species (intact forest) can be found outside the site footprint and is unlikely to be significantly negatively impacted by the proposed development.

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
Watercourse: As per the Specialist Aquatic Biodiversity Assessment (Dr. James Dabrowski, Confluent Environmental, May 2025) – "Two wetlands and associated streams were identified either side of the proposed cultivated area on Erf 385. These wetlands occur within a catchment area that has been classified as a FEPA and a SWSA. Any further development in the catchment area must therefore be done in a sensitive manner so as to maintain watercourses and the larger Touws River catchment in a good ecological condition… Both road crossing alternatives would require infilling of wetland habitat and can also alter the natural hydrological and geomorphological characteristics of the wetland by restricting flow across the road. Mitigation measures must therefore be implemented with a view to ensuring the natural hydrological and geomorphological characteristics of the wetland are maintained." Indigenous Vegetation: As per the Terrestrial Biodiversity Assessment (Greg Nicolson, Capensis Ecological Consulting, May 2024) – "The Terrestrial Biodiversity sensitives assigned to the site are High, Medium and Low. Based on this the most sensitive areas are considered as No-go areas and excluded from the development footprint. An area of 11 ha is regarded as acceptable for cultivation and this will exclude (1) the High sensitivity areas, (2) most of the Medium sensitivity areas, (3) both SCC on the eastern side of the site, and (4) the important drainage line buffers on both sides of the site. This will also exclude the area classified as CBA 1 and 2 for the most part. The areas included in the development footprint are not intact (Degraded to Highly degraded or Highly degraded) and only partially representative of the original fynbos ecosystem. The sensitivity of the Degraded to Highly degraded habitat is Medium, and the Highly degraded habitat is rated as Low sensitivity. The proposed development will result in the permanent loss of habitat which is currently Degraded to Highly degraded or Highly degraded. The mitigation of avoidance, search and rescue and rehabilitation will result in the remaining habitat on the site improving in condition. This will improve the overall ecological functioning of the site by ensuring that the dominant vegetation is locally occurring indigenous vegetation. This will allow for better habitat for faunal species and improving plant/animal interactions such as pollination. The connectivity between the upper and lower elevations on the site will allow for better faunal movement between the site and surrounding areas." Soil: As per the Soil Suitability Assessment and Agricultural Compliance Statement (Johann Lanz, Soil ZA, May 2025) – "The soils across the site are suitably similar for orchard establishment to the other recently established orchard adjacent to the site. They are predominantly reasonably drained podzol soils of the Groenkop 2110 soil form and family with approximately 8% clay in the A and B horizons. Depth to the underlying saprolite varies from 400 mm to 1000 mm. They are suitable for irrigated cropping once soil preparation that includes deep ripping has been done. Although the steep slopes make the land susceptible to erosion, it will be completely controlled through standard farming practices that are used on the adjacent, established orchards."

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	**NO**
6.2.	Provide the name and/or company who conducted the specialist study.		
A Notice of Intent to Develop/NID application was submitted to Heritage Western Cape/HWC. HWC comments are included in Appendix E1.			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
N/A			

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
See point 6.2 above.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
The area is characterised by mainly agricultural activity and medium to high income residential dwellings. The Seven Passes Road runs along the southern boundary of the subject property. Wilderness Heights, a residential village is located near the subject property boundary to the south. Further afield the area is characterised by farmland, natural indigenous vegetation and undeveloped land invaded by alien invasive plants.	
8.2.	Explain the socio-economic value/contribution of the proposed development.
The activity would result in minor positive socio-economic impacts as the success of the Macadamia orchards would support food production whilst providing local labour through the construction and operation phases.	
8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
Local employment will be utilised where possible during the construction and operational phases.	
8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.
As this is a continuation of agricultural activities on Erf 385 Hoekwil, the sense of place will not be altered. In addition, the activity (crop production) will not affect people's health and well-being. Provided that the activity operates within the parameters of the specialists' mitigation measures, the activity will not contribute negatively to the ecological condition of the local water sources.	

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred property and site alternative.	
Erf 385 Hoekwil is located north of Wilderness Heights, and the site location can be found at GPS coordinates: 33°57'14.11"S 22°35'47.65"E	
Provide a description of any other property and site alternatives investigated.	
Only one property was assessed as the applicant is currently in possession of only the mentioned property. Site location was limited as the assessed area is the remainder of the property that is undeveloped.	
Provide a motivation for the preferred property and site alternative including the outcome of the site selection matrix.	
The preferred site area for crop production was reduced from 15 hectares to 11 hectares following the input of specialists. The site contains important buffers which will reduce the cumulative impact that the activity will have on the receiving environment. The preferred location of the access road is an area (further north of the existing access road) where the road crosses a narrow portion of the wetland which had been previously disturbed, is far less saturated and thus exhibits less prominent wetland features (Specialist Aquatic Biodiversity Assessment, May 2025).	

Provide a full description of the process followed to reach the preferred alternative within the site.

The initial site selection was made, and specialist input guided the end result of the preferred alternative/s.

Provide a detailed motivation if no property and site alternatives were considered.

N/A

List the positive and negative impacts that the property and site alternatives will have on the environment.

Positive impacts:

- The location of the site favours the proposed development provided mitigation measures proposed by specialists are followed.
- Crop production will contribute to the local and national economy for many years to come.
- Clearing of alien invasive plant species will allow for indigenous vegetation to be rehabilitated, increasing the ecological value of the property.

Negative impacts:

- The site is located within an area of several environmental sensitivities and without following the provided mitigation measures, the activity would result in a very high cumulative negative impact.

1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred activity alternative.

The clearance of indigenous vegetation (heavily alien plant infested) for the development of a further 11 hectares of agricultural land for the purpose of planting avocado trees and macadamia trees. The property has water rights and a dam on site. Irrigation pipes will be laid within the area and drip irrigation used to water the trees.

Provide a description of any other activity alternatives investigated.

No other activity alternatives were investigated. The EIA was commissioned for the sole purpose of developing an agricultural field for crop production.

Provide a motivation for the preferred activity alternative.

Agriculture is beneficial for contributing to food security, local employment and contributing to the economy. The expansion of crop production on this farm is a positive indication of the farm's success. The rise in health-conscious consumers has resulted in the significant growth of the macadamia nut and avocado production industry (Invest KZN South Coast, n.d.). "The macadamia nut industry in South Africa is significant in terms of both employment and export earnings" (ADAMA South Africa, n.d.).

Provide a detailed motivation if no activity alternatives exist.

The EIA was commissioned for the sole purpose of developing an agricultural field for crop production.

List the positive and negative impacts that the activity alternatives will have on the environment.

Positive impacts:

- Carbon removal - Both macadamia and avocado trees are perennial crops, meaning they live for decades; leading to long-term carbon absorption.
- Soil health improvement - crops can improve soil structure and organic matter through leaf litter and root biomass.
- If managed with cover crops, the trees can enhance soil biodiversity.
- Management of soil erosion and surface water runoff - orchards reduce surface runoff and promote groundwater recharge. This is, provided all specialist mitigation measures are followed.
- Biodiversity support – the farm can provide habitats for birds, insects, and small mammals, especially when hedgerows and indigenous vegetation are preserved. In addition, if pesticide use is minimised, orchards can support pollinator populations, which benefit other nearby crops.

Negative impacts:

- High water usage if not managed sustainably.
- Biodiversity loss and the destruction of natural habitats for wildlife. Mitigation measures provided by specialists must be implemented to reduce this impact.
- Pesticide use – may pollute the watercourses and harm the local fauna.

- Soil erosion – if not managed correctly, the orchard could cause severe soil erosion due to the slope of the land.

1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts

Provide a description of the preferred design or layout alternative.

Design: low-energy dryland orchard
Layout: 11ha of crop land/orchard and an access road on a narrower portion of the wetland which had been previously disturbed.

Provide a description of any other design or layout alternatives investigated.

Alternative 2 - site location for crop production is approximately 15 hectares and contains no buffer areas for environmental sensitivities.

In addition, the location of the access road is within the existing route that has developed prominent wetland features and is heavily saturated and inundated along its entire width.

Provide a motivation for the preferred design or layout alternative.

The proposed orchards (macadamia and avocado) are designed primarily as dryland systems, meaning:

Minimal or no mechanical irrigation is required under normal rainfall conditions. This significantly reduces the need for energy-intensive water pumping systems.

The preferred site area for crop production was reduced from 15 hectares to 11 hectares following the input of specialists. The site contains important buffers which will reduce the cumulative impact that the activity will have on the receiving environment.

The preferred location of the access road is an area (further north of the existing access road) where the road crosses a narrow portion of the wetland which had been previously disturbed, is far less saturated and thus exhibits less prominent wetland features (Specialist Aquatic Biodiversity Assessment, May 2025).

Provide a detailed motivation if no design or layout alternatives exist.

N/A

List the positive and negative impacts that the design alternatives will have on the environment.

Positive impacts:

- Reduced need for energy-intensive water pumping systems
- Full utilisation of the developable area.
- Reduced soil erosion.

Negative impacts (without mitigation):

- Degradation of wetland habitat caused by upgrading the access road. Specialist mitigation measures must be implemented to reduce this impact.
- Disturbance on intact forest, semi-intact and degraded fynbos habitats.
- Destruction of sensitive and/or protected fauna and flora.

1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

Drip irrigation will be utilised to water the trees. This will result in water use minimisation through targeted watering of roots.

Provide a description of any other technology alternatives investigated.

Shade netting can be used during times of extreme heat. In addition, there are various technology based monitoring systems available to optimise farming.

Provide a motivation for the preferred technology alternative.

Water use minimisation through targeted watering of roots.

Provide a detailed motivation if no alternatives exist.

N/A

List the positive and negative impacts that the technology alternatives will have on the environment.

Positive impacts:

- Water conservation
- Reduced soil erosion
- Efficient fertiliser use.
- Increased plant health

Negative impacts:

- Usage and maintenance issues and costs
- High energy usage if not using a sustainable power source.

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

The Macadamia tree and Avocado tree, like other trees, are susceptible to diseases and pests. It is highly recommended that organic pest control is used on orchards in order to prevent the pollution of the soil and watercourses.

Provide a description of any other operational alternatives investigated.

In addition, no synthetic chemicals should be used in the farming operation and there should be an emphasis on soil health, biodiversity, and ecosystem restoration.

Provide a motivation for the preferred operational alternative.

Prevention of the pollution of the soil and watercourses.

Provide a detailed motivation if no alternatives exist.

N/A

List the positive and negative impacts that the operational alternatives will have on the environment.

N/A

1.6.	The option of not implementing the activity (the 'No-Go' Option).

Provide an explanation as to why the 'No-Go' Option is not preferred.

The No-Go alternative would see the continuation of the unproductive land, no additional crop production, and a potential for the increased spread of AIPs.

It may result in the surrounding land not being rehabilitated to encourage the flourishing of fynbos and other indigenous vegetation, which would eventually threaten the long-term viability of several SCC found in the current undisturbed habitats.

Soil health may not be improved once alien invasive plants are removed, and Alien invasive plants are known for utilising excess water and not providing beneficial habitats. The activity could showcase sustainable farming where there is biodiversity support – the farm can provide habitats for birds, insects, and small mammals, especially when hedgerows and indigenous vegetation are preserved. In addition, if pesticide use is minimised, orchards can support pollinator populations, which benefit other nearby crops.

1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.

N/A

1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.

1. Location/ site – Only one property was assessed as the applicant is currently in possession of only the mentioned property. Site location was limited as the assessed area is the remainder of the property that is undeveloped.
2. Activity – The clearance of indigenous vegetation (heavily alien plant infested) for the development of a further 11 hectares of agricultural land for the purpose of planting avocado trees and macadamia trees. The property has water rights and a dam on site. Irrigation pipes will be laid within the area and drip irrigation used to water the trees.
3. Design/ Layout – Dryland farming operation, and 11ha of crop land/orchard and an access road on a narrower portion of the wetland which had been previously disturbed.
4. Technology – Drip irrigation will be utilised to water the trees. This will result in water use minimisation through targeted watering of roots.

5. Operation - The Macadamia tree and Avocado tree, like other trees, are susceptible to diseases and pests. It is highly recommended that organic pest control is used on orchards in order to prevent the pollution of the soil and watercourses.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).

1. Delineated wetland and 30m buffer zone –

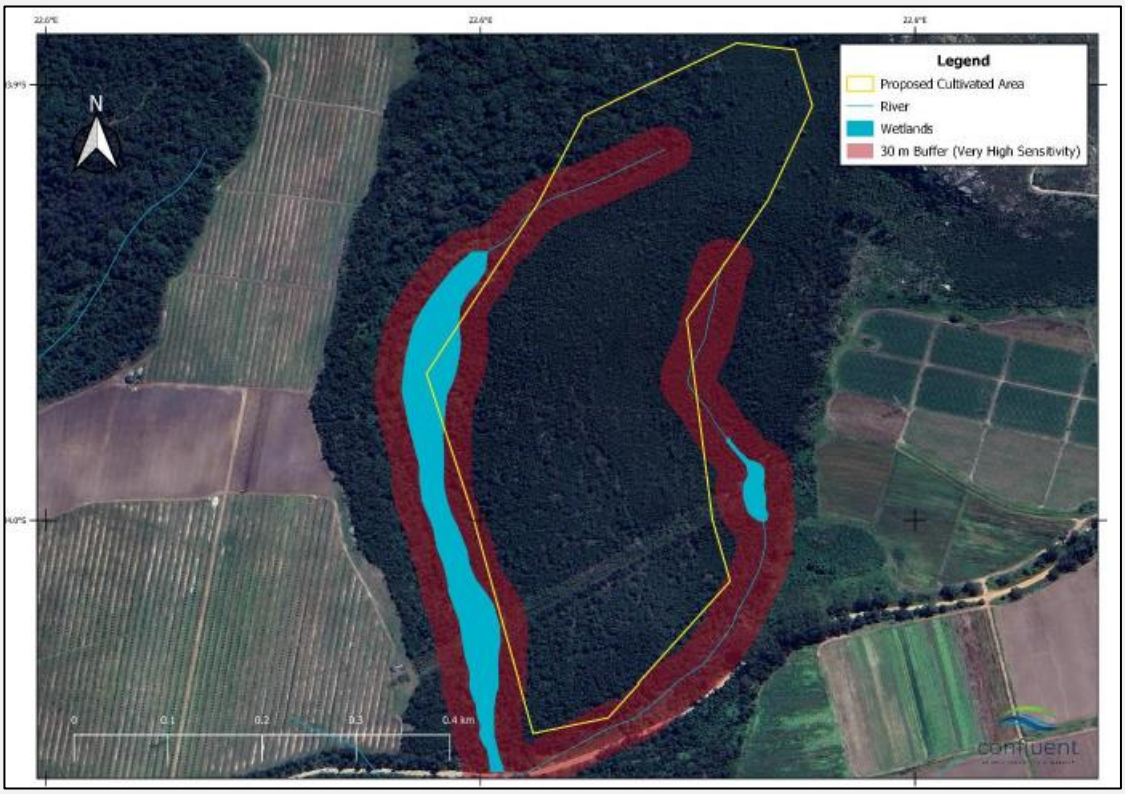

Figure 8: Map indicating watercourse and 30 m buffer in relation to proposed cultivated area.

2. Terrestrial Biodiversity Constraints –

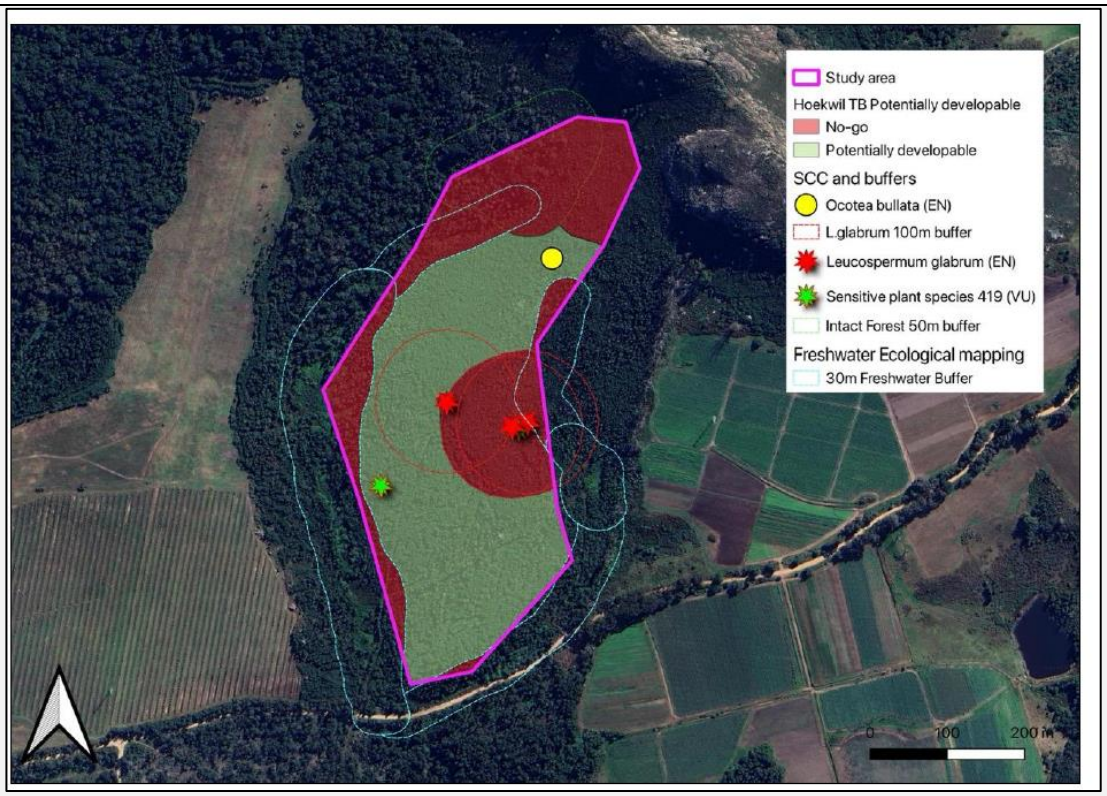

Figure 9 - The Terrestrial Biodiversity and Plant theme constraints for the study area overlaid on an ESRI ™ image.

3. Animal species sensitivity –

Figure 10. Map showing the recommended 50m Forest buffer and 30m Riverine buffers for the proposed development site.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.
Criteria are ascribed for each predicted impact. These include the intensity (size or degree scale), which also includes the type of impact, being either a positive or negative impact; the duration (temporal scale); and the extent (spatial scale), as well as the probability (likelihood). The methodology is quantitative, whereby professional judgement is used to identify a rating for each criterion based on a seven-point scale (Table 1) and the significance is auto-generated using a spreadsheet through application of the calculations. For each predicted impact, certain criteria are applied to establish the likely significance of the impact, firstly in the case of no mitigation being applied and then with the most effective mitigation measure(s) in place. These criteria include the intensity (size or degree scale), which also includes the nature of impact, being either a positive or negative impact; the duration (temporal scale); and the extent (spatial scale). These numerical ratings are used in an equation whereby the consequence of the impact can be calculated. Consequence is calculated as follows: Consequence = type x (intensity + duration + extent) To calculate the significance of an impact, the probability (or likelihood) of that impact occurring is applied to the consequence. Significance = consequence x probability

4. Assessment of each impact and risk identified for each alternative

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

Impacts foreseen during the design and planning phase:

The planning and design phase entails identified no-go areas and sensitivities on the site by specialists. These findings have been incorporated into the final SDP and must be adhered to .
The Southern Cape Fire Protection Agency needs to be approached to assist with a fire management plan during the lifespan of the project.

Impact 1 – Loss of Terrestrial Biodiversity

Cultivation of up to 15 ha including Intact and Semi-intact habitat.

Impact	**Preferred Alternative NOT APPLICABLE**		**Alternative 2**		**No-Go**
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration			Long term	Long term	Long term
Extent			Very limited	Very limited	Very limited
Intensity			High	Moderate	Moderate
Probability			Certain / definite	Certain / definite	Certain / definite
Confidence			High	High	High
Reversibility			Low	Low	Low
Resource irreplaceability			Medium	Medium	Low
Significance			**Moderate - negative**	**Minor - negative**	**Minor - negative**
Cumulative impacts	The loss of 15 ha on this site would result in the loss of Medium and High sensitivity areas and species of conservation concern, and would result in a Medium to High negative residual impact which would require a biodiversity offset.				

Mitigation:

1. The calculated potentially developable area is 11 ha. If this area were to be developed it would result in a Low negative impact if mitigation is applied.

2. Mitigation includes the search and rescue of one SCC the Vulnerable Sensitive species 419 and the rehabilitation of the areas excluded from the development footprint.

Impact 2 - Degradation of wetland habitat caused by upgrading the access road.

Additionally, infilling across the wetland can alter the natural hydrological and geomorphological characteristics of the wetland by restricting flow across the road. This has the effect of increasing the extent of inundation and sedimentation upstream of the road and reducing (or channelising) flow and sediment inputs downstream of the road, leading to a reduced extent or erosion of the wetland. Mitigation measures must therefore be implemented with a view to maintaining the natural hydrological and geomorphological characteristics of the wetland are maintained. In this respect the road must be upgraded to continue to allow diffuse flow through the road which can be achieved by installing multiple appropriately sized culverts through the road.

Impact	**Alternative A**		**Alternative B (has become the preferred alternative after assessing the impacts in this phase)**		**No-Go** **NOT APPLICABLE**
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration	Permanent	Permanent	Permanent	Permanent	
Extent	Very limited	Very limited	Very limited	Very limited	
Intensity	Very High	Moderate	High	Low	
Probability	Almost Certain	Likely	Almost Certain	Likely	
Confidence	High	High	High	High	
Reversibility	High	High	High	High	
Resource irreplaceability	Low	Low	Low	Low	
Significance	**Moderate - negative**	**Minor - negative**	**Moderate - negative**	**Minor - negative**	
Cumulative impacts					

Mitigation:

1. Multiple culverts (at least 300 mm diameter) must be placed through the road (every 5 m along the delineated width of the wetland) to facilitate diffuse flow beneath the road.
2. The invert of each culvert must be level with bed of the wetland upstream and downstream of the road as the bed Figure 12.
3. The width of the road surface must not exceed 4 m.
4. An ECO must be appointed to oversee the upgrade of the road to ensure that the above-mentioned mitigation measures are implemented.
5. For Alternative A: As the road crosses the wetland at an angle, culverts must be orientated parallel to the direction of flow through the wetland and must NOT be orientated perpendicular to the alignment of the road (see Figure 11).

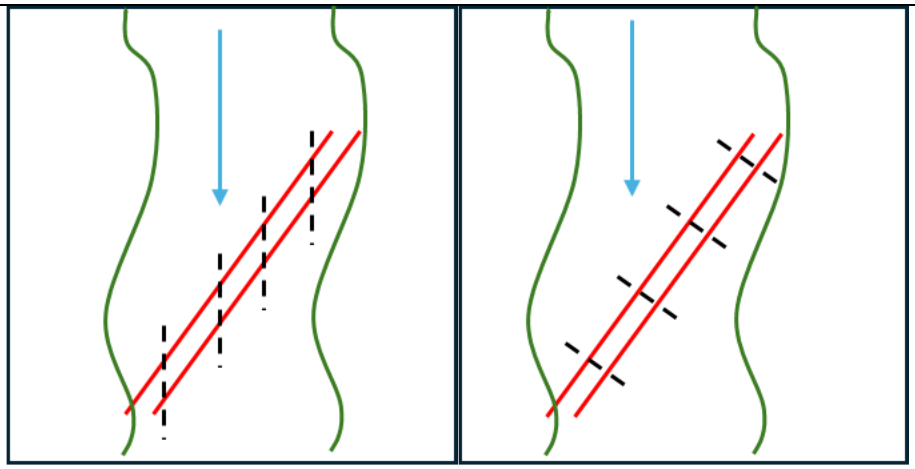

Figure 11: Sketch indicating orientation of correct orientation of culverts (black dashed lines) relative to the flow of water (blue arrow) and the alignment of the road (red lines).

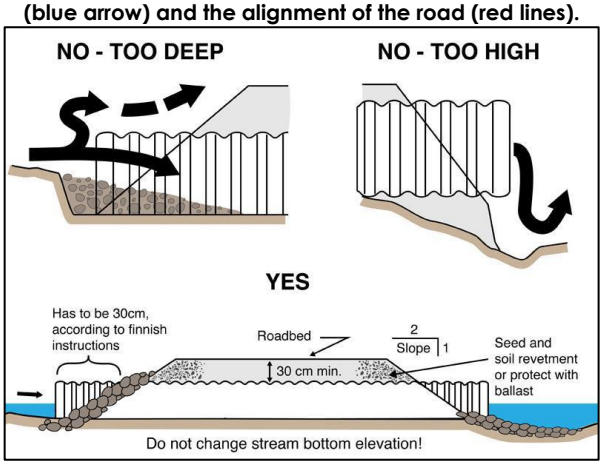

Figure 12: Diagram illustrating the ideal placement of culverts relative to the bed of the wetland.

Impacts foreseen during the construction phase:

Impact 3 – Loss of terrestrial ecology including: vegetation type, ecological processes, indigenous vegetation, ecologically important species, terrestrial habitat and ecological connectivity.					
Impact	**Preferred Alternative (11 ha)**		**Alternative 2 (15 ha)**		**No-Go**
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration	Long term	Long term	Long term	Long term	Long term
Extent	Very limited	Very limited	Very limited	Very limited	Very limited
Intensity	Moderate	Low	High	Moderate	Moderate
Probability	Certain / definite	Certain / definite	Certain / definite	Certain / definite	Certain / definite
Confidence	High	High	High	High	High
Reversibility	Low	Low	Low	Low	Low
Resource irreplaceability	Medium	Medium	Medium	Medium	Low
Significance	**Minor - negative**	**Minor - negative**	**Moderate - negative**	**Minor - negative**	**Minor - negative**
Cumulative impacts	The loss of 15 ha on this site would result in the loss of Medium and High sensitivity areas and species of conservation concern, and would result in a Medium to High negative residual impact which would require a biodiversity offset. The calculated potentially developable area is 11 ha. If this area were to be developed it would result in a Low negative impact if mitigation is applied.				
Mitigation:					

1. Avoidance of the Intact forest (including a 50m buffer), Semi-intact fynbos and Degraded fynbos habitats which are of High and Medium sensitivity.
2. Avoidance of the subpopulation of Leucospermum glabrum (including a 100m buffer) and Sensitive species 419 on the eastern side of the site.
3. Ensure that natural fire cycles can occur within this area.
4. Avoidance of the freshwater features (including a 30m buffer) to ensure connectivity of lowland and upland habitat.
5. The 'search and rescue' of the Sensitive species 419 from the western side of the site.
6. The vegetation from the fynbos habitat that is not developed must be rehabilitated to a state where it is representative of the original fynbos ecosystem and supports ecological functioning to a moderate or high level.
7. The rehabilitation must be undertaken in a phased approach, according to a rehabilitation plan and undertaken by a qualified botanist or restoration ecologist.
8. The initial step will require the removal and control of all IAPs on the property and erosion control if necessary. Passive rehabilitation on the parts of the site where no earthworks have taken place can be allowed for one winter season following the removal of IAPs. Thereafter the site must be assessed by the restoration contractor to determine the level of active rehabilitation input. Active rehabilitation will be required for areas where topsoil has been disturbed, and areas that do not naturally recover from stored soil seedbank.
9. The restoration contractor should monitor the populations of SCC to ensure that they persist on the site, and additional propagation of these species may be required.
10. Follow-up clearing of all exotic and listed IAPs is required every 6 months for the first three years, and annually thereafter to ensure that the IAPs do not dominate the fynbos.

Impact 4 – Loss of Species of Conservation Concern/ SCC

Flora: Loss of at least one Ocotea bullata seedling. Potential loss of two other SCC from site.
Fauna: one species of conservation concern (C. duthiae) may be impacted by the development,

Impact	**Preferred Alternative (11 ha)**		**Alternative 2 (15 ha)**		**No-Go**
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration	Long term	Long term	Long term	Long term	Long term
Extent	Very limited	Very limited	Very limited	Very limited	Very limited
Intensity	High	Low	High	Low	Moderate
Probability	Certain / definite	Certain / definite	Certain / definite	Certain / definite	Certain / definite
Confidence	High	High	High	High	High
Reversibility	Low	Low	Low	Low	Low
Resource irreplaceability	Medium	Low	Medium	Low	Low
Significance	**Moderate - negative**	**Minor - negative**	**Moderate - negative**	**Minor - negative**	**Minor - negative**
Cumulative impacts	N/A				

Mitigation:

1. Avoidance of the subpopulation of Leucospermum glabrum (including a 100m buffer) and Sensitive species 419 on the eastern side of the site.
2. The 'search and rescue' of the Sensitive species 419 from the western side of the site.
3. A buffer of 50m from intact forest habitats (Figure 9). This boundary is intended to mitigate any potential edge effects that may result from the clearing of adjacent vegetation. Forest species tend to be intolerant of disturbance and therefore this buffer intends to reduce disturbance during the construction and operational phases of developments.

4. Removal of all Invasive Alien Plants (IAPs) in buffers. The removal of these plants is key to allow for the recovery of the natural edaphic climax community, thereby improving habitat quality for resident faunal populations. The rehabilitation must be undertaken in a phased approach, according to a rehabilitation plan and undertaken by a qualified botanist or restoration ecologist.
5. Strict adherence to guidelines regarding use of pesticides, herbicides and other agricultural chemicals.
6. Avoid using heavy machinery in close proximity to buffer zones, and where possible limit human presence within buffer zones.

Impact 5 - Loss of wetland habitat during the establishment of orchards

The extent of the proposed cultivated area (Alternative 2) will extend into sections of wetland habitat and will provide minimal buffer area and associated protection of the wetland. In addition, preparation of orchards during the construction phase could potentially result in the degradation of wetland habitat if these take place in too close proximity to orchards. This will result in loss and degradation of wetland habitat over time, particularly considering the steep slopes and poor buffering capability of uncleared vegetation.

Impact	**Preferred Alternative (11 ha)**		**Alternative 2 (15 ha)**		**No-Go NOT APPLICABLE**
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration	Permanent	Long term	Permanent	Long term	
Extent	Limited	Very limited	Limited	Very limited	
Intensity	Very high	Low	Very high	Low	
Probability	Certain / definite	Unlikely	Certain / definite	Unlikely	
Confidence	High	High	High	High	
Reversibility	High	High	High	High	
Resource irreplaceability	Low	Low	Low	Low	
Significance	**Moderate - negative**	**Negligible - negative**	**Moderate - negative**	**Negligible - negative**	
Cumulative impacts	Loss of ecological habitats and SCC.				

Mitigation:

- Implementation of a 30 m buffer to protect the watercourse during the establishment of the orchards. The outer edge of the buffer must be clearly demarcated and activities within the buffer must be avoided;
- No orchards are to be established within the buffer;
- No equipment or materials to be stored or stockpiled in the buffer;
- No heavy machinery to operate within buffer;
- Apart from the road crossing the wetland, no roads to be established within the buffer; and
- An ECO must be appointed to oversee the establishment of the cultivated area relative to the delineation of the 30 m buffer.

Impact 6 - Disturbance and pollution of aquatic habitat caused by construction of the road crossing.

Alternative A: The existing road crossing the western wetland has been completely inundated and revegetated by wetland plant species and will need to be upgraded in order to make it passable to vehicles. This would require infilling along the existing alignment of the road, which will result in loss of permanent wetland habitat.

Alternative B: The alternative crossing is located across a narrower portion of the wetland which has been previously disturbed, is far less saturated and thus exhibits less prominent permanent wetland features.

In addition, for both alternatives, construction of the crossing will require that vehicles and machinery will need to access the watercourse which can result in:

• Physical disturbance of aquatic habitat (beyond the footprint of the road);
• Pollution through leaks and spills of hydrocarbons (i.e. fuel and oil from construction vehicles and machinery) and other construction materials (e.g. cement) and
• Mobilisation of sediment due excavation of the bed and banks and operation of construction vehicles in the watercourse.

Impact	**Alternative A**		**Alternative B (has become the preferred alternative after assessing the impacts in this phase)**		**No-Go NOT APPLICABLE**
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration	Permanent	Permanent	Permanent	Permanent	
Extent	Very limited	Very limited	Very limited	Very limited	
Intensity	High	Moderate	Low	Very low	
Probability	Certain / definite	Certain / definite	Certain / definite	Certain / definite	
Confidence	High	High	High	High	
Reversibility	High	High	High	High	
Resource irreplaceability	Low	Low	Low	Low	
Significance	**Moderate - negative**	**Moderate - negative**	**Moderate - negative**	**Minor - negative**	
Cumulative impacts					

Mitigation:

- Construction of the road crossing must occur during the drier summer season;
- Working areas must be clearly demarcated and no vehicle access or disturbance must take place outside of demarcated areas;
- Rehabilitate and naturalise areas beyond the development footprint, which have been affected by the construction activities, using indigenous grass species;
- Use excavators instead of bulldozers to reduce sedimentation and consolidate the entry and exit points to reduce scouring;
- Vehicles must be restricted to travelling only on designated roadways to limit the ecological footprint of the proposed development activities;
- Restrict vehicle access to the watercourse to single points that are clearly demarcated;
- Excavators and all other machinery and vehicles must be checked for oil and fuel leaks daily. No machinery or vehicles with leaks are permitted to work in the watercourse;
- No fuel storage, refuelling, vehicle maintenance or vehicle depots to be allowed within 30 m of the edge of the delineated watercourse;
- Ensure that all stockpiles are well managed and have measures such as berms and hessian sheets implemented to prevent erosion and sedimentation. Stockpiles must be located more than 30 m from the edge of the wetland;
- Contractors used for the project should have spill kits available to ensure that any fuel or oil spills are cleaned and disposed correctly;
- Adequate sanitary facilities and ablutions must be provided for all personnel throughout the project area. Use of these facilities must be enforced (these facilities must be kept clean so that they are a desired alternative to the surrounding vegetation) and must be routinely serviced; and
- No dumping of construction or waste material is permitted. All construction and waste materials must be removed from the wetland and correctly disposed.

Impacts foreseen during the operation phase:

Impact 7 – Pollution of watercourse caused by surface runoff of sediments, pesticides and nutrients from orchards.

Cultivated fields will be established on relatively steep slopes which could mobilise nonpoint source pollution of sediments, nutrients and pesticides via surface runoff into watercourses.

Impact	Preferred Alternative (11 ha)		Alternative 2 (15 ha)		No-Go NOT APPLICABLE
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration	Long term	Long term	Long term	Long term	
Extent	Local	Limited	Local	Limited	
Intensity	High	Moderate	High	Moderate	
Probability	Certain / definite	Probable	Certain / definite	Probable	
Confidence	High	High	High	High	
Reversibility	High	High	High	High	
Resource irreplaceability	Low	Low	Low	Low	
Significance	**Moderate - negative**	**Minor - negative**	**Moderate - negative**	**Minor - negative**	
Cumulative impacts	Pollution of the greater water catchment area.				

Mitigation:

1. Planting rows must be planted along the contours as opposed to perpendicular to the contours;
2. A permanent cover crop must be cultivated on the orchard row (underneath the trees) and in work rows (rows between the trees) which will improve water retention and soil structure and control unwanted weeds and also minimise transport of soil, nutrients and pesticides in surface runoff;
3. Implementation and maintenance of 30 m buffer between cultivated fields and watercourses; and
4. Control of alien invasive plant species must be carried out within buffer areas to encourage recolonisation by indigenous vegetation and improve the structural integrity of the buffer.

Impact 8 – Pollution of watercourse caused by spray drift during pesticide application.

Drift of pesticides into sensitive non-target areas during spraying can result in high concentrations of toxic pesticides being deposited in watercourses. While contamination is likely to be short-term, the high concentrations typically associated with spray drift events can lead to chronic and/or acute toxicological effects to aquatic and other biota inhabiting watercourses. The most effective measure to reduce drift deposition in watercourses is a) to increase the distance between the closest point of application and the watercourse through the establishment of a buffer and b) encourage growth of vegetation within the buffer which effectively intercepts spray droplets and minimises deposition in the watercourse.

Impact	Preferred Alternative (11 ha)		Alternative 2 (15 ha)		No-Go NOT APPLICABLE
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Duration	On-going	On-going	On-going	On-going	
Extent	Local	Limited	Local	Limited	
Intensity	High	Low	High	Low	
Probability	Certain / definite	Probable	Certain / definite	Probable	
Confidence	High	High	High	High	
Reversibility	High	High	High	High	
Resource irreplaceability	Low	Low	Low	Low	

Significance	**Moderate - negative**	**Minor - negative**	**Moderate - negative**	**Minor - negative**	
Cumulative impacts	Pollution of the greater water catchment area and loss of SCC.				

Mitigation:

1. Implementation and maintenance of a vegetated 30 m buffer between cultivated fields and watercourses.
2. Strict adherence to application of herbicide/pesticide protocols.
3. Avoid applying aerosolized herbicide/pesticide during windy conditions.

Impact 9 – Impairment of wetland habitat caused by increased stormwater inputs.

Hardened road surfaces act as conduits for the conveyance of high energy stormwater flows directly into watercourses which can lead to erosion of the bed and banks and discharge of sediments and pollutants into watercourses.

Impact	**Preferred Alternative (11 ha)**		**Alternative 2 (15 ha)**		**No-Go**
	Without mitigation	With mitigation	Without mitigation	With mitigation	**NOT APPLICABLE**
Duration	On-going	On-going	On-going	On-going	
Extent	Limited	Limited	Limited	Limited	
Intensity	High	Low	High	Low	
Probability	Likely	Unlikely	Likely	Unlikely	
Confidence	High	High	High	High	
Reversibility	High	High	High	High	
Resource irreplaceability	Low	Low	Low	Low	
Significance	**Minor - negative**	**Negligible - negative**	**Minor - negative**	**Negligible - negative**	
Cumulative impacts	N/A				

Mitigation:

1. Water on the road approaching the wetland must be diverted off of the road as quickly as possible, to minimise the amount of water running directly down the road and into the wetland. The drainage must lead the water to vegetated filter strips or swales alongside the road, which remove sediment and other pollutants from the water.
2. Having more frequent drains on the approach to the wetland ensures that the least amount of water is discharged directly into the wetland and reduced sediment loading.

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.

1. Terrestrial Biodiversity Assessment (Greg Nicolson, Capensis Ecological Consulting, May 2024) –

Based on the site visit, the fynbos habitat that remains is considered to be representative of Garden Route Shale Fynbos and the forest is representative of Southern Afrotemperate Forest.

The WCBSP 2017 assigns the northern parts of the site as CBA 1 and CBA 2. ESA 2 is assigned to the area just to the south of this, and ESA 1 is assigned to the greater part of the central and southern parts of the site. In general the classifications are supported based on the site visit, however, the CBA 1 site in the south-eastern corner of the site is erroneously classified as a forest patch, however, the dense vegetation in this area is invasive species.

The Terrestrial Biodiversity sensitives assigned to the site are High, Medium and Low. Based on this the most sensitive areas are considered as No-go areas and excluded from the development footprint. An area of 11 ha is regarded as acceptable for cultivation and this will exclude (1) the High sensitivity areas, (2) most of the Medium sensitivity areas, (3) both SCC on the eastern side of the site, and (4) the important drainage line buffers on both sides of the site.

The areas included in the development footprint are not intact (Degraded to Highly degraded or Highly degraded) and only partially representative of the original fynbos ecosystem. The sensitivity of the Degraded to Highly degraded habitat is Medium, and the Highly degraded habitat is rated as Low sensitivity.

The proposed development will result in the permanent loss of habitat which is currently Degraded to Highly degraded or Highly degraded. The mitigation of avoidance, search and rescue and rehabilitation will result in the remaining habitat on the site improving in condition. This will improve the overall ecological functioning of the site by ensuring that the dominant vegetation is locally occurring indigenous vegetation. This will allow for better habitat for faunal species and improving plant/animal interactions such as pollination. The connectivity between the upper and lower elevations on the site will allow for better faunal movement between the site and surrounding areas. The occurrence of fires which are an important ecological driver for fynbos ecosystems may be reduced by increasing density of agricultural activities.

The proposed development of 15 ha within the study area would result in the loss of Medium and High sensitivity vegetation, species of conservation concern and areas critical for ecological functioning such as river corridors. This loss is not supported from a Terrestrial Ecology perspective. An area of 11 ha has been mapped that excludes the most sensitive areas and species, and the development of this area is considered as acceptable from a Terrestrial Biodiversity perspective. However, the impacts will still need to be mitigated, and rehabilitation of the excluded areas is required. This will have a Low negative cumulative impact, and no change to the ecosystem threat status will occur as a result of the proposed development.

A number of essential mitigation measures are necessary to reduce the impact of the development.

1. Avoidance of the Intact forest (including a 50m buffer), Semi-intact fynbos and Degraded fynbos habitats which are of High and Medium sensitivity.
2. Avoidance of the subpopulation of Leucospermum glabrum (including a 100m buffer) and Sensitive species 419 on the eastern side of the site.
3. Ensure that natural fire cycles can occur within this area.
4. Avoidance of the freshwater features (including a 30m buffer) to ensure connectivity of lowland and upland habitat.
5. The 'search and rescue' of the Sensitive species 419 from the western side of the site.
6. The vegetation from the fynbos habitat that is not developed must be rehabilitated to a state where it is representative of the original fynbos ecosystem and supports ecological functioning to a moderate or high level.
7. The rehabilitation must be undertaken in a phased approach, according to a rehabilitation plan and undertaken by a qualified botanist or restoration ecologist.
8. The initial step will require the removal and control of all IAPs on the property and erosion control if necessary. Passive rehabilitation on the parts of the site where no earthworks have taken place can be allowed for one winter season following the removal of IAPs. Thereafter the site must be assessed by the restoration contractor to determine the level of active rehabilitation input. Active rehabilitation will be required for areas where topsoil has been disturbed, and areas that do not naturally recover from stored soil seedbank.
9. The restoration contractor should monitor the populations of SCC to ensure that they persist on the site, and additional propagation of these species may be required.
10. Follow-up clearing of all exotic and listed IAPs is required every 6 months for the first three years, and annually thereafter to ensure that the IAPs do not dominate the fynbos.

Best practise mitigation

1. Mark off the areas that are not going to be developed prior to undertaking any works, and ensure that no unnecessary loss of adjacent vegetation occurs.
2. Mark off all SCC, especially the central subpopulation of Leucospermum glabrum, to ensure that it is not disturbed during construction.
3. Sites for building material stocks, vehicles, toilets etc must be clearly marked and restricted to the building footprint, exiting roads or existing disturbed areas.

2. Animal Species Specialist Report (Adam Labuschagne and Jacobus Visser, Capensis Ecological Consulting, May 2024) –

A total of 40 animal species were observed in the study area, with two being of conservation concern. The two species in question are Campethera notata (Knysna Woodpecker) and Chlorotalpa duthiae (Duthie's Golden Mole). Based on the habitat present at or in close proximity to the site there is the potential for the locality to support four additional SCC, including Afrixalus kysnae, Bradypterus sylvaticus, Sensitive Species 8, and Stephanoaetus coronatus. The direct impact of the proposed development is estimated to have a moderate negative impact without mitigation measures, with the likely loss of C. duthiaea from within the development footprint, as well as loss of potential habitat for SCC. Should appropriate mitigation measures be followed, including a 50m buffer zone around intact forest habitat and a 30m buffer from aquatic habitats, the impact of the proposed development on SCC present at the site (or potentially occurring SCC) is considered to be low negative. It should be noted that C. duthiaea is highly likely to be lost from within the proposed development footprint as this species is fairly intolerant to soil disturbance, even when accounting for the appropriate mitigation methods. However, the sub-population of this species is unlikely to be heavily impacted as the preferred habitat for this species (intact forest) can be found outside the site footprint and is unlikely to be significantly negatively impacted by the proposed development.

In terms of essential mitigation measures the following actions are necessary to reduce the impact of the development:

1. A buffer of 50m from intact forest habitats (Figure 9). This boundary is intended to mitigate any potential edge effects that may result from the clearing of adjacent vegetation. Forest species tend to be intolerant of disturbance and therefore this buffer intends to reduce disturbance during the construction and operational phases of developments.
2. A 30m buffer along all water courses and wetland habitats (Figure 9), as per the Aquatic Specialist Report (James, 2024). Due to the steep topography, there is a high risk of runoff in both the construction and operational phases of the development. This can be in the form of increased sediment loads as a result of erosion, or through runoff containing agricultural products such as pesticide or herbicide. This is vital to ensure the viability of amphibian and aquatic invertebrate populations that are sensitive to poor water quality.
3. Removal of all Invasive Alien Plants (IAPs) in buffers. The removal of these plants is key to allow for the recovery of the natural edaphic climax community, thereby improving habitat quality for resident faunal populations. The rehabilitation must be undertaken in a phased approach, according to a rehabilitation plan and undertaken by a qualified botanist or restoration ecologist.
4. Strict adherence to guidelines regarding use of pesticides, herbicides and other agricultural chemicals.
5. Avoid using heavy machinery in close proximity to buffer zones, and where possible limit human presence within buffer zones.

Whilst not an essential mitigation measure, it is recommended that any particularly large IAP individuals be ring barked and left to stand within buffer zones, where possible. Referred to as snags in forestry, these dead trees will provide good quality nesting sites for Campethera notata and other woodpeckers species as well as raptors such as Stephanoetus coronatus or Polemaetus bellicosus.

Best practise mitigation

1. Mark off the areas that are not going to be developed prior to undertaking any works, and ensure that no unnecessary loss of adjacent vegetation occurs.
2. Sites for building material stocks, vehicles, toilets etc must be clearly marked and restricted to the developmental footprint, existing roads or existing disturbed areas.
3. Avoid using heavy machinery within the prescribed buffer zones. This reduces the risk of soil compaction which would have a deleterious effect on the burrowing behaviour of any remaining mole species within these habitats.

3. Specialist Aquatic Biodiversity Assessment (Dr. James Dabrowski, Confluent Environmental, May 2025) –

Two wetlands and associated streams were identified either side of the proposed cultivated area on Erf 385. These wetlands occur within a catchment area that has been classified as a FEPA and a SWSA. Any further

development in the catchment area must therefore be done in a sensitive manner so as to maintain watercourses and the larger Touws River catchment in a good ecological condition. Extensive agricultural activities are one of the main threats to aquatic biodiversity that have been identified in the broader catchment area. Impacts associated with agriculture are primarily related to loss of aquatic habitat due to encroachment of cultivated areas into riparian zones and wetlands and nonpoint source pollution of watercourses by nutrients, sediment and pesticides. All of these impacts can be effectively mitigated through the implementation of adequately sized buffers that protect watercourses from habitat loss but also play and important role in attenuating and filtering nonpoint source pollutants. In this respect, and considering the sensitivity of the catchment area, a mandatory 30 m buffer between watercourses and planned cultivated fields must be implemented. Provided that the buffer and other mitigation measures are implemented, impacts associated with the proposed establishment of cultivated areas are acceptable from an aquatic biodiversity perspective.

Both road crossing alternatives would require infilling of wetland habitat and can also alter the natural hydrological and geomorphological characteristics of the wetland by restricting flow across the road. Mitigation measures must therefore be implemented with a view to ensuring the natural hydrological and geomorphological characteristics of the wetland are maintained. In this respect the road design must continue to allow diffuse flow through the road which can be achieved by installing multiple appropriately sized culverts through the road. Alternative B results in a lower impact and risk to the wetland – and is therefore the recommended alternative.

4. Soil Suitability Assessment and Agricultural Compliance Statement (Johann Lanz, Soil ZA, May 2025) –

The overall conclusion of this assessment is that the proposed development enhances future agricultural production potential and therefore has a positive agricultural impact. The soils across the site are suitably similar for orchard establishment to the other recently established orchard adjacent to the site. They are predominantly reasonably drained podzol soils of the Groenkop 2110 soil form and family with approximately 8% clay in the A and B horizons. Depth to the underlying saprolite varies from 400 mm to 1000 mm. They are suitable for irrigated cropping once soil preparation that includes deep ripping has been done. Although the steep slopes make the land susceptible to erosion, it will be completely controlled through standard farming practices that are used on the adjacent, established orchards. This assessment confirms that the site is suitable and viable for irrigated orchards, and that the soil resources on the site will not be damaged by this activity.

From an agricultural impact point of view, it is recommended that the proposed development be approved. The conclusion of this assessment on the acceptability of the proposed development and the recommendation for its approval is not subject to any conditions.

All of the above findings have influenced the Preferred Alternative.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr

All of the above will be included in the EMPr.

3.	List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

N/A

4.	Explain how the proposed development will impact the surrounding communities.

Positive Impacts:

- Job creation - farming operations (planting, harvesting, processing, transport) create employment.

Negative Impacts:

- If not managed correctly, the farming of macadamia trees and avocados may strain local water supplies, reducing availability for communities and ecosystems.
- Use of pesticides and fertilizers can pollute local water sources, affecting human health and biodiversity. Mitigation measures provided by specialists must be adhered to.

5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

How the risk of climate change may influence the proposed activity or development –

Rising temperatures:	Reduced flowering, fruit quality, heat stress
Water scarcity:	Lower yields, increased irrigation demand
Extreme weather:	Physical damage, root rot, erosion
Pests and diseases:	Higher incidence, spread to new areas
Quality & yield decline:	Lower export value, inconsistent production

How has the potential impacts of climate change been considered and addressed –

Water Conservation	Drip irrigation, mulching, rain harvesting
Pest Management	Biological controls, disease monitoring
Variety Selection	Drought- and heat-tolerant cultivars
Ecosystem Protection	Make use of buffer zones to protect sensitive and indigenous habitats

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.

None

7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.

The investigation of the cultivation of 15 ha of land for the farming of macadamia and avocados was presented by the applicant for initial desktop study.

Specialists were appointed to assess the feasibility of the proposed activity and once this was done, the Preferred Alternative was amended to incorporate these findings.

8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

As explained above, specialist input and mitigation measures influenced the final proposed activity in order to apply for the best practicable environmental option.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.

Impacts of the cultivation of macadamia and avocados trees:

1. Loss of Terrestrial Biodiversity including SCCs

Cultivation of up to 15 ha including intact and semi-intact habitat.

Preferred Alternative (11 ha):
Without mitigation: Moderate negative impact.
With mitigation: Minor negative impact.

Alternative 2 (15 ha):
Without mitigation: Moderate negative impact.
With mitigation: Minor negative impact.

Mitigation measures:

- Develop only 11 ha to avoid high-sensitivity areas.
- Conduct search and rescue of vulnerable species.
- Rehabilitate excluded areas.

Cumulative impact: Medium to high residual impact; biodiversity offset required without mitigation.

2. Loss of wetland habitat during the establishment of orchards

Establishing orchards (particularly under Alternative 2) may encroach on wetland habitat.

Lack of sufficient buffer zones and construction activities near wetlands could lead to long-term habitat degradation, especially on steep slopes with poor vegetation buffering.

Preferred Alternative (11 ha):
Without mitigation: Moderate negative
With mitigation: Negligible negative

Alternative 2 (15 ha):
Without mitigation: Moderate negative
With mitigation: Negligible negative

Mitigation measures:

- Establish and clearly demarcate a 30 m buffer around watercourses.
- No orchards to be planted within this buffer zone.
- Prohibit storage of materials and operation of heavy machinery within the buffer.
- No roads, except for the designated wetland crossing, to be built within the buffer.
- An Environmental Control Officer (ECO) must oversee compliance during orchard establishment.

3. Disturbance and pollution of aquatic habitat caused by construction of the road crossing.

Construction or upgrading of the road crossing through a wetland area may:

- Disturb aquatic habitats beyond the road footprint.
- Cause hydrocarbon and construction material pollution (e.g., fuel, oil, cement).
- Lead to sediment mobilisation from excavation and vehicle movement.

Alternatives Considered:

Alternative A: Existing road through a saturated, revegetated wetland—requires infilling, higher ecological impact.
Alternative B (Preferred): Crosses a narrower, less saturated section with fewer permanent wetland features.

Alternative A:
Without mitigation: Moderate – negative
With mitigation: Moderate – negative

Alternative B (Preferred):
Without mitigation: Moderate – negative
With mitigation: Minor – negative

Mitigation measures:

- Construct during the dry summer season.
- Demarcate working areas—no disturbance beyond this boundary.
- Use excavators instead of bulldozers to reduce erosion.
- Restrict vehicle access to designated points only.
- Daily check of machinery for oil/fuel leaks—no leaking equipment allowed in watercourses.
- No fuel storage or refueling within 30 m of watercourse.
- Implement stockpile controls (e.g., berms, hessian sheets); place stockpiles >30 m from wetland.
- Provide adequate and serviced sanitation facilities for workers.
- No dumping—remove and dispose of all construction waste offsite.
- Rehabilitate disturbed areas beyond the footprint using indigenous vegetation.

4. Pollution of Watercourse from Surface Runoff (Sediments, Pesticides, Nutrients)

Cultivated orchards on steep slopes may result in nonpoint source pollution entering watercourses via surface runoff.

Runoff may carry sediment, pesticides, and nutrients, degrading water quality and aquatic ecosystems.

Preferred Alternative and Alternative 2:
Without mitigation: Moderate negative impact.
With mitigation: Minor negative impact.

Mitigation measures:

- Contour Planting: Rows must follow the contour lines to slow runoff and reduce erosion.
- Cover Crops: Permanent cover crop under and between orchard rows to:
  - Improve water retention
  - Enhance soil structure

- Control weeds
- Minimize sediment and nutrient loss

- Buffer Zones: Maintain a 30 m vegetated buffer between cultivated fields and watercourses.
- Alien Plant Control: Remove invasive alien plants in buffer zones to promote indigenous vegetation regrowth and strengthen buffer integrity.

5. Pollution of watercourse caused by spray drift during pesticide application.

Pesticide drift during spraying may deposit toxic chemicals into nearby watercourses, impacting aquatic ecosystems. Though short-term, these events may cause acute or chronic toxicity in aquatic life.

Drift is more likely without adequate buffers or in windy conditions.

Preferred Alternative (11 ha):
Without mitigation: Moderate – negative
With mitigation: Minor – negative

Alternative 2 (15 ha):
Without mitigation: Moderate – negative
With mitigation: Minor – negative

Mitigation Measures:

- Maintain a 30 m vegetated buffer between cultivated fields and watercourses.
- Follow strict herbicide/pesticide protocols.
- Avoid spraying during windy conditions to reduce drift risk.
- Promote vegetative growth in buffer zones to intercept and absorb pesticide droplets.

6. Stormwater Runoff into Wetlands

Roads may funnel stormwater directly into wetlands, leading to erosion, sedimentation, and pollution.

Preferred Alternative and Alternative 2:
Without mitigation: Minor negative impact (high intensity, likely).
With mitigation: Negligible negative impact (low intensity, unlikely).

Mitigation measures:

- Divert road runoff into vegetated filter strips/swales before it reaches wetlands.
- Install frequent drains along roads to reduce concentrated water discharge.

1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)

Attached as Appendix B2.

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.

Positive Impacts on the Environment and Community:

1. Environmental

- Rehabilitation of Degraded Land: Clearing invasive alien plants will allow indigenous vegetation to regenerate outside the cultivation footprint.
- Soil Health Improvement: Orchard trees and cover crops enhance soil structure, increase organic matter, and support soil biodiversity.
- Carbon removal: Long-living trees like macadamias and avocados act as carbon sinks.

2. Socio-Economic

- Local Employment: Job creation during construction and ongoing operational phases (planting, harvesting, maintenance).

- Agricultural Development: Supports food security, rural livelihoods, and economic growth in the George region.
- Efficient Land Use: The site is already zoned for agriculture and has existing water use rights and infrastructure.
- Fire Risk Reduction: Removing dense invasive vegetation reduces the threat of wildfires.

Negative Impacts and Risks

1. Biodiversity and Ecosystems

- Loss of Indigenous Vegetation: Even though much of the site is degraded, clearance will still permanently remove 11–15 ha of habitat.
- Impact on Fauna: Potential loss of sensitive species (e.g., Duthie's golden mole), particularly those intolerant to soil disturbance.

2. Water Resources and Wetlands

- Wetland Disturbance: Road construction and orchard expansion may impact adjacent wetlands and streams.
- Water Pollution Risks:
    - Pesticide drift may contaminate nearby watercourses.
    - Surface runoff from steep slopes can carry sediment, nutrients, and chemicals into wetlands and rivers.
- Stormwater Flow Disruption: Roads and infrastructure may alter natural drainage patterns unless properly designed.

3. Soil and Erosion

- Erosion Risk: Steep slopes increase susceptibility to soil erosion if not managed with proper contouring and ground cover.

Mitigation Measures Required:

- To reduce the above risks, the following are essential:
- Maintain 30 m vegetated buffer zones around watercourses.
- Install culverts and contour drains to maintain natural flow and manage runoff.
- Follow strict pesticide protocols; avoid spraying during windy conditions.
- Implement cover crops and contour planting to reduce erosion.
- Use Alternative B for road access to minimize wetland disruption.
- Conduct environmental control oversight during construction.

Cumulative Impact Consideration:

Without mitigation: Moderate to high negative cumulative impacts, especially on biodiversity and wetlands.

With full mitigation: Impacts reduced to minor or negligible, with some potential for net positive ecological outcomes due to alien plant clearing and improved land management.

2. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr

1. Biodiversity Conservation

No-Go areas (e.g., forested zones, CBA1 and CBA2 areas) must be strictly excluded from development as per WCBSP 2017.

Outcome: No loss of intact indigenous vegetation or habitat for species of conservation concern (SCC) within these areas.

2. Wetland and Watercourse Protection

Minimum 30 m vegetated buffer zones must be established and maintained between cultivation areas and any watercourses/wetlands.

Outcome: No encroachment or disturbance of wetland habitat; water quality in streams and wetlands remains within acceptable ecological thresholds.

3. Access Road Development (Alternative B)

Culverts must be installed to maintain diffuse flow and wetland hydrology at the road crossing.

Construction must be limited to the dry season, and the disturbed area must be rehabilitated.

Outcome: Minimal alteration of wetland flow and structure; post-construction habitat condition stable or improved.

4. Soil Erosion Control

Contour planting and cover cropping must be implemented on all cultivated slopes.

Soil must be stabilised immediately after disturbance; erosion barriers installed where necessary.

Outcome: No significant soil erosion or loss of topsoil from orchard areas.

5. Water Quality Protection

No pesticide or fertiliser use within buffer zones.

Spraying must follow weather-based protocols (e.g., no spraying during windy conditions).

Implement vegetative filter strips to treat runoff before entering watercourses.

Outcome: No detectable pesticide or nutrient pollution in adjacent watercourses.

6. Alien Invasive Plant Control

All alien vegetation within and surrounding the development footprint must be systematically cleared and controlled.

Outcome: Reduction in fire risk, improved ecosystem functioning, and support for native vegetation regeneration.

7. Habitat Rehabilitation

All disturbed areas (outside the cultivation footprint) must be revegetated with indigenous plant species.

A search-and-rescue operation must be conducted for translocatable flora before clearance.

Outcome: Reinstated ecological connectivity and improved condition of degraded zones.

8. Faunal Species Protection

A 50 m buffer must be maintained around intact forest areas to protect fauna like Duthie's Golden Mole.

Construction staff must be trained to avoid disturbance to wildlife.

Outcome: No direct harm to fauna of conservation concern; habitats for sensitive species preserved.

9. Construction Phase Pollution Prevention

No fuel storage, refuelling, or waste disposal within 30 m of any watercourse.

Outcome: Zero fuel/oil spills; construction-related pollutants contained and removed.

10. Monitoring and Compliance

An Environmental Control Officer (ECO) must monitor all construction and operational activities.

Non-compliance must trigger corrective actions and, where necessary, cessation of work.

Outcome: Continuous compliance with EMPr conditions and adaptive management.

2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

All recommendations made by specialists must be conditions of the authorisation to ensure minimal impact is experienced.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.

The proposed activity should be authorised, subject to conditions-

Land Use Compatibility:

The property is zoned Agricultural I, and the proposed cultivation of macadamia and avocado trees aligns with existing land use rights.

A portion of the farm is already under active cultivation, and the expansion is a continuation of the lawful agricultural operation.

Site Selection and Scale:

The preferred alternative (11 ha) avoids the most sensitive biodiversity and wetland areas identified by specialists.

Specialist input resulted in a reduction of the development footprint from 15 ha to 11 ha, showing an effort to minimise ecological harm.

Positive Socio-Economic Contribution:

The activity will generate local employment, support agricultural productivity, and contribute to rural economic development.

It supports regional goals for resilient agriculture and food security, as outlined in the George SDF and Provincial Spatial Development Framework.

Environmental Mitigation:

All significant negative impacts identified (e.g. wetland disturbance, pesticide drift, erosion) are manageable through mitigation.

The development avoids high-sensitivity zones (e.g. CBA1, intact forest, wetlands) and includes buffer zones and rehabilitation commitments.

Sustainability and Resource Use:

The farm has existing water rights, and trees will be drip irrigated or managed as dryland, reducing water pressure.

Alien invasive vegetation will be cleared, reducing fire risk and enhancing biodiversity resilience.

No Irreversible Loss of Critical Biodiversity:

Impacted areas are degraded or previously cultivated; the development avoids irreversible loss of pristine habitats or protected areas.

Recommended Conditions for Environmental Authorisation:

1. Environmental Control and Oversight

Appoint an independent Environmental Control Officer (ECO) to monitor all construction and operational activities.

2. Buffer Zones

Maintain a minimum 30 m vegetated buffer between cultivated areas and any wetland or watercourse.

Enforce a 50 m buffer from intact forest habitat to protect sensitive faunal species.

3. Access Road Design

Only Alternative B may be used for wetland crossing.

Culverts must be installed to maintain diffuse water flow and minimise hydrological disruption.

4. Soil and Erosion Management

Implement contour planting and permanent cover cropping.

No planting on slopes >25% without additional soil stabilisation.

Water and Chemical Use

Adhere strictly to pesticide application protocols; no spraying during windy conditions.

Prohibit chemical storage or use within buffer areas.

5. Habitat Rehabilitation

Conduct search-and-rescue for vulnerable flora prior to vegetation clearance.

All disturbed areas outside the cultivation footprint must be revegetated with indigenous species.

Invasive Alien Plant Control

Implement the authorised Alien Invasive Species Management Plan.

6. Monitoring and Reporting

Submit biannual environmental monitoring reports to the competent authority for 2 years during the operational phase.

Include compliance updates and adaptive mitigation measures.

Conclusion:

With strict implementation of the mitigation measures and adherence to the recommended conditions, the proposed agricultural development presents low residual environmental risk and offers notable socio-economic benefits. It is consistent with spatial planning frameworks and environmental policies and should be authorised.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.

1. Timing of Biodiversity Surveys

Assumption: The vegetation and fauna assessments conducted during autumn are sufficiently representative.

Uncertainty: Many geophytes and annual plant species flower in spring, meaning some species of conservation concern may have been missed or under-represented.

Gap: Lack of a spring-season follow-up survey for more comprehensive species identification. As per the Terrestrial Biodiversity Assessment, May 2024: "it should be noted however that due to the year-round precipitation experienced in the Garden Route region this limitation is not considered to have had a highly significant effect on sampling efforts."

2. Accuracy of Conservation Mapping

Assumption: The Western Cape Biodiversity Spatial Plan (WCBSP 2017) and other mapping tools accurately reflect site sensitivity.

Uncertainty: Ground-truthing by specialists found some misclassified areas (e.g., degraded patches mapped as Critical Biodiversity Areas).

Gap: WCBSP updates post-report compilation (only with reference to the Terrestrial Biodiversity Assessment and Animal Species Specialist Report) were not reflected in the final specialist reports, though these specialists deemed this non-critical to their findings.

3. Effectiveness of Buffer Zones

Assumption: A 30 m vegetated buffer will be effective in preventing pesticide and nutrient runoff into wetlands.

Uncertainty: Effectiveness depends on maintenance, vegetation density, and compliance with no-application zones.

Gap: No empirical site-specific data on buffer efficiency under local rainfall and soil conditions.

4. Faunal Presence and Movement

Assumption: Sensitive species (e.g. Duthie's Golden Mole) are largely outside the development footprint.

Uncertainty: Actual distribution and population density within the broader site is not fully known.

Gap: No detailed trapping or telemetry data was collected.

5. Long-Term Soil Erosion Risk

Assumption: Contour planting and cover crops will adequately control erosion on steep slopes.

Uncertainty: Performance of these measures under extreme weather events or farming practice changes is not guaranteed.

Gap: No detailed erosion modelling or runoff simulation conducted. This is non-critical to the assessment findings.

6. Hydrological Impacts of Road Construction

Assumption: Use of culverts and dry-season construction will maintain wetland hydrology.

Uncertainty: The long-term effects of the road on subsurface flows and diffuse wetland recharge are uncertain.

Gap: No pre-construction hydrological baseline monitoring data or modelling provided. This is non-critical to the assessment findings.

***All assumptions, uncertainties and gaps in knowledge experienced by specialists have been mitigated using substantive supportive data.**	
2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.

1. Period for which the EA is required:

A minimum period of 10 years is requested. This accommodates:

- Orchard establishment and full maturity of macadamia and avocado trees.
- Long-term monitoring of environmental compliance and vegetation recovery.
- Ensures accountability for any delayed impacts (e.g. erosion, pesticide drift).

2. The date the activity will be concluded:

The following are timelines are estimations –

- Start of construction (site clearance and roadworks): within 6 months of EA issuance.
- Planting and irrigation installation: expected within 12–18 months of EA issuance.
- Conclusion of construction activities: estimated within 24 months from commencement.

3. When the post construction monitoring requirements should be finalised:

Post-construction environmental monitoring should be conducted for a minimum of 2 years following the conclusion of planting and infrastructure establishment. This includes:

- Monitoring of buffer zones, erosion control structures, and wetland conditions.
- Biannual reporting by the appointed Environmental Control Officer (ECO).
- Biodiversity rehabilitation progress in no-go and rehabilitated areas.

Final post-construction monitoring report should be submitted within 24 months post-completion, unless significant residual impacts require extended monitoring.

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.

No municipal potable water will be used during construction or farming.

The property already has existing lawful water use rights and a dam on site, providing an independent, non-potable source for irrigation.

Rainfall in the area is generally sufficient to support the proposed dryland macadamia and avocado orchards with only supplemental irrigation during dry periods or for fertiliser application with water.

Measures to reuse or recycle water:

1. Runoff and Stormwater Management:

Stormwater will be diverted into vegetated filter strips and swales, allowing infiltration and recharging of groundwater.

Contour planting and mulching will minimise surface runoff and promote soil water retention.

2. Nutrient Water Management (Fertigation):

Fertiliser applications will be combined with controlled irrigation (fertigation) to minimise leaching and reuse water efficiently within the root zone.

3. Buffer Zone Vegetation:

Vegetated buffers act as natural biofilters, cleaning any water runoff and allowing partial reuse by filtering into surrounding soils and aquifers.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.

1. Waste Reduction Measures

During Construction:
Pre-planning of materials: Only required quantities of construction materials (e.g., fencing, pipes) will be procured to reduce excess and waste.

Designated storage areas: Materials will be stored in demarcated, sheltered areas to prevent damage and waste due to weather exposure.

No packaging waste left on site: Contractors will be responsible for removing all packaging and waste daily.

During Operational Phase:
Integrated farm management: Efficient use of fertilisers, pesticides, and fuel to prevent over-application and reduce waste.

On-site composting of organic waste: Pruned plant material, fallen leaves, and non-diseased crop residue will be composted and reused as mulch or soil conditioner.

2. Waste Reuse Measures

Organic matter recycling:

Tree trimmings, wood chips, and organic residues will be reused as mulch or compost, reducing the need for synthetic soil amendments.

Reusing chemical containers (where safe):

Containers may be used for storing non-potable water for drip systems (in compliance with safety protocols).

Construction off-cuts:

Wood, plastic, or metal off-cuts (e.g., from fence installations) may be repurposed for other farm uses like bracing, posts, or temporary structures.

3. Waste Recycling Measures

Segregation of waste at source:

Waste will be sorted into recyclable (plastic, paper, metal) and non-recyclable categories.

Recyclable materials:

Plastic pesticide containers (triple-rinsed), metal scraps, and cardboard packaging will be sent to registered recycling facilities.

Hazardous waste handling:

Empty pesticide and fertiliser containers will be managed in accordance with hazardous waste disposal regulations, not buried or burned on site.

4. Waste Collection and Disposal

No on-site dumping or burning permitted.

All general and hazardous waste to be collected and disposed of off-site by a licensed waste service provider.

Construction waste will be removed promptly at the end of the construction phase.

Sanitation waste will be managed via serviced portable toilets during construction.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

Low-Energy Farming Design

Dryland Orchard Strategy

The proposed orchards (macadamia and avocado) are designed primarily as dryland systems, meaning: Minimal or no mechanical irrigation is required under normal rainfall conditions. This significantly reduces the need for energy-intensive water pumping systems.

Efficient Irrigation Systems (Where Required)

If supplemental irrigation is required, it will use:

Drip irrigation systems powered by gravity or low-pressure pumps. These systems are more energy-efficient than traditional overhead irrigation, as they deliver water directly to the root zone with minimal energy input.
Water is sourced from an on-site dam, reducing the need for long-distance pumping or pressurisation.

Use of Renewable Energy Sources (Possible Future Provision)

The site layout and farm infrastructure could accommodate the future installation of:

Solar panels for powering farm equipment, lighting, and water pumps. This reduces dependence on grid electricity or fossil fuels.

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT – ATTACHED SEPARATELY

Note: Duplicate this section where there is more than one Applicant.

I……, ID number ……in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;

- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;

- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;

- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;

- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;

- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Signature of the Applicant: Date:

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I **Samantha Teeluckdhari**, EAP Registration number **2023/6445** as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- 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, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, 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 decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

S. Teeluckdhari

23/06/2025

Signature of the EAP: Date:

Eco Route

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP – N/A

I ……, EAP Registration number …….. as the appointed Review EAP hereby declare/affirm that:

- I have reviewed all the work produced by the EAP;
- I have reviewed the correctness of the information provided as part of this Report;
- I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the specialist (if any), the review specialist (if any), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE SPECIALIST – ATTACHED TO SPECIALIST REPORTS

Note: Duplicate this section where there is more than one specialist.

I ……, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST – ATTACHED TO SPECIALIST REPORTS

I ……., as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s):
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):