

ANNEXURE W:

*Socio-Economic Impact Assessment &
Agriculture Viability Analysis*



**MULTI-PURPOSE
BUSINESS SOLUTIONS**

**Scoping for a Socio-Economic Impact Assessment underpinned by an
Agriculture Viability Analysis and Socio-economic Cost-Benefit
Assessment for the proposed Hoogeland Coastal Farmsteads
Development, George**



**Draft Consultative Report
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MULTI-PURPOSE BUSINESS SOLUTIONS CC

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Executive Summary

Attwood Property Developments (Pty) Ltd acquired the rights to lodge land development applications for a rural Agricultural Farmstead development and a rural Farm Village where settlers with valid ESTA tenure rights can be accommodated. The proposal is to reorganise the farm boundaries to create an agricultural settlement comprising small farms with a minimum extent of 5 ha, together with communal equestrian facilities, including a polo field, stables, paddocks, dressage rings, and riding trails. The farms north of the N2 National Road will be reduced from six to five cadastral units, and the proposed agricultural farms south of the N2 National Road will comprise 81 small farms that will be part of a Homeowners Association.

Consent for the consolidation and subdivision of several farms to create the 529-ha Hoogeland development was granted in 2021 by the Department of Agriculture, Land Reform and Rural Development, but the Consent has not been registered and expires on 10 September 2026. A new Reconfiguration Proposal for the Hoogeland footprint entails subdividing 529 ha into 57 small-scale agricultural farms, each with a minimum size of 5 ha, and 24 conservation parcels, resulting in 81 subdivided freehold properties. The proposal ensures the properties remain agricultural, while owners of portions sold on a freehold basis could establish a farming enterprise on a 4,5-ha portion of the farm unit, with a maximum hard-surface footprint of 0,5 ha for a dwelling and other supporting infrastructure.

The proposed Hoogeland Coastal Farmlands project will benefit the economies of George and the Garden Route District (Section 3)

All economic activities associated with the construction phase would benefit the primary, secondary, and tertiary sectors of the local economy, requiring raw materials (e.g., sand mining), construction materials (e.g., bricks, cement), and business services (e.g., professional services). In addition, household spending by residents will induce spending on salaries and wages, benefiting all three economic sectors. The operational agricultural activities and those on conservation parcels will support growth and employment across all three sectors. This will benefit the George economy, which registered an unemployment rate of 18,4% in 2022, with 32,6% of the working-age population not economically active.

The Reconfiguration Proposal aligns with national, provincial, and local policies and strategies, supporting spatial planning and advancing strategic goals at all levels (Section 5)

George Municipality's approach to rural development is based on protecting rural land and resources, supporting agriculture and tourism, improving livelihoods and infrastructure, strengthening existing rural settlements, and integrating rural economies into the broader regional economy. The proposed development involves establishing small-scale farming units and securing residential rights for farm workers and beneficiaries with established tenure on the Hoogekraal Farm 238 property. The proposal aligns with the WCPSDF by improving the agricultural potential of the Hoogekraal footprint, which is not currently farmed productively, while also safeguarding the rural character and scenic assets. The proposed Hoogeland reconfiguration retains agriculture where applicable and, through viable farming practices, would generate economic growth and employment opportunities in the George Municipality. Although the George SDF discourages new rural settlements, the proposed residential village for farm workers aims to formalise the tenure rights of existing beneficiaries on the farm, rather than creating a new settlement.

An Agricultural Viability Analysis was conducted to assess the viability of selected agricultural activities within the Hoogekraal footprint (Section 6)

Pastures for grazing were, and to some extent still are, the historical farming enterprise of the Hoogekraal Farms. However, cattle grazing and feed production are declining in favour of higher-value crops such as avocado and macadamia. Although about 40% of the Hoogekraal footprint is suitable for these two crops, limited irrigation capacity (supplemental water requirements) reduces the viable area for avocado and macadamia farming to 25 ha and 23 ha, respectively. Farming avocados and macadamia with a more focused, capital-intensive strategy, concentrating production on higher-potential soils, would permit only a small cultivated footprint because of water constraints and the assumption that future returns will take time to realise. Both the avocado and macadamia farming models show negative NPV and a modest IRR; however, they perform better on a smaller agricultural footprint than the historic scenario of dryland pastures and livestock.



If one assumes that only 25 ha of avocado and 23 ha of macadamia orchards are viable, regardless of the farming enterprise's profitability, it would still be possible to reconfigure the remaining agricultural portion (excluding the conservation portion). If the net 290 ha (net of the avocado footprint) and 292 ha (net of the macadamia footprint) are divided by 5 ha (the average envisaged size of the small-scale farming units), the envisaged number of 57 units would still be achieved (all else being equal). This may imply that avocado or macadamia orchards of up to 25 ha could still be included in the proposed reconfiguration without reducing the number of small-scale agricultural units. A "co-operative"/out-grower model could be considered, with orchards located on the most suitable small-scale farms (soil and access to water), while the rest maintain dryland pastures and/or low-intensity vegetables or fruit trees for their own use.

Apart from retaining the land's agricultural capacity, the impact of the number of farming units in the Reconfiguration Proposal should be weighed against the fact that most current farm units are not economically viable or sustainable. The proposed subdivisions will therefore not result in the loss of a single economically viable farm unit.

Socio-Economic Cost-Benefit Analysis (Section 7) of the Reconfiguration Proposal against the continued use of the property for dryland pastures and livestock farming, or the introduction and cultivation of high-value crops such as avocados and macadamia

Based on their water constraints, these high-value (irrigated) crops would be restricted to 25 ha of avocados, or 23 ha of macadamias, or a mixture of these that doesn't exceed 24 ha. The owners may also consider other crops, such as vegetables.

A financial analysis was prepared to assess the agricultural potential of the following three Scenarios:

- **Scenario 1:** A reconfiguration of 529 ha to include 57 small-scale farming units and 24 conservation parcels as opposed to 257 ha of dryland (rain-fed) pasture and livestock production.
- **Scenario 2:** A reconfiguration of 529 ha to include 57 small-scale farming units and 24 conservation parcels as opposed to 25 ha of avocado orchards (constrained due to irrigation water).
- **Scenario 3:** A reconfiguration of 529 ha to include 57 small-scale farming units and 24 conservation parcels as opposed to 23 ha of macadamia farming (constrained due to irrigation water).

By categorising the benefits and costs of developing a dwelling on agricultural smallholdings with a farming enterprise and on conservation parcels with a conservation lifestyle, it is possible to compare the current values of the Reconfiguration Proposal with those of conventional farming for dryland pasture, avocado, or macadamia. The Reconfiguration Proposal required various assumptions regarding building costs, uptake of opportunities, and fiscal benefits to the local authority. These cost and benefit elements were categorised and aggregated across the three scenarios. The annualised nominal free cash flow for conventional farming and the Reconfiguration Proposal (the socio-economic value addition) was discounted to present value in current terms. The results are presented under a Micro cost-benefit approach, which tests whether the capital invested in the Reconfiguration Proposal is recovered from the recurring value of ongoing farming and conservation operations, and a broader macroeconomic impact approach, which also includes construction income, property rates and induced household spending. A positive Net Present Value (NPV) of conventional farming would be deducted from the NPV of the Reconfiguration Proposal under either approach.

The results suggest that conventional farming, whether with dryland pastures and livestock or with avocados or macadamia, is not economically viable under the applied assumptions. Higher-value crops are constrained by the availability of irrigation water and, therefore, by the number of hectares that could be planted, suggesting that scale may be a challenge in justifying working capital and establishment costs. This results in a negative NPV; although the Internal Rate of Return (IRR) is positive for avocado and macadamia, it is sub-optimal given the risk associated with the nature and scope of farming. This represents an opportunity cost, implying that funding losses should be channelled to the next-best option, namely the Reconfiguration Proposal. Subtracting a negative NPV for conventional farming effectively adds to the NPV of the Reconfiguration Proposal, as it represents a saving.

Under the Micro cost-benefit approach, the decision-relevant test, the capital invested in the Reconfiguration Proposal is not recovered from the recurring value of ongoing farming and conservation operations alone, in any of



the three scenarios (benefit-cost ratio ranging from 0,161 to 0,164). Under the broader macroeconomic impact approach, which also includes construction income, property rates and induced household spending, the Reconfiguration Proposal shows a positive net benefit relative to conventional farming with pastures and livestock, avocado, or macadamia (within the constraints of irrigation water) over 25 years. The questionable feasibility of conventional farming under irrigation water constraints, compared with the Reconfiguration Proposal, which would incur a loss of only 16,2 ha of low-quality soil, suggests the Reconfiguration Proposal remains the preferable option among those assessed, based on its broader economic and social contribution.

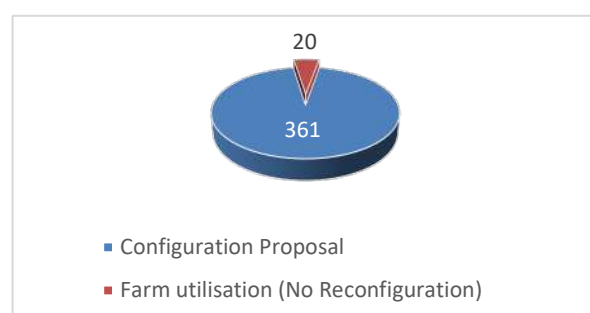
Indicator	Scenario 1	Scenario 2	Scenario 3
Micro cost-benefit approach: Net Present Value (R'million)	(R2 539,4)	(R2 545,7)	(R2 550,3)
Micro cost-benefit approach: Benefit-Cost Ratio	0,164x	0,162x	0,161x
Macroeconomic impact approach: Net Present Value (R'million)	R211,2	R204,9	R200,3
Macroeconomic impact approach: Benefit-Cost Ratio	1,070x	1,067x	1,066x
Internal Rate of Return (IRR) (no reconfiguration)	0,2%	5,8%	7,4%

The table above indicates two approaches for interpreting the cost-benefit results, applied consistently across all three scenarios. The Micro cost-benefit approach asks a narrow, practical question: once the small farms and conservation infrastructure are built, does the ongoing income from farming and conservation activities pay back what it cost to build them? Leaving aside the value generated during construction itself, to avoid counting the same money twice, the answer is no in all three scenarios: building the Reconfiguration Proposal costs more (over R3 billion) than the farming and conservation activities on the reconfigured land are expected to earn back over the following 25 years. This statement compares the Reconfiguration Proposal's construction cost to its ongoing income. It is not a finding that farming with livestock, avocado or macadamia would have been the better choice: that comparison is addressed separately below under the broader Macroeconomic impact approach, and in the agricultural viability analysis in **Section 6**, both of which show conventional farming performing worse than the Reconfiguration Proposal.

The Macroeconomic impact approach takes a broader view, adding construction income, property rates and induced household spending to the recurring operational value. On this basis, all three scenarios show a positive net present value: R211,2 million (Scenario 1), R204,9 million (Scenario 2) and R200,3 million (Scenario 3), with a benefit-cost ratio ranging from 1,066 to 1,070 across the three scenarios. This reflects the total economic and social contribution of the Reconfiguration Proposal, rather than a strict return on the capital invested, and is the approach used in the detailed results in **Section 7.9** and **Section 7.10**.

The Internal Rate of Return reflects the profitability of continuing with conventional farming instead of the Reconfiguration Proposal, calculated without reference to either approach above. It is lowest for dryland pasture and livestock (0,2%) and highest for macadamia (7,4%), though all three remain below the return an investor would typically require, which is why each is treated as a cost (or, where the net present value of farming is negative, a saving) in the cost-benefit analysis rather than a standalone alternative.

The analysis also indicates that conventional farming with any of the three crops would, on average, sustain 20 jobs per annum, while the configuration proposal could sustain 361 jobs per annum. This translates to 18 jobs for the Reconfiguration Proposal for every 1 job associated with conventional farming.





The Reconfiguration Proposal accounts for almost 72,8% of employment, while 27,2% is associated with conservation properties. A breakdown of total employment (permanent and seasonal) indicates that avocado farming is the most labour-intensive, while pastures and livestock are less labour-intensive. However, the dwellings provide the largest staff complement.

Circling back to the Reconfiguration Proposal and whether it would result in a viable farming unit, the proposal assumes avocado or macadamia farming would be accommodated within irrigation water constraints, with the remainder used as pastures for livestock. It is assumed that a small-scale farm would not yield returns sufficient to justify funding the farming enterprise. However, proposals suggest creating a co-operative or outgrower entity that, by consolidating farming across participating owners, would create the scale needed to farm the proposed crops and operate as a viable entity (farming unit). A group structure could be introduced to enable subsidiary entities to farm specific crops. Undoubtedly, economies of scale could be achieved, supporting the viability of the farming enterprise. The Homeowners Association (HOA) could drive such an initiative, creating the alignment and cohesion among owners.

Several potential positive and negative socio-economic impacts are associated with the Proposed Reconfigurations (Section 8)

Cumulative impacts usually relate to other developments or activities in the immediate area that could amplify the positive or negative effects of the proposed reconfiguration of the Hoogekraal Farm during construction and operation. In this instance, cumulative impacts are considered only for similar projects in the immediate area that would require subdivision of existing agricultural land. Rezoning agricultural land for residential or mixed-use purposes in the surrounding area is unlikely to be approved, but may be considered for hospitality and tourism-related uses in isolated cases.

The following table summarises the socio-economic impacts associated with the proposed reconfiguration and their corresponding significance after implementing mitigation measures (i.e., the residual impact). Note that the table shows only impacts not rated by other specialists.

Nature of the Impact	Rating after mitigation (Residual impact)	Cumulative
Construction		
Traffic flows along access roads	Refer to Transport Impact Assessment	
Nuisance factors (dust and noise)	Low (-)	Low (-)
Influx of job-seekers	Low (-)	Low (-)
Increase in local crime	Low (-)	Low (-)
Economic income and employment opportunities	Medium (+)	Medium (+)
Operations		
Increased traffic flows along access roads	Refer to Transport Impact Assessment	
Sense of place	Low (+)	Low (+)
Provision of housing and amenities to farmworkers	Low (+)	Low (+)
Agricultural production and new enterprises	Low (+)	Low (+)
Surrounding property values	Low (+)	Low (+)
Local income and employment opportunities	Low (+)	Low (+)
Revenue for public authorities (relative to conventional farming)	High (+)	High (+)

Mitigation measures

The Developer should consider and implement the measures recommended by various specialists to mitigate potential negative impacts. Monitoring and evaluating socio-economic impacts, along with ongoing assessment of



the outcomes, would provide further insights into the social and economic fabric and the effects on surrounding land users. The following mitigation measures related to the socio-economic context are proposed and should be incorporated into an Implementation Plan as part of the Construction Environmental Management Plan (CEMP) and/or the Operational Environmental Management Plan (OEMP):

- Establish a communication protocol to inform residents and surrounding landowners of activities, timelines and intended impacts (pre-construction and construction) and utilise signage to ensure effective management of traffic across the farming footprint.
- The developer of the farm worker village should use local labour from the George area as a mechanism to support the local economy.
- Owners who engage in low-level commercial or lifestyle farming activities should consider and be encouraged to use the farm workers who are resettled from part of the Hoogkraal Farm to the new farmworker village.
- Contractors should hire George (local) residents whenever possible (construction) and manage any potential influx of job-seekers, and in this way prevent loitering across the expanse of the farming footprint.
- Owners and contractors should agree on mechanisms to secure construction sites to prevent theft, given the expense of the small-scale farming units and the likely spread of construction activity over a wide area.
- Implement recommendations from relevant specialists to mitigate negative impacts related to visual, traffic, and nuisance factors on the sense of place (construction and operations).

Impact Statement

Several socio-economic impacts of the proposed reconfiguration were identified. Positive impacts include providing housing and amenities for 110 farmworkers with tenure rights and increasing agricultural production of high-value crops such as avocados and macadamias (pending water availability). The project would benefit the George Municipality by maintaining employment among existing contractors and triggering successive rounds of spending, thereby generating income for the local economy. An estimated R3,3 billion in capital investment could contribute R2,6 billion (net of import leakage) to the Western Cape's GGP during construction, with the George economy as a significant beneficiary. The project could sustain approximately 11 430 direct, indirect, and induced employment opportunities.

An estimated R2 billion in operational income could generate R2,5 billion (net of import leakage) in nominal terms over 25 years for the Western Cape economy's GGP. It could also create 6 462 direct, indirect, and induced employment opportunities over 25 years, with salaries that could boost the economic income by R1 080,2 million over 25 years, or roughly R43,2 million per year.

Farming avocados and macadamia with a more focused, capital-intensive strategy, concentrating production on higher-potential soils, would allow only a small cultivated footprint because of water constraints and the assumption that future returns will take time to realise. Both the avocado and macadamia farming models show negative NPV and a modest IRR; however, they perform better on a smaller agricultural footprint than the historic scenario of dryland pastures and livestock.

Over 25 years, the net benefit of the Reconfiguration Proposal outweighs farming with pastures and livestock, or avocado or macadamia (within irrigation water constraints), on a conventional basis. The questionable feasibility of conventional farming under irrigation water constraints, compared with the Reconfiguration Proposal, which would incur a loss of only 16,2 ha of low-quality soil, suggests that the proposal would deliver greater socio-economic benefit if implemented. Potential (minor) negative impacts include increased traffic, loss of sense of place, nuisance factors, and an influx of job seekers during construction. If the general farming footprint is well managed and the recommended mitigation measures are implemented, the significance of these impacts would be low to moderate.

Our assessment indicates that the socio-economic benefits of the proposed Reconfiguration outweigh any potential socio-economic drawbacks as mentioned above. As a result, no fatal socio-economic flaws have been identified or are expected for the proposed reconfiguration of the Hoogeland Farmstead development.



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1 BACKGROUND

1.1 Introduction

Attwood Property Developments (Pty) Ltd proposes a rural agricultural farmstead development and a rural village to accommodate current settlers (farm workers) with valid ESTA tenure rights. This requires an application to rezone and subdivide 32 portions of Farm Hoogekraal No 238 and two portions of Farm Buffelsdrift No 227, George. The Applicant envisages 57 Agricultural farms and 24 Nature Conservation Farms, as well as a Farming Village to house 110 farmworker families with permanent tenure rights.

The proposed Hoogeland Coastal Farmsteads and Farming Village requires a new application for the rezoning and subdivision of 32 portions of the Farm Hoogekraal No 238 and two portions of the Farm Buffelsdrift No 227, George (Marika Vreken, 2026). The Consolidation, Rezoning and Subdivision Application for the proposed development stated that, "The 34 land parcels south of the N2 National Road will form the application area for the 'Hoogeland Coastal Farmsteads'. These portions will be consolidated into a single property to create a farm of $\pm$ 530 ha, followed by the rezoning of the consolidated Farm from "Agriculture Zone I" and "Business Zone III" to a "Subdivisional Area" overlay zone in terms of Section 15(2)(a) of the Land-Use Planning By-Law for George Municipality, 2023."

Dr Jonathan Bloom of Multi-Purpose Business Solutions was appointed as an independent consultant to prepare a Socio-Economic Impact Assessment of the proposed development. Dr Bloom (PhD, Corporate Finance) is the managing member of Multi-Purpose Business Solutions and was a professor of real estate at Stellenbosch University until 2013. He has conducted more than 100 socio-economic impact assessments and other evaluations as an independent consultant for real estate and various development projects across Southern Africa. Jonathan has research skills in designing and executing research projects from both qualitative and quantitative perspectives. He majored in statistics, finance, and business management, and his expertise in statistical modelling of economic factors and cost-benefit analyses has helped clients assess the socio-economic impacts of various projects. Refer to **Annexure C** for a declaration confirming Dr Bloom's independence, and **Annexure D** for his *Curriculum vitae*.

1.2 Terms of Reference

The Socio-Economic Impact Assessment includes the following:

1. Description and understanding of the nature and scope of the proposed project, location, layout, etc.;
2. An overview of economic development patterns in the George and Garden Route District Municipalities;
3. A socio-demographic and economic profile of the local population;
4. Contextualise the proposed development in terms of spatial planning, strategic documents and other guidelines to assess the fit from an economic perspective;
5. Prepare a Socio-economic Cost-benefit analysis to assess conventional farming versus lifestyle farming with the retention of the property for Agriculture;
6. Prepare an Agriculture Potential Study to assess historical farming (grazing and pastures versus farming with higher value crops of avocados and macadamia nuts
7. Identify and assess possible social and economic impacts/consequences of the proposed development;
8. Ascertain the overall monetary benefits, contribution to economic income and job creation potential; and
9. Propose a framework for monitoring and evaluation of the socio-economic impacts.

1.3 Approach & Methodology

Socio-economic cost-benefit analysis and socio-economic impact analysis are not directly comparable, but they are complementary, offering both a micro-level appraisal and a macroeconomic assessment of the proposed

development. Our approach to assessing the socio-economic impacts of the proposed development is shown in **Figure 1**. The illustration indicates that evaluating a project's financial feasibility and long-term viability is a vital first step, as only a financially sustainable project can yield long-term economic benefits. It must also be compatible with and demonstrate integration into economic and spatial planning for the area, including economic alignment with spatial planning. These challenges are essential to economic desirability, ensuring that the proposed development aligns with economic planning as outlined in spatial development plans, local economic development strategies, and related area plans.

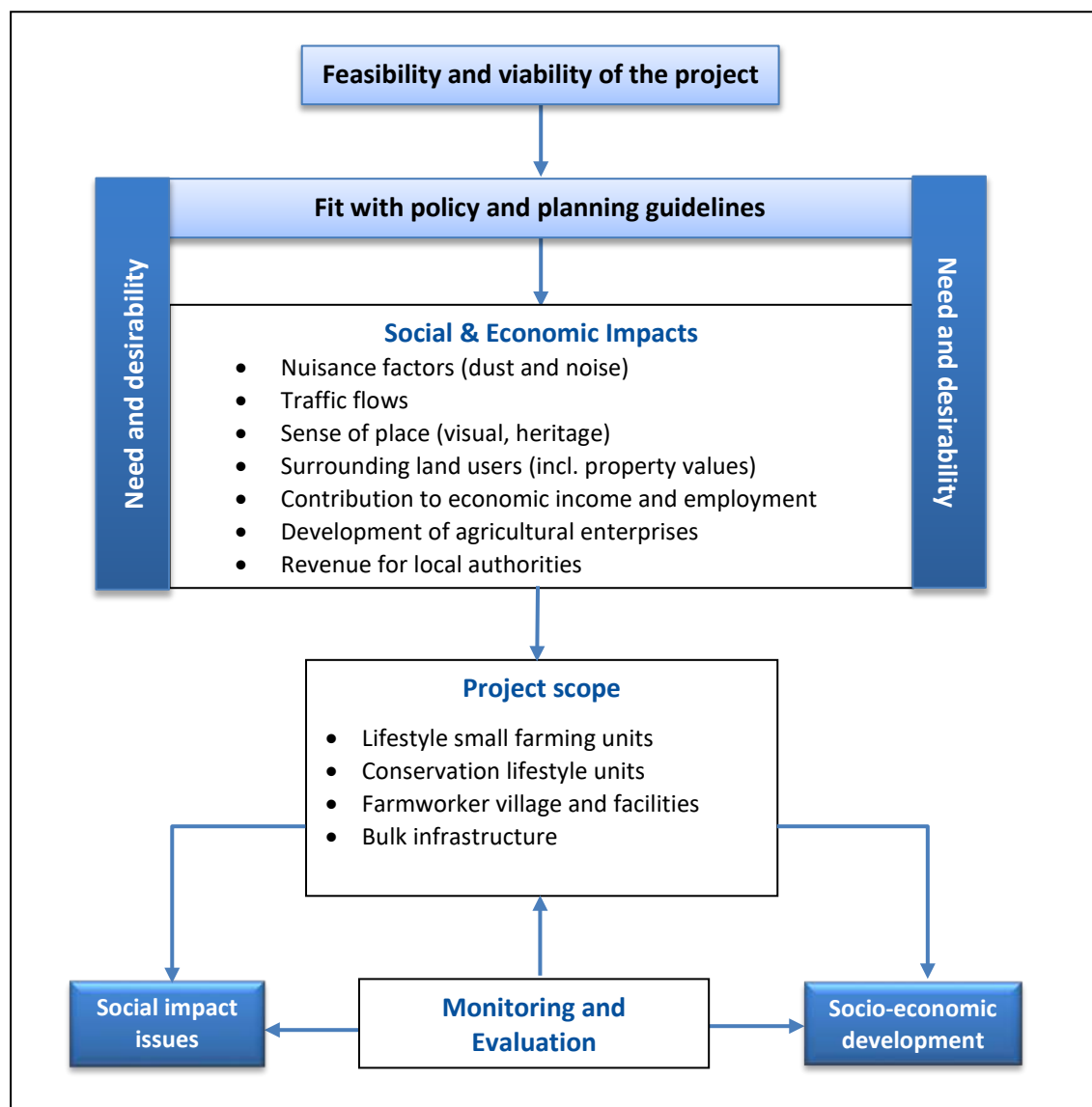


Figure 1: Methodology used for specialist socio-economic input for the EIA process

Source: Multi-Purpose Business Solutions

In accordance with the *Guideline for Involving Economic Assessment Specialists in EIA Processes* (CSIR, 2005) and the *Guideline for Involving Social Assessment Specialists in EIA Processes* (Department of Environmental Affairs and Development Planning, 2007), the project should align with planning frameworks and be desirable from a societal cost-benefit perspective, particularly regarding social impacts. The *Need and Desirability Guidelines* (Republic of South Africa, 2014) also serve to assess the economic and social justification for the proposed development in the specific location. Furthermore, compliance with *Appendix 6 of the NEMA Regulations (Annexure B)* and alignment with existing guidelines are essential.



Given the nature of the proposed activities and the project's importance for direct investment in George Municipality and the protection of agricultural land, monitoring and evaluation are essential throughout the construction of dwellings on the small-scale farming units and conservation units, as well as during operations. Both the envisaged positive and potential negative impacts need to be monitored through an inclusive and credible process, with a broad framework outlined in this report (**Section 9** in Impact Assessment).

1.3.1 Data gathering and analysis

The George Municipality is identified as the study area for the socio-economic impact assessment (see the Socio-Demographic and Economic analysis in **Section 4**). Our approach to addressing comments from stakeholder groups and Interested and Affected Parties (I&APs) is to incorporate the socio-economic inputs from the EAP's environmental process and assess them from a socio-economic perspective. Where applicable and if required, I&APs will be identified for further consultation. We may, at our discretion and if required, engage in further discussions with the identified parties and obtain additional information for inclusion in the report.

Secondary sources (including reports and publications) are consulted to inform the assessment and to complement the primary research. Occasionally, this would include using Artificial Intelligence (AI) to distil large volumes of information and to prompt for guidance on accessing sources and distilling complex matters. Sources are verified and checked to ensure the integrity of the work and, where applicable, its alignment with the inputs used in the context provided in the report.

1.3.2 Impact assessment

The proposed project would have both qualitative and quantitative impacts (benefits and costs) on the area's socio-economic fabric. We consider the core project's quantitative economic impacts, i.e. positive and negative consequences, and analyse the socio-economic impacts. Where applicable, a qualitative assessment of benefits and costs from a social perspective is provided, and the different impacts are assessed using the impact rating methodology outlined in **Annexure A**.

Per NEMA EIA Regulations (2014, as amended), the potential impacts of the following alternatives are assessed and compared:

- **Preferred Alternative:** 57 Agricultural Farms, 24 Nature Conservation Farms, 110 group housing units in the Farming Village, and Private Open Spaces
- **No-Go Alternative:** No development, i.e. the *status quo* is maintained

Estimating the economic impact of a project or development can help understand its potential benefits to the local economy. However, estimating these benefits is more helpful for understanding the likely range of impacts than for producing precise figures. An economic impact assessment traces spending through an economy and measures the cumulative effects of that spending over time. Defining the area of influence is an important first step, as it will have local and regional impacts.

A Socio-Economic Impact Analysis evaluates the direct and indirect contributions of construction expenditure and operational revenues to the economy by applying multipliers. Once the direct investment is determined, the indirect and induced impacts are estimated. A Social Accounting Matrix (SAM) is utilised to assess and estimate the project's indirect and induced impacts on the local or regional economy. A SAM illustrates the flows of all economic transactions within an economy (regional or national) and the total direct contribution to, as well as the indirect impact on, the economy in terms of value added to Gross Geographic Product (GGP).

The multiplier effect describes the relationship between a specific type of economic activity and the total additional activity it generates. An Economic Impact Analysis relies on the multiplier concept, which estimates the additional economic activity generated by an investment of R1. It is called a multiplier because the total impacts are larger than the initial, direct impact of an investment during construction or operations. For example, an aggregate economic multiplier of 2,50 indicates that for every Rand spent on operations, R2,50 is generated. After subtracting



the original R1,00 in operational spending (the direct impact), R1,50 in additional spending on goods and services remains, representing the indirect and induced impact.

1.4 Assumptions

The following key assumptions were applied to employment and economic income during construction and operations:

- The structure and composition of the Western Cape economy will remain unchanged (a requirement for multiplier analyses).
- No significant political or other administrative changes will take place on a national or provincial level.
- A period of 12 years is envisaged for the development, which will be staggered depending on unit sales. A 1-year lag is envisaged for each activity: selling the farm, constructing the farm dwelling, and commencing lifestyle agricultural activity. This means that the time from sale to the commencement of farming activities could take 3 years.
- Only total labour demand is considered, regardless of race, gender or skill level.
- An import leakage¹ of 20% was assumed for construction.
- Employment densities reflecting full-time equivalent jobs during operations are applied to estimate employment from operations

1.5 Limitations

Several limitations were identified during the study; they do not affect the study outcomes and are highlighted to provide context:

- Although the 2022 Census high-level results have been released, many issues cast doubt on their credibility and validity. The large undercount of approximately 30% far exceeds any acceptable norm and has led to considerable criticism of the methodology and other aspects. Data at the Municipal level provides some indication of socio-demographic characteristics, but no granular analysis at the sub-place level, as defined by Statistics SA, is possible.
- In the absence of credible Census data, the socio-demographic profile of the study area is based on information extracted from the *2023-24 Municipal Economic Review & Outlook for the Garden Route District* and the *2026 Review of the George Integrated Development Plan 2022–2027*.
- The economic impact of the construction period is an estimate subject to market demand and various external factors beyond the developer's control, which may result in different actual outcomes.
- Local research to estimate full-time equivalent jobs related to residential development is not available. International research was used to estimate the number of full-time equivalent jobs, which may differ in the South African context.

¹ Leakage refers to capital or income that exits an economy or system rather than remaining within it.

2 PROJECT DESCRIPTION

2.1 Project location, site description and zoning rights

Lagoonbay Lifestyle Estate (Pty) Ltd owned 32 portions of the Farm Hoogekraal No 238, and two portions of the Farm Buffelsdrift No 227, in the Division and Municipality of George. In 2021, the National Department of Agriculture approved the consolidation and subdivision of the 530-ha application area under the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970), to create 205 farms ranging from 2 ha to 60 ha on 32 portions of the Farm Hoogekraal No 238, and two portions of the Farm Buffelsdrift No 227, in the Division and Municipality of George (Consent No 55912, Department of Agriculture, Land Reform and Rural Development, 2021). The proposed 530-ha Hoogeland rural development is located just outside Glentana, along the Garden Route, and is bordered by the Maalgate River and the Indian Ocean (**Figure 2**).

The property was sold to Attwood Property Developments (Pty) Ltd, which wishes to submit an application to rezone and subdivide the 34 cadastral units for a rural agricultural farmstead development, Hoogeland Coastal Farmsteads, on the same approved footprint. The proposed development includes 57 Agricultural farms and 24 Nature Conservation Farms, as well as a Farming Village to house 110 farmworker families with permanent tenure rights.

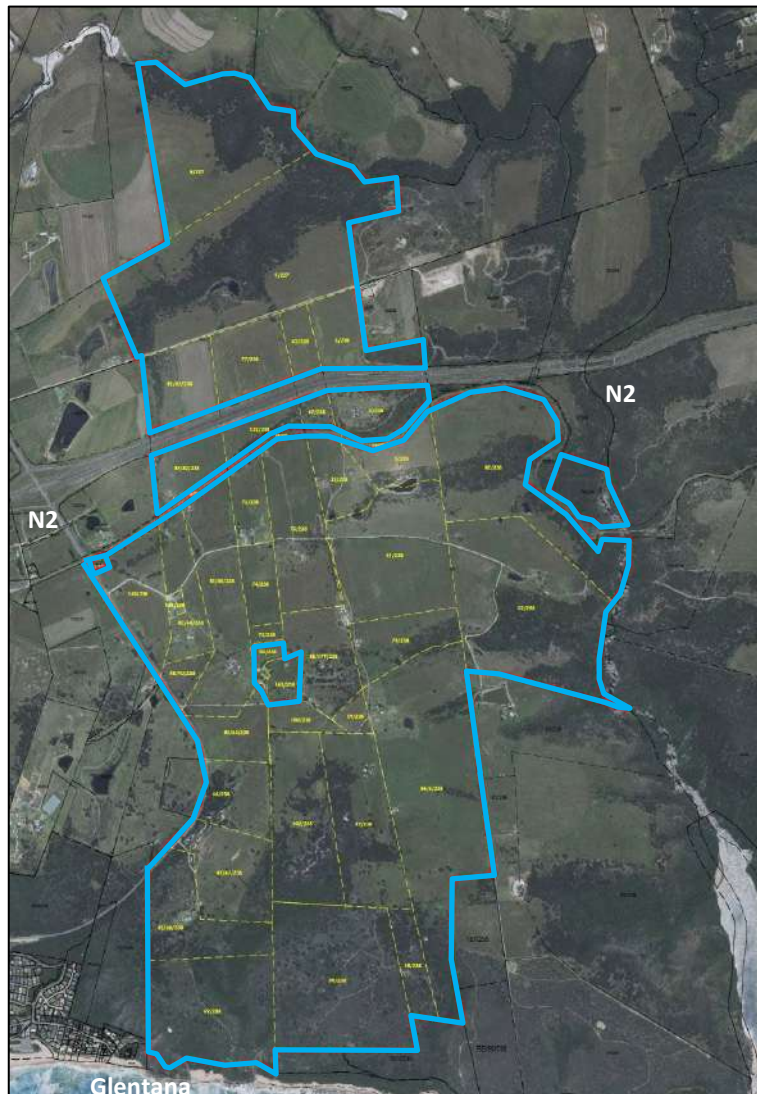


Figure 2: The properties included in the application for the Hoogeland Coastal Farmlands and Farm Village

Source: Marike Vreken, 2026

2.2 Surrounding land users

The application area spans the N2 National Road: the farms north of the N2 are vacant, with no structures, whereas those south of the N2 are used for grazing but have large areas of fallow land. The area contains various buildings, such as agricultural homesteads with outbuildings, the Hoogekraal Primary School, the Hoogekraal Superette, and multiple informal settlements where farmworkers reside. The surrounding area is predominantly rural, with agricultural activities such as cultivated lands and natural grazing areas, as well as dispersed farmsteads. The George Airport is located 6 km northwest, the Glentana residential area is southwest, and the Herolds Bay Nature Reserve is located along the eastern side of the application area (**Figure 3**).

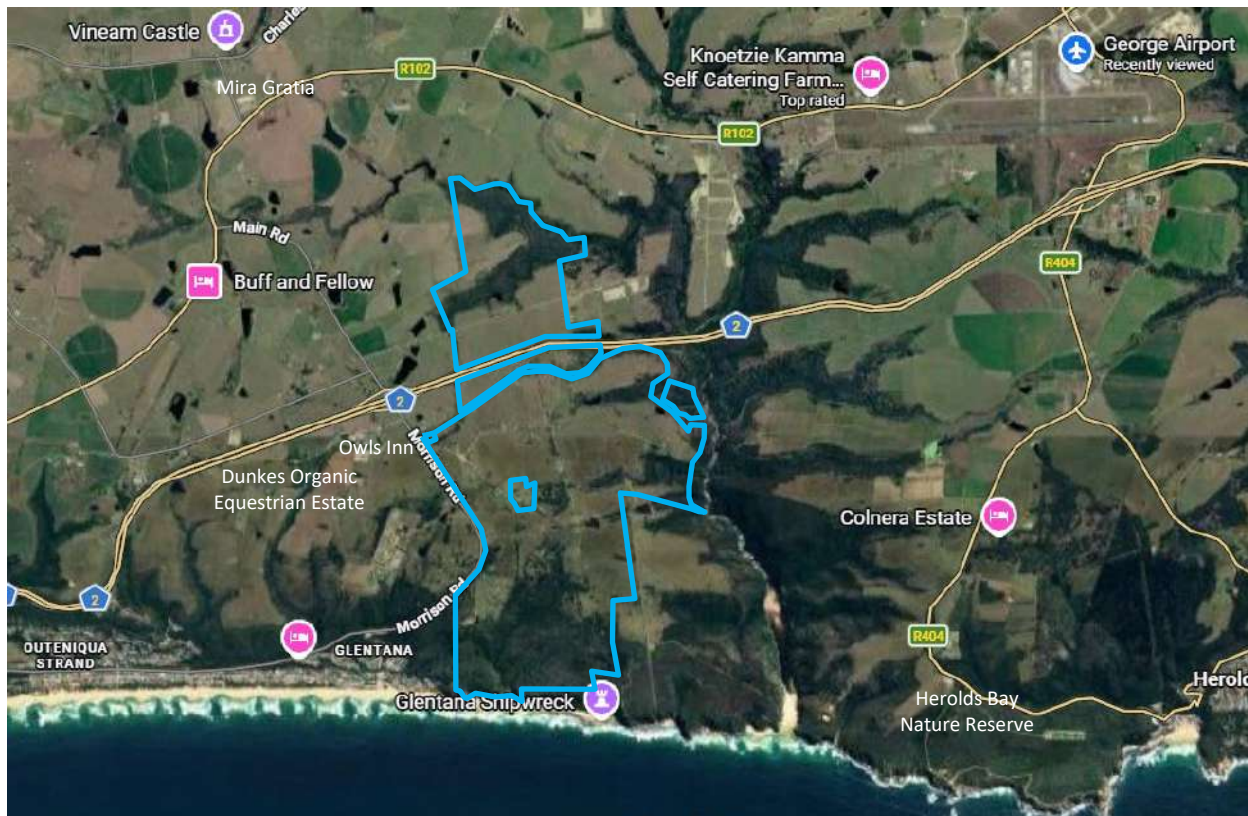


Figure 3: The proposed Hoogeland Coastal Farmheads development site and surrounding land uses.

Some of the prominent land users near the proposed development area include the following:



Glentana is a small seaside town with a total population of 554 in 2011. It offers sandy beaches, warm Indian Ocean water for swimming, sunbathing, and surfing, and a range of outdoor activities (<https://www.capetourism.com/glentana/>)

Herolds Bay Nature Reserve, which aims to restore and protect a pristine stretch of coastline, offers access to its trails or lets you enjoy the views and natural beauty of the Cape Floral Kingdom (<https://en.hbnr.org.za/about/>).





Colnera Estate offers four small self-catering chalets set among the trees (<https://www.colnera.co.za/chalets/info/>)

Buff and Fellow - 10 accommodation units, game drives, picnics and several outdoor activities (<https://www.buffandfellow.co.za/>)



Mira Gratia – Tranquil farm stay with luxury, charm, breathtaking views, and accommodation in three rooms and an eco-cabin (<https://miragratia.co.za/e/>)

The Owls Inn Country Villa and Spa - three self-catering units, each featuring a private entrance and secure shared parking area (<http://owlsinnquestlodge.co.za/>)



Knoetzie Kamma Farm - Self-Catering facilities with five rooms and two cottages with access to a shared kitchen and outdoor braai area (<https://www.knoetziekamma.co.za/index.php>)

Dunkes Organic Equestrian Estate – Guest House or Cottage accommodation, with views of the mountains, and access to swimming pool, natural pond, pizza oven, fire pit, and braai facilities (<https://dunkesorganicequestrianestate.co.za/>)



The existing **Hoogekraal Primary School** on Portion 10 of the Farm No 238 will be retained and accommodated on Erf 82.



2.3 Proposed development

Attwood Property Developments (Pty) Ltd acquired the rights to lodge land development applications for a rural Agricultural Farmstead development and a rural Farm Village where settlers with valid ESTA tenure rights can be accommodated. The proposal is to reorganise the farm boundaries to create an agricultural settlement comprising small farms of approximately 5 ha and larger, together with communal equestrian facilities such as a polo field, stables, paddocks, dressage rings, and riding trails. The farms north of the N2 National Road will be reduced from six cadastral units to five, and the proposed agricultural farms south of the N2 National Road will comprise 81 small farms that will be part of a Homeowners Association.

The following land uses are proposed south of the N2 (**Figure 4**):

- **57 Agricultural Farms** that permit agricultural activities on these properties, such as orchards, vegetable gardens, and grazing paddocks.
- **24 Farms zoned for Nature Conservation:** Farms where more than 50% of the area has been identified as environmentally sensitive will be zoned as “Open Space Zone III” (Nature Conservation Area), with a demarcated footprint of 2 000 m² for the construction of a dwelling and associated infrastructure. The remaining area will be preserved as a natural landscape, with trails or low-impact amenities designed to minimise ecological disturbance.
- **Private Open Spaces** (including communal recreation facilities such as equestrian facilities, stables, arenas, clubhouses, etc.). The Equestrian Facility will be privately owned but available for use by residents and HOA members. The proposed Private Open Spaces also include trail networks that connect properties. Equestrian paths will be designed to minimise soil compaction, erosion, and runoff. Existing graveyards are located within private open spaces (Erven 85 & 92), and other open spaces contain dams that will be utilised for irrigation.
- **Hoogeland Farming Village (Group Housing):** The proposed residential village will consist of 110 residential units (17 units/ha) available only to beneficiaries with established tenure rights in the application area. The property is located between the N2 National Road and the railway line. The proposal is to create a sustainable village with recreational facilities, communal food gardens and a community hall. Beneficiaries will receive a constructed house, with ownership via sectional title. The Farming Village will be developed first, and beneficiaries will be relocated there before the Hoogeland Coastal Farmsteads are developed and occupied. The developer will approach the Department of Land Reform for assistance with subsidies to construct these homes.

The Services Reports (EDS, 2025; 2026a) indicated the following bulk service requirements for the proposed development:

Water

- The existing farms collectively have an annual water allocation of about 1,88 million m³. Water is currently abstracted from the Maalgate River using facilities that comply with the existing lawful on-site water rights. It is proposed to use these facilities to draw water from the Maalgate River into a central dam. From there, water will be pumped to a central treatment and distribution point situated in the northern part of the site, just south of the existing railway line.
- It is proposed to install a buffer tank at this location, where water will first undergo filtration. After this initial treatment, the water will be purified to meet potable standards and then supplied to the residential village through a proposed pump station.
- Filtered water will be supplied from this location to each farm via a newly constructed pump station. Bulk reticulation to each farm will follow the proposed roads, and erf connections will be provided for each farm. It is proposed that a minimum allocation of 7 kL per day be provided to each farm. A storage tank of at least 10 kL for water storage will be required. Each farm will be responsible for treating the filtered water to potable standards for the water supplied to the house.
- Irrigation water can be supplied directly from each farm’s storage tank to the designated areas.

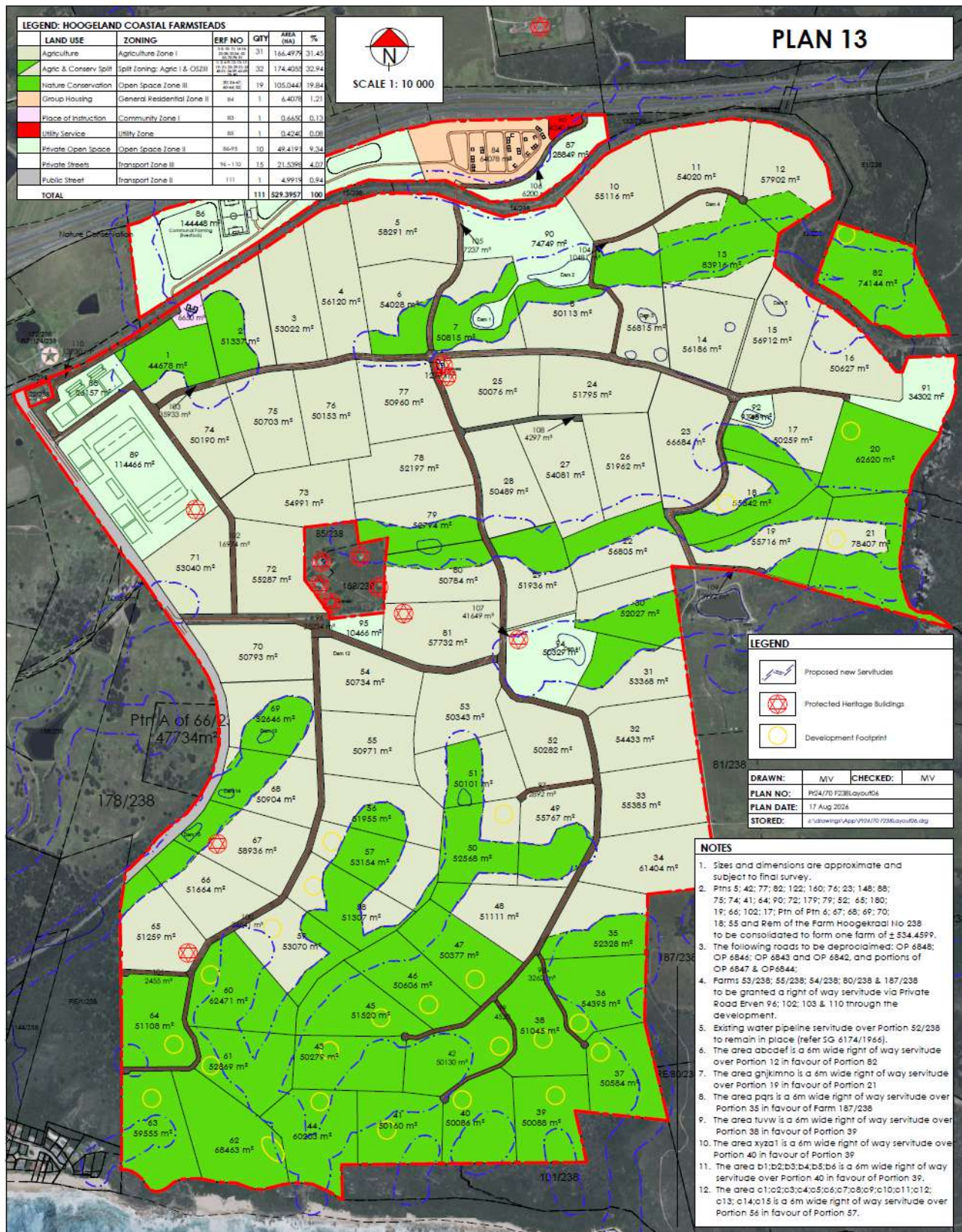


Figure 4: Proposed land uses for the properties south of the N2: Agricultural Farms (light yellow), Nature Conservation Areas (bright green), Group Housing (orange), and Private Open Space (olive green).

Source: Marike Vreken, 2026



Sanitation

- Each 5 ha farm will be responsible for its own sewage treatment on-site, using a septic tank combined with bio-filtration through an artificial wetland for additional treatment.
- It is proposed to construct a sewer treatment package plant to handle sewage from the Residential Village. The treatment will meet General Limits standards, enabling the Treated Sewage Effluent to be reused for irrigation within the development.
- Treated Sewage Effluent will be discharged into a newly constructed reservoir from where it will be distributed for irrigation of general areas under the management of the Home Owner's Association.
- The sewer package plant will be situated east of the proposed Residential Village (the lower-lying area) to facilitate a gravity-fed sewer network that directs sewage to the plant. The Home Owners Association will handle the operation and upkeep of the sewage package plant.
- Regular monitoring of quality will be performed to ensure the Treated Sewage Effluent meets the necessary standards.

Stormwater management

- The proposed development will use the existing internal topography, so catchment boundaries will stay unchanged after development. Low water crossings will be built on the roads to enable stormwater to flow overland to the existing drainage lines.
- While the proposed subdivision and rezoning might cause a minor increase in stormwater runoff—less than 10%—the stormwater system's operation will stay unchanged.
- To alleviate the slight increase, the development footprint of hardened surfaces will be limited to 2000 m² per 5 ha farm. Rainwater harvesting will be implemented at all new dwellings.
- Increased farming activities and irrigation will result in more water being abstracted from the existing on-site dams. There will therefore be additional attenuation capacity in the on-site dams, further decreasing the total runoff from the site.
- Low-water crossings on new roads will be constructed to ensure that the stormwater system continues to operate in a sustainable manner.

Electricity

- Electricity services will be provided directly by Eskom and by renewable energy (i.e. a hybrid supply). No electrical services will be required from George Municipality (Marike Vreken, 2026).

3 OVERVIEW OF THE GEORGE AND GARDEN ROUTE ECONOMIES

3.1 Introduction

The George economy contributed approximately 40,73% to the Garden Route District's economy in 2024. In terms of absolute numbers, the George economy generated R65 767 million in GVA at current prices², relative to R161 462 million recorded for the Garden Route. The George economy grew off a solid base at 8,14% per annum from 2005 to 2024, while its contribution to the Garden Route GVA increased from 36,96% in 2005 to 40,73% in 2024.

Figure 5 indicates the sector contributions to the GVA of the George economy for 2005 and 2024. The largest sector of the George economy in 2005 was Manufacturing, followed by Finance, insurance, real estate, and business services, and Wholesale and retail. In 2024, Finance, insurance, real estate, and business services, and Manufacturing contributed almost 64,17% of the total GVA generated by the George economy, an increase of 2,72% from 2005. The Manufacturing sector has remained one of the largest contributors to the George GVA over the 19-year analysis period. The sector's contribution has remained constant at around 25% over the period 2005 to 2024, while the contribution of Finance, insurance, real estate and business services to GVA increased from 23,46% in 2005 to 26,35% in 2024.

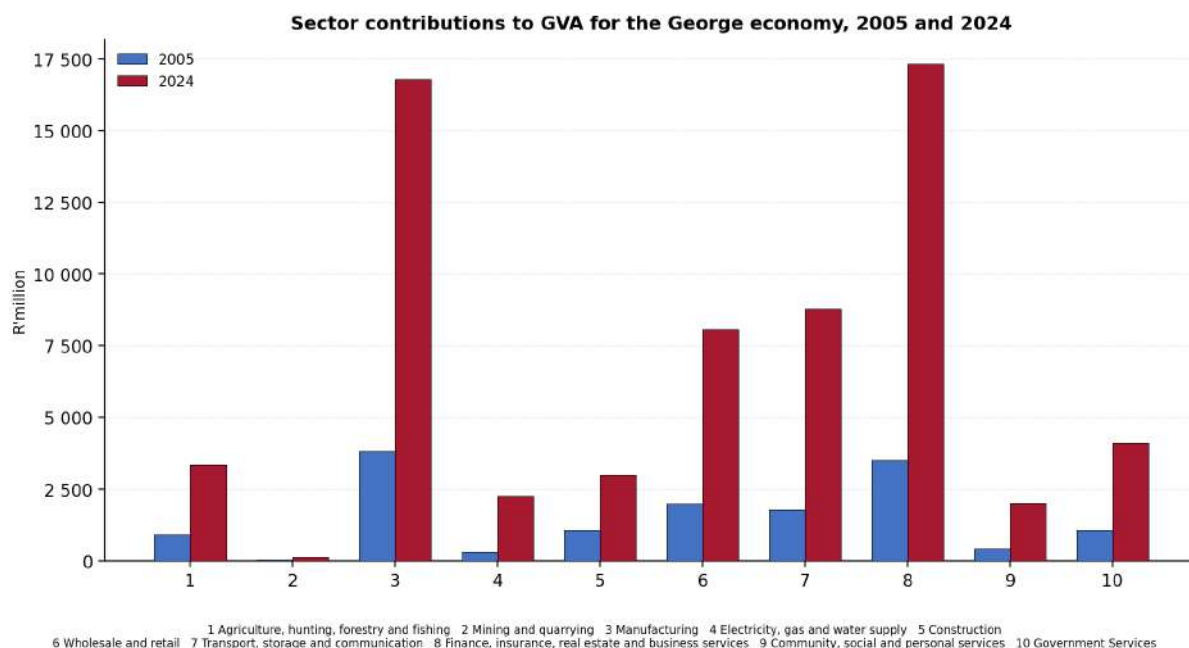


Figure 5: An illustration of the GVA contributions per sector for the George economy in 2005 and 2024

Legend:

- | | |
|--|---|
| 1 Agriculture, hunting, forestry and fishing | 6 Wholesale and retail |
| 2 Mining and quarrying | 7 Transport, storage and communication |
| 3 Manufacturing | 8 Finance, insurance, real estate and business services |
| 4 Electricity, gas and water supply | 9 Community, social and personal services |
| 5 Construction | 10 Government Services |

Source: Adapted from data provided by Quantec Research, 2025

To understand whether sectors of George are contracting or growing, it is useful to consider the overall and annual growth rates and compare them to those of the Garden Route. **Figure 6** indicates the annual compounded growth rates per economic sector for George and the Garden Route from 2005 to 2024. The Garden Route and George

² GVA and Gross Geographic Product (GGP) or Gross Regional Product (GRP) are very similarly related concepts. GVA excludes taxation and subsidies, whereas GDP includes the items. GVA is analysed using current prices

economies grew in nominal terms by 7,59% and 8,14% per annum, respectively, from 2005 to 2024 (refer to the Total data in **Figure 6**). Nine sectors of the George economy achieved higher annual growth rates than the Garden Route District did from 2005 to 2024. High annual growth rates were achieved by the Garden Route District in the Electricity, gas, and water supply, and Government sectors, but are calculated on a very low base and should be considered with caution.

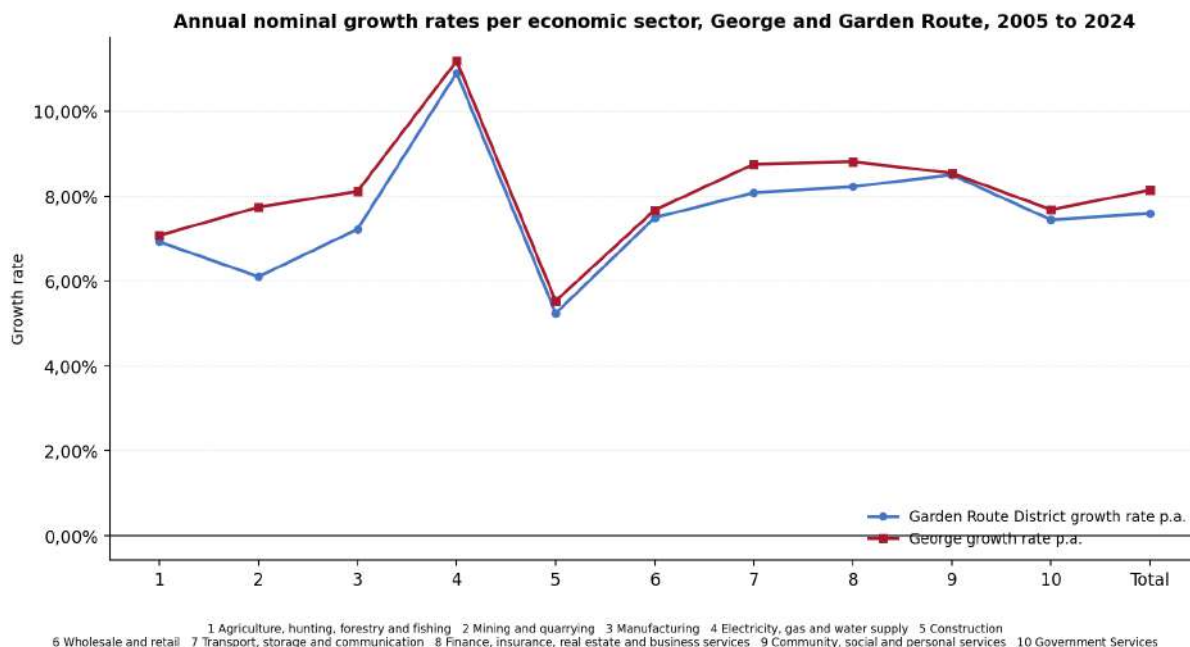


Figure 6: An illustration of the annual nominal growth rates per economic sector for George and the Garden Route from 2005 to 2024

Legend:

- | | |
|--|---|
| 1 Agriculture, hunting, forestry and fishing | 6 Wholesale and retail |
| 2 Mining and quarrying | 7 Transport, storage and communication |
| 3 Manufacturing | 8 Finance, insurance, real estate and business services |
| 4 Electricity, gas and water supply | 9 Community, social and personal services |
| 5 Construction | 10 Government Services |

Source: Adapted from data provided by Quantec Research, 2025 and own calculations

3.2 Sector analysis of GVA contributions

Figure 7 shows the contribution of each economic sector to the GVA of the George and Garden Route economies for 2005 and 2024. An assessment of the larger sectors suggests that the contribution of Manufacturing has remained constant from 2005 to 2024; Finance, insurance, real estate, and business services have increased; while the contributions of Wholesale and Retail and Construction have decreased. The Manufacturing sector showed a decline in its contribution to GVA, i.e., from 25,68% (2005) to 25,55% (2024). The GVA contribution of agriculture also declined slightly, although the contribution to the overall economy is small. A similar trend is experienced in the Garden Route District.

Four sectors increased their GVA contribution to the George economy from 2005 to 2024, while Construction and Wholesale and Retail declined. The trend emerging across the District is similar, with five sectors increasing their GVA contribution to the District economy and five declining. The concern could be a declining trend in employment levels in the more labour-intensive sectors of the economy, such as Manufacturing. A greater focus on service-oriented sectors has emerged, which are invariably lower employment creators than Construction and Wholesale and retail.

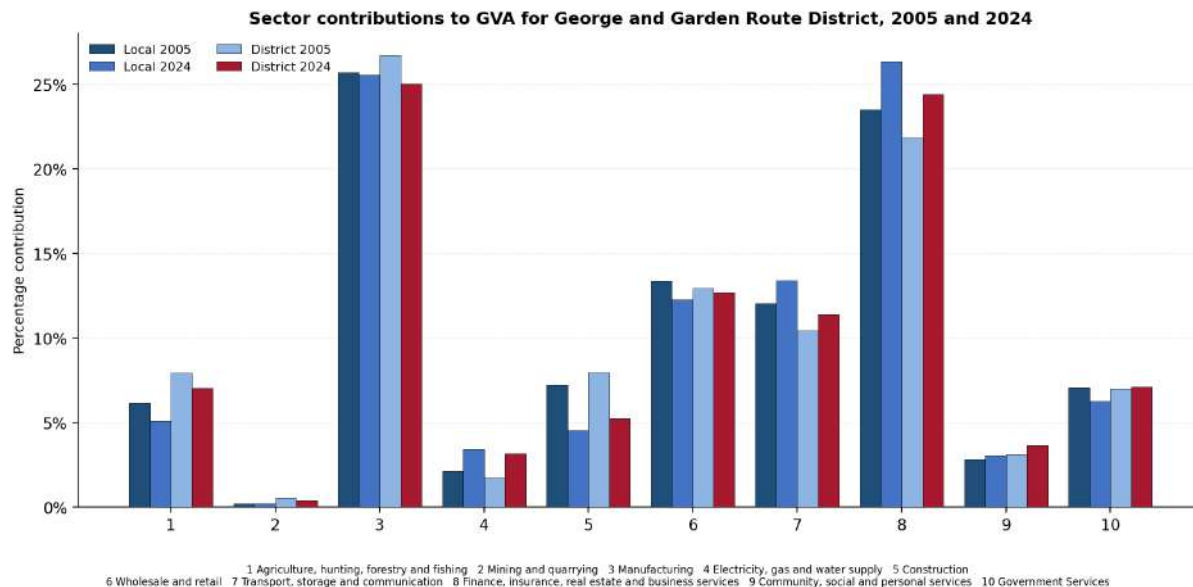


Figure 7: Sector contributions to GVA for George and Garden Route District in 2005 and 2024

Legend:

- | | |
|--|---|
| 1 Agriculture, hunting, forestry and fishing | 6 Wholesale and retail |
| 2 Mining and quarrying | 7 Transport, storage and communication |
| 3 Manufacturing | 8 Finance, insurance, real estate and business services |
| 4 Electricity, gas and water supply | 9 Community, social and personal services |
| 5 Construction | 10 Government Services |

Source: Adapted from data provided by Quantec Research, 2025 and own calculations

The assessment of GVA sector contributions and the annual and period growth rates for 2005 and 2024 are indicated in **Table 1**. All 10 sectors showed a yearly increase in economic activity from 2005 to 2024. The analysis demonstrates that the Construction sector is declining in favour of Finance, insurance, real estate, and business services, and Transport, storage and communication, suggesting a greater focus on a service-oriented approach.

Table 1: Sector contributions to GVA in 2005 and 2024 and annual growth rates for the George economy

Economic sector (R'million)	Gross Value Added				Growth for Period	Annual growth	Direction of growth
	2005	% of total	2024	% of total			
Agriculture, hunting, forestry and fishing	911	6,13%	3 337	5,07%	266,22%	7,07%	↑
Mining and Quarrying	28	0,19%	116	0,18%	312,07%	7,74%	↑
Manufacturing	3 816	25,68%	16 802	25,55%	340,30%	8,11%	↑
Electricity, gas and water supply	315	2,12%	2 249	3,42%	614,41%	10,90%	↑
Construction	1 069	7,20%	2 975	4,52%	178,24%	5,53%	↑
Wholesale and retail	1 982	13,33%	8 071	12,27%	307,33%	7,67%	↑
Transport, storage and communication	1 785	12,01%	8 791	13,37%	392,62%	8,75%	↑
Finance, insurance, real estate and business services	3 487	23,46%	17 331	26,35%	397,08%	8,81%	↑
General government	419	2,82%	1 990	3,03%	374,77%	8,54%	↑
Community, social and personal services	1 049	7,06%	4 104	6,24%	291,21%	7,44%	↑
Total	14 860	100,00%	65 767	100,00%	342,56%	8,14%	↑

Source: Adapted from data provided by Quantec Research, 2025 and own calculations

Primary sector

The primary sector of the George economy includes Agriculture, hunting, forestry, and fishing activities, as well as Mining and quarrying. The primary sector contributed 5,25% to the George economy's GVA in 2024, marginally lower than the 6,32% recorded in 2005. Agriculture is the largest contributor to the GVA of the Primary sector, accounting for 97,00% in 2005, declining slightly to 96,64% in 2024.



Secondary sector

The secondary sector of the George economy includes Manufacturing, Construction and Electricity, gas and water supply. The secondary sector contributed 33,49% to the George economy's GVA in 2005, but its contribution increased slightly to 34,99% in 2024. The Manufacturing sector's contribution to the secondary sector GVA increased from 73,38% in 2005 to 76,28% in 2024.

Tertiary sector

The tertiary sector of the George economy comprises Trade, repairs, and hospitality; Financial institutions, real estate, and business services; Community, social, and personal services; and Government services. The tertiary sector contributed 58,68% to the GVA of the George economy in 2005, rising to 61,26% in 2024. The analysis suggests that the contribution of Government Services to the GVA of the tertiary sector remained more or less the same at 3,03% in 2024, compared with 2,82% in 2005.

3.3 General employment trends

A comparison of total employment indicates that George accounted for 36,23% of the Garden Route District's total employment in 2024. The primary, secondary and tertiary sectors contributed 9,95%, 15,82% and 74,23% to total employment in the local economy, respectively. In comparison, the Garden Route recorded total employment contributions of 12,49%, 15,68%, and 71,83% from the primary, secondary, and tertiary sectors, respectively.

Overall employment increased by 68,15% in the George economy from 2001 to 2024. The strong growth in the tertiary sector was offset by low employment growth in the secondary sector and negative growth in the primary sector in George's economy. Strong employment growth was recorded in the tertiary sector, with an increase of 68,15% from 2001 to 2024, or an annual compounded growth rate of 2,28%. The Garden Route experienced similar trends, with a 36,78% decline in primary sector employment and increases of 19,13% and 61,29% in the secondary and tertiary sectors, respectively. The tertiary sector of the George economy grew during the pre-2008 and post-2011 periods, while the primary and secondary sectors shed 24,52% and 7,34%, respectively, from 2008 to 2011 (**Figure 8**). Following 2011, the primary sector began to recover some of the employment lost in the previous period, resulting in a 7,78% increase in employment from 2012 to 2024. However, the labour-intensive secondary sector clawed back the jobs from 2012 to 2024, following the loss from 2008 to 2011.

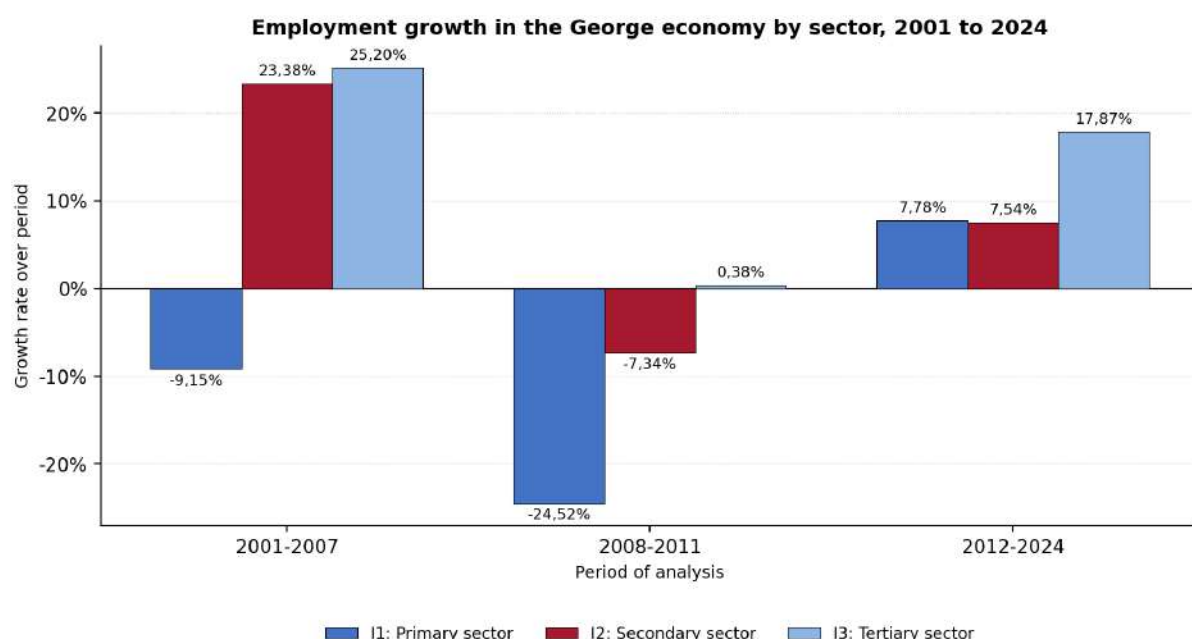




Figure 8: An illustration of the employment growth in the George economy for three specified periods (pre-recession, recession and post-recession) from 2001 to 2024

Source: Quantec, 2025 and own calculations

3.4 Conclusions

The proposed reconfiguration of farms for the Hoogeland Coastal Farmlands project will benefit the economies of George and the Garden Route. All economic activities associated with development during construction would impact the primary, secondary, and tertiary sectors of the economy, requiring raw materials (e.g., sand mining), construction materials (e.g., bricks, cement), and business services (e.g., professional services). In addition, household spending by residents will induce spending on salaries and wages, benefiting all three economic sectors. Operational agricultural activities and those on conservation parcels will support growth and employment across all three economic sectors, whereas residential-only development supports only the construction phase, after which project-related jobs and income dissipate.

4 SOCIO-ECONOMIC AND DEMOGRAPHIC PROFILE OF THE POPULATION

4.1 Defining the study area and available statistics

The study area is the George Municipal Area, which accounts for 22,2% of the Garden Route District (GRD) Municipal area and is considered the GRD's commercial hub. Once reliant on traditional fishing and agriculture, the George municipal area's economy has since expanded to include industries such as boutique tourism and artisanal crafts.

One of the main limitations of the 2022 National Population Census is its estimated 30% undercount, which raises concerns about the data's reliability and suitability for socio-demographic and economic analysis. Additionally, the 2022 Census was not conducted at the same level of detail as the 2001 and 2011 Censuses, resulting in limited socio-demographic data for towns and sub-places within local municipalities. As a result, other data sources were consulted to understand the socio-economic and demographic profile of residents near the development site. The following sections focus on the Garden Route District (GRD) and George Municipality, with key statistics drawn from the *2024-25 Municipal Economic Review and Outlook for the Garden Route* (Garden Route District Municipality, 2024) and the *2026 Review of the George Municipality IDP* (George Municipality, 2026).

4.2 Socio-demographic profile

4.2.1 Population

The GRD covers 18% of the Western Cape Province's area, housing 667 636 residents in 2023, with an estimated 1% annual growth from 2024. It includes the Municipalities of Kannaland, Oudtshoorn, George, Bitou, Knysna, Mossel Bay, and Hessequa. In 2023, George had the largest population share in the GRD, with 240 415 residents in 2024, accounting for 35,6% of the District population. It is expected to grow at an average rate of 1,4% from 2024 to 2028, the second highest in the District, due to its development as an urban hub (**Figure 9**). In 2023, the George population was 49,7% Coloured, 34,5% Black African, 15,4% White, and 0,5% Indian or Asian. George has experienced consistent growth, with population expansion matching an expected household growth rate of 2,1% from 2023 to 2027 (Garden Route District Municipality, 2024).

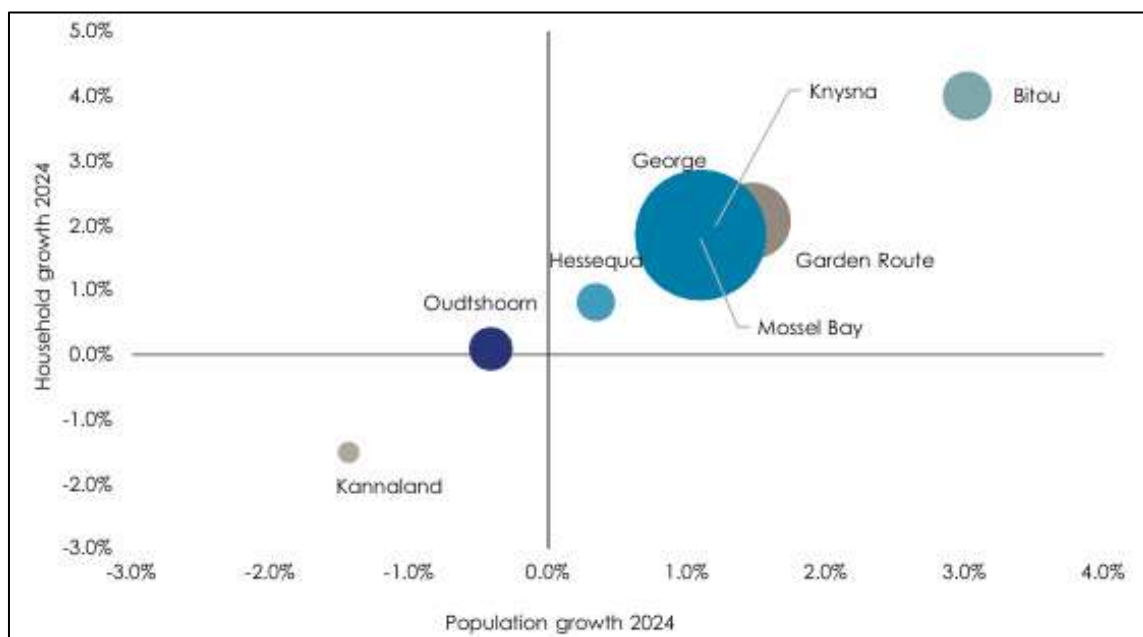


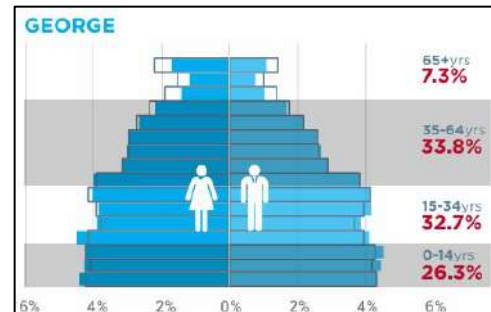
Figure 9: Population and Household Growth in Garden Route District, 2023-2024

Source: Garden Route District Municipality, 2024



The George IDP (George Municipality, 2026) reports a total population of 140 415 in 2024 and 65 954 households in 2025. While the urban population has grown, some developments around George extend into rural areas, potentially leading to an overestimation of the rural population. The town of George itself houses a significant urban population (57,9% of residents), whereas Thembaletu's share of the GM population increased from 21,4% in 2001 to 23,3% in 2021.

The George municipal area had the largest population within the District in 2022, accounting for 35,2% of the GRD population. George has also consistently experienced population growth, with an expected average household growth rate of 2,0% from 2023 to 2027. This has made George the second-fastest-growing municipal area in the GRD. In 2022, approximately 33,8% of its residents were aged 35 to 64, followed by 32,7% aged 15 to 34. Meanwhile, 26,3% of the population was under 14, resulting in a relatively high dependency ratio. In 2023, the Matric pass rate was 85,9%, with a learner retention rate of 73,8% and a learner-to-teacher ratio of 28,9 (George Municipality, 2026).



4.2.2 Employment

In 2023, the per capita GDPR for the GRD was R54 487, showing a noticeable contraction relative to 2021 (**Figure 10**). This can be explained by prevailing disparities: a segment of the population enjoys affluence, while others grapple with financial challenges in an economic landscape characterised by inflation, rising interest rates, and unemployment. George maintained its economic lead in the district with a GDPR per capita of R61 616, a slight decrease of 1,2% from 2022. However, this is far below the Western Cape's average of R80 488. George, with the highest median income of R8 228, benefits from its status as a major urban centre with well-developed infrastructure, including an airport and various educational institutions (Garden Route District Municipality, 2024).

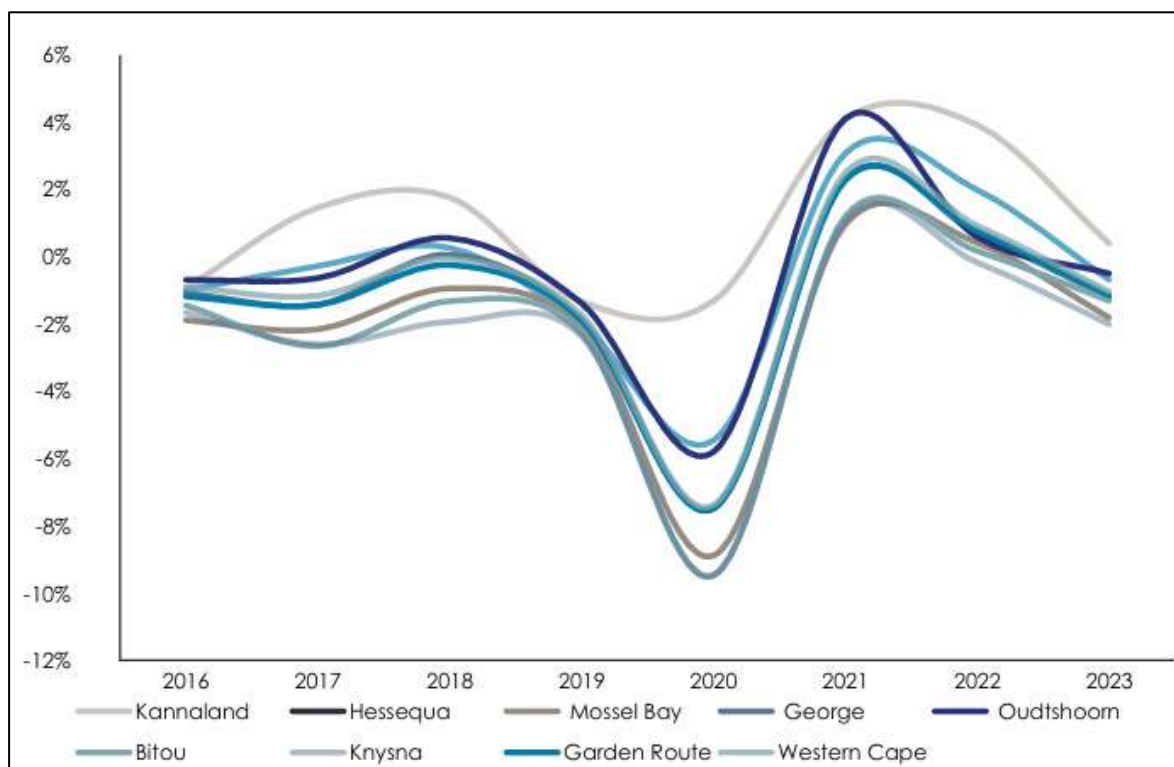


Figure 10: GDP per capita growth, Garden Route District, 2016 – 2023

Source: Garden Route District Municipality, 2024

The changes in the Employment Profile for George Municipality from 2023 to 2024 are illustrated in **Figure 11** (George Municipality, 2026). In 2022, George Municipality experienced an estimated 3,3% growth, resulting in 4 650 new jobs, mainly in the informal sector, while the formal sector lost 661 jobs. Despite these job losses, the unemployment rate dropped to 18,4%, with 32,6% of the working-age population not economically active.

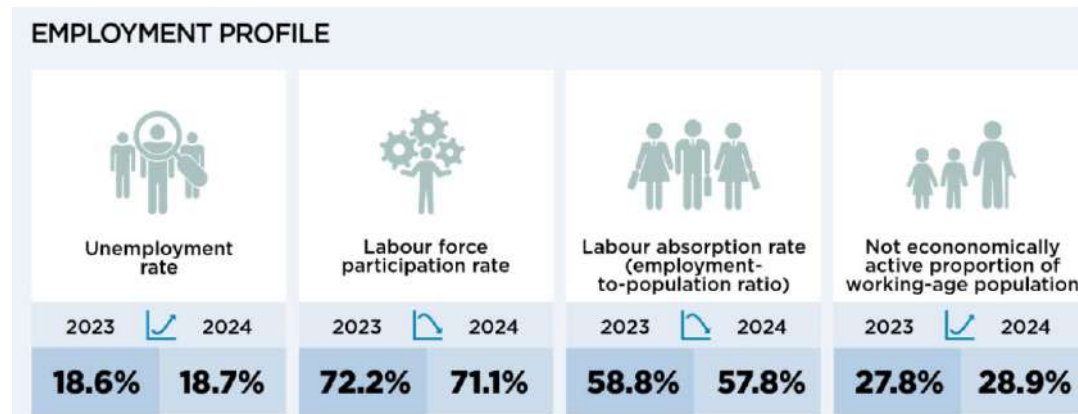


Figure 11: Employment Profile, George Municipality, 2023 – 2024

Source: George Municipality, 2026

4.2.3 Human Development

The Human Development Index (HDI) evaluates three main aspects of human progress: life expectancy, education, and living standards. The HDI offers a broad perspective on a region's socio-economic development, since economic performance significantly influences residents' quality of life. When economies grow, human development tends to improve, resulting in a higher quality of life for individuals. Economic prosperity and expansion can drive advances in education, healthcare, and access to resources, ultimately boosting the overall well-being of the population (Garden Route District Municipality, 2024). The GRD's HDI has begun to recover from post-pandemic levels, driven by improvements in income, educational attainment, and health. In 2023, the GRD recorded an HDI of 0,712, compared to 0,705 in 2022 (**Figure 12**). However, HDI levels vary widely within the District. In 2023, the Mossel Bay municipal area recorded the highest HDI, closely followed by Hessequa and Knysna, with the latter supported by relatively higher incomes and improved access to education. George Municipality scored an HDI of 0,722, displaying some post-COVID-19 recovery.

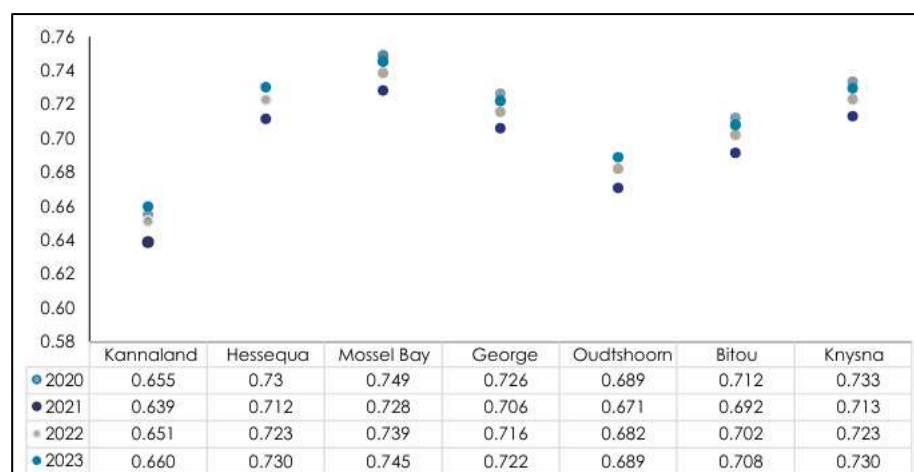


Figure 12: HDI per Municipal area, Garden Route District, 2020-2023

Source: Garden Route District Municipality, 2024

4.2.4 Housing demand

Housing demand in the GRD is quite low compared to other districts and the Metro, accounting for 10,8% of applications. Notably, the GRD recorded a modest 3,3% year-on-year increase in property demand, compared with other districts in the Province. This burgeoning demand in the region reflects the broader implications of urbanisation and the pressing need for effective housing solutions. As the number of households grows, there is an urgent need for housing solutions, either through government-supported programmes or private affordable housing developments. Within the GRD, two Municipalities have sustained the largest share of housing demand over the last three years: George (27,3%) and Oudtshoorn (16,8%). The consistent demand for housing in these areas is largely attributed to population growth, educational growth, opportunities, and semigration (Garden Route District Municipality, 2024).

4.2.5 Access to basic services

Municipalities are responsible for providing a range of basic services to ensure the well-being and quality of life of their residents. These services typically include: access to clean, safe drinking water for all residents; adequate sanitation services, including sewage systems and waste management; reliable, affordable electricity; and disposal of household and commercial waste. Between 2015 and 2023, access to piped or tap water in the George Municipality increased to 94,2% (**Figure 13**). The share of residents with access to electricity increased to 95,4%, while those with sanitation and solid waste removal services grew to 90,1% and 90,3%, respectively. However, it is important to recognise that settlement patterns, with many households living on farms, pose challenges for infrastructure expansion, in particular for solid waste removal services.

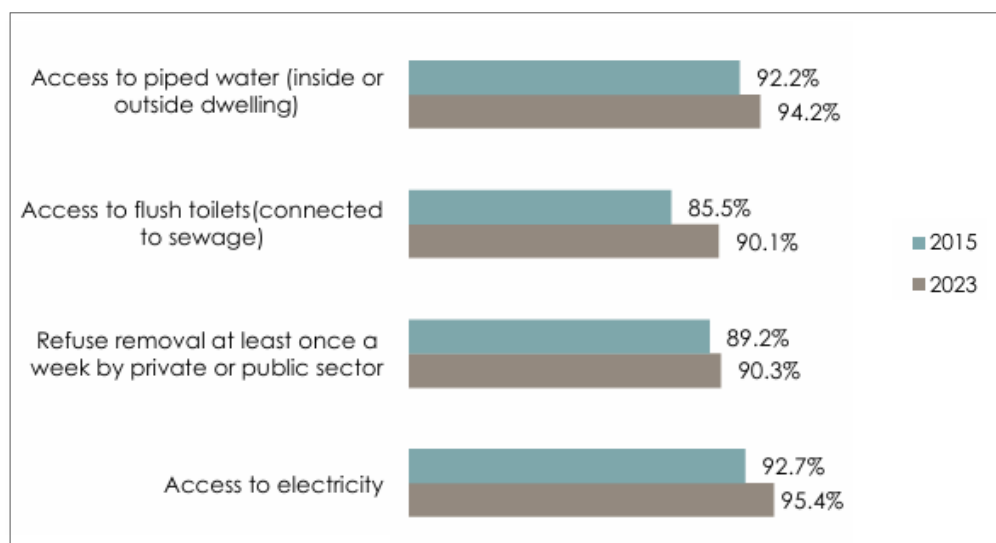


Figure 13: Access to basic services in George Municipality, 2015 –2023

Source: Garden Route District Municipality, 2024

4.3 Conclusions

In 2023, the George Municipal area had the largest population in the District, representing 35,6% of the GRD's total. Over the past few years, the George population has steadily grown, with the average number of households anticipated to increase by 2,1%, making it the second-fastest-growing area in the District. In 2022, George Municipality experienced an estimated 3,3% growth in employment, resulting in 4 650 new jobs, mainly in the informal sector, while the formal sector lost 661 jobs. Despite these job losses, the unemployment rate dropped to 18,4%, with 32,6% of the working-age population not economically active. More than 90% of its residents have access to all basic services, but George Municipality recorded an HDI of only 0,722. However, it has shown some recovery from post-pandemic levels, driven by improvements in income, educational attainment, and health.



5 FEASIBILITY OF THE PROJECT AND FIT WITH SPATIAL PLANNING

5.1 Project viability and financial sustainability

The viability and sustainability of a development project rely on various factors, including property market trends, environmental concerns, economic feasibility, social impacts, and compliance with local and national regulations. A financial feasibility study underpins the Developer's approach once there is a clearer understanding of the various processes and development options. Nevertheless, any development will be demand-driven. The properties are likely to be released in stages to maximise market visibility and to accommodate market conditions and demand at the time. Although the development proposal did not include a financial feasibility analysis, appropriate phasing will help manage and reduce the developer's financial risk. It is unclear how long it will take to sell out, but the development of these components is expected to span over 12 years. A 1-year lag is envisaged for each activity: selling the farm, constructing the farm dwelling, and commencing lifestyle agricultural activity. This means that the time from sale to the commencement of farming activities could take 3 years.

5.2 Need and desirability

The Department of Environmental Affairs (2014) issued a *Guideline on Need and Desirability*, accompanied by a list of questions to address when considering a proposed development. While job creation and economic growth are important, the specific needs of the wider community should be considered alongside opportunity costs and distributional effects to determine whether the development will be socially, economically, and environmentally sustainable. The concept of “need and desirability” relates to, among other things, the nature, scale, and location of the proposed development, as well as the wise use of land. Essentially, “need” refers to time, and “desirability” to place (i.e., is this the right time and the right location for the proposed land use/activity?). The “need and desirability” considers the development proposal's strategic context, broader societal needs, and public interest. While the financial viability considerations of the private developer might indicate if a development is “do-able”, the “need and desirability” takes into account the broader community's needs and interests as reflected in an Integrated Development Plan (IDP), Spatial Development Framework (SDF), and Environmental Management Framework (EMF) for the area. **Table 2** highlights the need and desirability of the proposed development, supporting its progression at the proposed time and location from a socio-economic perspective, in line with the DEADP Guidelines (2014).

Table 2: Need and desirability of the proposed development

Aspect	Comment
Need	
Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority?	It is the considered opinion that, since the proposed development involves the establishment of small-scale farming units and the securing of residential rights for farm workers and beneficiaries with established tenure rights on the farm/application area, the proposal is regarded as consistent with the WCPSDF (p.79)
Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur here at this point in time?	The SDFs generally aim to contain urban development within a defined urban edge to prevent fragmentation of the rural landscape and protect high-potential agricultural land. In this unique case, the proposal is not for a typical low-density residential estate (which is often discouraged outside the urban edge), but for a development with a significant agricultural component (p. 101)
Does the community/area need the activity and the associated land use concerned? (Is it a societal priority).	Yes, the farmworker community across the Hoogekraal Farm 238 live in sub-optimal circumstances. This is an opportunity for them to be relocated to a farming village on the farm, where they will own their houses.



Aspect	Comment
Are the necessary services with appropriate capacity currently available, or must additional capacity be created to cater for the development?	The development will not impact the current capacity of the Municipality, and no provision for additional capacity is required from the Municipality.
Is the development provided for in the infrastructure planning of the municipality, and if not, what will the implications be for the infrastructure planning of the municipality (priority and placement services and opportunity costs)?	The development will not rely on Municipal infrastructure; therefore, there is no need for the Municipality to service the development. Electricity will be obtained directly from Eskom, and water will be obtained by extracting it from the Maalegat River.
Is this project part of a national programme to address an issue of national concern or importance?	Yes, in the sense that it attempts to make existing agricultural land more viable as a farming unit and add further socio-economic value to the local economy
Desirability	
Is the development the best practicable environmental option (BPEO) for this land/site?	Yes, the existing agriculture is retained, although in another form, to make it more viable, subscribing to the protection of agricultural land
Would the approval of this application compromise the integrity of the existing approved municipal IDP and SDF as agreed to by the relevant authorities?	No
Would the approval of this application compromise the integrity of the existing environmental management priorities for the area, and if so, can it be justified in terms of sustainability considerations?	No, it will support the maintenance of conservation in areas where no agricultural activity is possible and therefore support sustainability considerations
Do location factors favour this land use (associated with the activity applied for) at this place? (Relates to the contextualization of the proposed land use on this site within its broader context)	Yes, agriculture is retained in a reconfigured form and within the broader agricultural area surrounding the site
How will the activity or the land use associated with the activity have an impact on sensitive natural and cultural areas?	The impact will be positive insofar as areas that are not suitable for any form of agriculture
How will the development impact on people's health and wellbeing (e.g., noise, odours, visual character, and sense of place, etc.)?	The nature of the proposal would not impact people's health; it will support the rural character, and as the proposal supports agriculture in an area that is agricultural, it will likely enhance the sense of place
Will the proposed activity or the land use associated with the activity applied for result in unacceptable opportunity costs?	No, the proposed activity is commensurate with the existing land use and therefore would not result in an opportunity cost
Will the proposed land use result in unacceptable cumulative impacts?	No, the land use remains agriculture

5.3 Compatibility Spatial Planning

Individual project benefits are often overstated if they diminish benefits elsewhere in the area. Therefore, economic viability is essential for assessing whether a proposed development aligns with broader economic planning outlined in spatial development plans. It's not sufficient for a project to yield positive outcomes if it conflicts with planning objectives that aim to maximise the area's overall economic potential. SDFs are key components of economic development planning, guiding overall development toward what local and provincial authorities deem desirable. However, the main role of an SDF is to illustrate the spatial effects of IDPs. For context, provincial, regional, and local SDFs - along with related frameworks, reports, and discussion documents - and Local Economic Development (LED) plans and strategies, along with other guidance documents, form the foundation for this part of the assessment.



5.3.1 National Development Plan 2030

The National Development Plan (NDP, National Planning Commission, 2012) sets out six interlinked priorities:

- Uniting all South Africans around a common programme to achieve prosperity and equity;
- Promoting active citizenry to strengthen development, democracy and accountability;
- Bringing about faster economic growth, higher investment and greater labour absorption;
- Focusing on key capabilities of people and the state;
- Building a capable and developmental state; and
- Encouraging strong leadership throughout society to work together to solve problems.

Achieving the goals of the National Development Plan hinges on advancing multiple areas, with a primary focus on boosting employment via accelerated economic growth. For sustained employment growth, the economy must expand quickly, and structural obstacles - such as poor education and spatial settlement issues that marginalise much of the population - must be addressed. These actions are essential for increasing investment and competitiveness, as well as boosting production and exports. Success depends on joint efforts from businesses, workers, communities, and governments to promote faster economic growth.

The NDP focuses on enhancing human capital, productive capacity, and infrastructure to boost exports and attract investment, aiming to reduce reliance on capital inflows. Increased investment, coupled with improved public infrastructure and skills, will drive faster economic growth and higher productivity. This will result in more jobs, higher incomes, better living standards, and reduced inequality. Prioritising increased investment is essential for sustained economic progress. Furthermore, a strong, competitive infrastructure is vital for supporting growth and employment through various economic activities.

The NDP identified nine key challenges facing the country and proposed approaches to address them. The NDP's primary goals are to eliminate income poverty and reduce inequality by 2030. Regarding Urban and Rural Transformation, the NDP's human settlement aims include increasing the number of people living closer to their workplaces, improving the quality of public transport, and creating more jobs near townships. To meet these targets, it supports strong measures to curtail further housing development in marginal areas, promote higher urban densities to support public transport, incentivise economic activity within and near townships, and involve the private sector in the Gap housing market.

In terms of rural development, the NDP's overall vision is for rural communities and farming areas to become economically productive, socially integrated, and better served by 2030. Key points related to farming settlements include:

- **Better rural living conditions:** Rural residents (including those living on farms and in dispersed farm settlements) should have improved housing, access to water, sanitation, electricity, roads and transport, schools and healthcare, and broadband and communications infrastructure.
- **Farm worker housing and tenure security:** The plan recognises that many farm dwellers and workers have insecure tenure and poor living conditions. It calls for clearer land rights, stronger protection for farm dwellers, improved labour conditions, and the upgrading of rural housing and services.
- **Integrated rural economies:** The NDP argues that rural areas should not rely solely on traditional farming. Farmsteads and rural settlements should connect to agro-processing, tourism, local business, mining support industries, renewable energy, and rural enterprise development.
- **Spatial planning and settlement restructuring:** The plan supports better spatial planning by reducing the isolation of rural communities, bringing people closer to economic opportunities, and improving transport connections between farms, towns, and markets. It discourages fragmented or neglected rural settlement patterns that trap people in poverty.
- **Sustainable agriculture and land use:** The NDP promotes the expansion of irrigated agriculture, the protection of productive agricultural land, sustainable water use, climate resilience, and support for small-scale and commercial farmers.



5.3.2 Western Cape Provincial Spatial Development Framework (WCPsDF) 2014

The Western Cape Provincial Spatial Development Framework (2014) highlights the importance of a coherent structure for the province's urban and rural areas, which articulates the spatial expression of the National and Provincial development agendas, among others. Its guiding principles include the following:

- **Spatial justice:** Past spatial and other development imbalances should be redressed by improving land access and use for disadvantaged communities.
- **Sustainability and resilience:** Land development should be spatially compact, resource-efficient, and compatible with cultural and scenic landscapes, avoiding the conversion of high-potential agricultural land and the degradation of ecosystems. Resilience is the capacity to withstand shocks and disturbances, such as climate change or economic crises, and to use such events to catalyse renewal, novelty and innovation. The focus should be on creating complex, diverse and resilient spatial systems that are sustainable in all contexts.
- **Spatial efficiency:** Efficiency relates to the form of settlements and the use of resources - compaction as opposed to sprawl; mixed-use rather than mono-functional land uses; residential areas close to work opportunities as opposed to dormitory settlements; and prioritisation of public transport over private car use. When a settlement is compact, higher densities provide thresholds that support viable public transport, reduce overall energy use, and lower user costs due to shorter travel distances.
- **Accessibility:** Improving access to services, facilities, employment, training, and recreation, including enhancing the choice of safe and efficient transportation modes (e.g., public transport, private vehicle, bicycle, walking, and wheelchair), is essential to achieving settlement transitions.
- **Quality and liveability:** The quality of an environment directly contributes to its liveability. A good environment is legible, diverse, and unique. Diverse environments provide a variety of opportunities, experiences, and choices. Liveable settlements balance individual and community, logic and feeling, order and random incident. The quality of space can define a place's liveability. Spaces need to be safe and attractive.

In terms hereof, the logical underpinning of the spatial strategy of the WCPsDF covers the following (p. 34):

- Capitalise and build on the Western Cape's comparative strengths (e.g. gateway status, knowledge economy, lifestyle offering) and leverage the sustainable use of its unique spatial assets;
- Consolidate existing and emerging regional economic nodes as they offer the best prospects to generate jobs and stimulate innovation;
- Connect urban and rural markets and consumers, fragmented settlements and critical biodiversity areas (i.e. freight logistics, public transport, broadband, priority climate change ecological corridors, etc.); and
- Cluster economic infrastructure and facilities along public transport routes (to maximise the coverage of these public investments) and respond to unique regional identities within the Western Cape.

5.3.3 Western Cape Land Use Planning Guidelines - Rural Areas, 2019

The Western Cape economy relies on its unique assets, including agricultural resources, natural capital, and scenic and cultural attractions that make it South Africa's top tourism destination (Western Cape Government, 2019). The guidelines issued by the Department of Environmental Affairs and Development Planning are intended to promote sustainable rural development, protect biological diversity, maintain ecosystem functions, safeguard agricultural land, and conserve rural heritage and culture.

Municipalities categorise settlements either by defining an urban boundary or by applying criteria from the Department of Environmental Affairs and Development Planning, in line with the 2014 NEMA Listing Notices (p. 29). Sustainable development and effective management are vital, with existing settlements primarily designated for non-agricultural activities and facilities. This approach aims to foster local economic growth, reinforce and streamline settlement structures, enhance service delivery, strengthen rural-urban links, promote socio-economic development, and raise standards for service provision and social infrastructure.



Activities should be compatible and sustainable, be well-suited to a rural setting, provide positive socio-economic benefits, and prevent harm to the environment, the municipality's ability to meet its responsibilities, or the right to farm. They should also be appropriately scaled and designed to take place outside urban edges, except in designated wilderness zones. Municipal SDFs should include growth management tools such as densification strategies with specific targets for settlement areas; establish an urban edge to protect high-value agricultural land and restrict settlement expansion; and offer development incentives to promote integration, higher densities, and suitable development types.

Regarding location, the municipal SDF and its urban edge should identify zones for expanding existing settlements. Visual impact is particularly important at settlement entrances. Encroachment into farmland, scenic areas, and areas vital for biodiversity and ecological services - particularly between settlements, along coastlines, and in river corridors - must be avoided. Urban growth should align with the Settlement Toolkit (PSDF Annexure 3), which provides spatial guidance for implementing the PSDF's proposals at municipal, town, and precinct levels.

An important consideration is curbing the formation of new settlements, which negatively impacts municipal financial sustainability. Where new settlements need to be established, consideration needs to be given to:

- Accessibility and public transport availability, universal access and access for the disabled;
- Infrastructure provision and cost, and long-term maintenance costs;
- Environmental impact (e.g. waste management);
- Agricultural impact;
- Visual impact, especially on the rural landscape;
- Historical settlement patterns and form; and
- Natural landscape and topographical form as design informants.

New buildings and structures should conform to the massing, form, height and material use in existing settlements. When accommodating development in existing settlements, the following principles should be adhered to:

- Retain the compact form of smaller settlements.
- Maintain and enhance public spaces.
- Reinforce the close relationship of settlements to the regional route structure.
- Integrate new development into the settlement structure.
- Respect socio-historical and cultural places.

New settlements should align with and enhance a settlement hierarchy that accounts for their economic, social, and spatial significance. This hierarchy reflects the roles, characters, and locations of each settlement relative to the others while maintaining the overall structure of towns, villages, hamlets, and farmsteads. The Settlement Spatial Planning Category (SPC) Delineation Guidelines emphasise the following points:

- Municipal SDFs should divert urban growth pressures away from Critical Biodiversity Areas (CBAs).
- Urban "fringe areas" earmarked for urban development or expansion should be included in the Settlement SPC.
- Record high potential and unique agricultural land in SDFs and demarcate urban edges to protect these assets.
- Use CBA, ESA (Ecological Support Areas) and high-potential and unique agricultural land mapping to inform delineation.



5.3.4 Garden Route Growth and Development Strategy (GDS) 2021-2040

The GDS (Garden Route District Municipality, 2021) identifies "Resilient Agriculture" as one of its seven core strategic pillars and outlines a long-term vision to transform the region's agricultural sector into a competitive, inclusive, and sustainable one. The main agricultural points of the strategy include:

- **Transition to Resilient and Niche Agriculture:** The strategy emphasises adapting to climate change and water scarcity by adopting climate-resilient farming methods and promoting niche, high-value commodities (such as honeybush tea, berries, and indigenous crops) suited to the Southern Cape's environment.
- **Expansion of Agro-Processing Capabilities:** A major goal is to add value to raw agricultural products locally before export. This involves establishing district-wide agro-processing infrastructure, shared hubs, and producer-owned facilities (such as honeybush tea processing units) to create jobs and boost local economic output.
- **Regenerative and Conservation Farming:** The GDS promotes regenerative agriculture practices that rehabilitate soils, retain moisture, reduce the reliance on synthetic chemicals, and preserve the ecological infrastructure of the Garden Route.
- **Water and Resource Efficiency:** In light of recurring droughts and constraints on bulk water supply, the strategy stresses the need for farmers to invest in advanced irrigation technology, water-use reduction measures, and non-wasteful farming techniques.
- **Support for Emerging and Smallholder Farmers:** The strategy coordinates with skills development programs (such as the Garden Route Skills Mecca) and the Department of Agriculture to provide small-scale farmers with training, mechanisation support, market access, and agricultural advisory services.
- **Strengthening Rural-Urban Linkages:** The strategy aims to connect rural production nodes with urban logistics networks along the N2 corridor, ensuring a reliable flow of inputs and outputs through better local transport and infrastructure management.

5.3.5 Garden Route IDP (2022-2027)

The Garden Route District Municipality Integrated Development Plan (2022) identifies agriculture as one of the district's key economic sectors, especially in the rural areas of the Garden Route and Klein Karoo. The IDP and related economic development documents emphasise agriculture's role in:

- Employment creation
- Rural development
- Food security
- Agro-processing and value chains
- Tourism linkages
- Land reform and support for emerging farmers

Key points about agriculture in the IDP include:

- **Agriculture is a major economic sector:** The municipality describes agriculture, forestry and fishing as important contributors to the regional economy alongside tourism, manufacturing and trade. The IDP specifically highlights livestock farming, dairy, ostrich farming in the Klein Karoo, crop production, forestry, and agri-processing opportunities.
- **Focus on rural development:** The IDP strongly links agriculture to rural upliftment. The municipality states that it aims to "promote integrated rural development and social upliftment", improve the quality of life in rural communities, support rural economic participation, and strengthen agricultural nodes.
- **Support for emerging and small-scale farmers:** The IDP and ward priorities identify demand for land access for small farmers, agricultural support programmes, and inclusion of rural communities in development initiatives.



- **Agriculture linked to economic development strategies:** The District's economic development planning promotes agricultural value-chain development, agro-processing, investment attraction, and integration with tourism.

5.3.6 George Municipality SDF (2023)

The George Municipal Spatial Development Framework (MSDF) identifies rural areas and agricultural land as critical economic, environmental, and productive resources. The framework emphasises balancing urban expansion with protecting agricultural assets. Key agricultural points raised in the MSDF include:

- **Protection of the Productive Landscape:** The framework prioritises safeguarding fertile farmlands and agricultural areas from uncontrolled urban encroachment to maintain the productive landscape and ensure long-term economic and environmental sustainability.
- **Subdivision and Minimum Lot Sizes:** The MSDF maintains that the principal use of designated agricultural areas remains *Agriculture Zone I*. A minimum subdivision area of 40 hectares is supported, subject to comment and approval from the relevant agricultural and land-use authorities.
- **Land Use Management:** The framework outlines specific management concerns for agricultural land, including:
 - The scale, placement, and visual impact of farm structures and intensive farming practices (such as tunnel farming).
 - The restriction of potentially incompatible uses, such as certain types of livestock farming located near or adjacent to residential/urban interfaces.
- **Climate Change and Resilience:** The MSDF recognises the sector's vulnerability to climate change, drought, and water scarcity. It emphasises sustainable farming practices, efficient water use, and the conservation of ecological infrastructure.
- **Regulatory Alignment:** The framework notes that any subdivision or change in land use on land subject to the Subdivision of Agricultural Land Act (Act 70 of 1970) remains under the jurisdiction of the national Department of Agriculture, Land Reform and Rural Development (DALRRD).
- **Enhancing Rural Character and Livelihood:** The MSDF supports the integration of rural livelihoods, facilitating economic opportunities through agri-processing, strengthening rural-urban linkages, and protecting rural heritage.

The SDF also addresses the establishment of agri-villages, which are “privately established and managed settlements on private land within a farming area and exclusively accommodate the local agri- worker community. The only circumstances under which an agri-village should be considered include the following:

- In a farming area where there is a concentration of agricultural workers due to the type of agricultural activities and that has a substantial demand for “off-the-farm” settlement.
- Areas where there are no established settlements within practical commuting distance (approximately 30 km) and a municipality that has no feasible means of establishing and managing a new town.
- Considering the substantial managerial and financial resources required to establish and maintain small settlements, and their potential negative impact on the environment and also due to the relatively short distance between settlements in the Western Cape, the establishment of agri-villages or new settlements as “off-the-farm” options both have limited applicability in the Western Cape”.

5.3.7 George IDP (2022-2027)

The **George Municipality Integrated Development Plan (IDP) for 2022–2027** outlines a strategic roadmap that integrates agriculture as a vital component of the region's economy, employment base, and environmental management. Key points include:



- **Strategic Regional Anchor:** The IDP recognises the George municipal area as a key Regional Development Anchor along the N2 corridor. This positioning highlights the strong interconnection among high-value rural production areas, ecological resource regions, and urban nodes, providing opportunities to consolidate supply chains and enhance multimodal connectivity.
- **Economic Contribution and Value Chains:** Although the primary sector (agriculture, forestry, and fishing) accounts for a smaller share of the local GDP, the IDP notes its crucial role in rural employment and as a feeder to the secondary sector. The strategy supports the growth of agro-processing and value-added facilities to retain value locally before export.
- **Sustainable and Regenerative Farming:** The plan emphasises a shift toward conservation and regenerative agriculture to rehabilitate soils and maintain productivity. It encourages practices that restore soil organic matter, retain moisture, and reduce chemical inputs, thereby maintaining long-term agricultural and ecological health.
- **Spatial Alignment and Protection of Resources:** Operating in tandem with the Spatial Development Framework, the IDP prioritises protecting fertile farmlands and high-potential agricultural land from uncontrolled urban encroachment and land-use conflicts.
- **Climate Resilience:** The IDP acknowledges the risks of climate change - such as drought and water scarcity - and promotes resource-efficient agricultural methods, improved water infrastructure, and the cultivation of resilient or niche crops suited to the Southern Cape's year-round rainfall and varied climatic zones.

The IDP Review (2026) highlights key climate-related transformations across five sectors: (i) human settlements and spatial planning; (ii) natural capital and biodiversity; (iii) infrastructure; (iv) disaster management; and (v) water and sanitation. Shifts in rainfall patterns will impact water supply for agriculture, households, and downstream ecosystems. Changes in fire regimes and climate conditions may favour invasive plants such as Acacia and Eucalyptus, which outcompete native fynbos and reduce biodiversity. More frequent and severe wildfires, caused by prolonged dry periods, could harm the diversity of forests and fynbos.

5.3.8 George Economic Development Strategy (2012)

George Municipality strives to continuously improve the local business climate while rallying public-sector support to build a sustainable economy that utilises George's natural resources and those of the surrounding region. The Municipality should provide a supportive, business-friendly environment within legal and regulatory frameworks and actively work to remove structural barriers to investment, retention, and growth. The aim is to strengthen resilience against competition, encourage collaboration, support large-scale entrepreneurship, and generate sustainable, high-quality employment.

The municipality's Economic Development Strategy (George Municipality, 2012) is structured around a 5-P framework to guide its medium- to long-term economic planning:

- **Perspective:** Capitalises on the region's comparative advantages - such as its moderate climate, outdoor lifestyle, and good infrastructure - to position George as a highly livable, attractive, and regionally connected city.
- **Position:** Identifies the sectors where George holds a natural competitive advantage, i.e. timber, vegetable and fruit production, and more uniquely in berry production.
- **Plan:** Aims to specialise in these specific comparative advantages, especially berries, fruit and vegetables, by fostering collaboration across stakeholders and building local public-private partnerships.
- **Ploy:** Promotes the development of scalable, producer-owned processing facilities (such as tertiary co-operatives) to create early-mover advantages and add value to local products before export.
- **Pattern:** Drives action toward making the city an agri-business cluster while providing systematic support for new entrants and small to medium-sized enterprises (SMMES).



5.4 Conclusions

The development aligns with national, provincial, and local policies, strategies, and programs, supporting current spatial planning and advancing strategic goals at all levels. George Municipality's approach to rural development is based on protecting rural land and resources, supporting agriculture and tourism, improving livelihoods and infrastructure, strengthening existing rural settlements, and integrating rural economies into the broader regional economy. The proposed development involves establishing small-scale farming units and securing residential rights for farm workers and beneficiaries with established tenure. The proposal aligns with the WCPSDF by improving the agricultural potential of the Hoogekraal footprint, which is not currently farmed productively, while also safeguarding the rural character and scenic assets. Hoogeland retains agriculture where applicable and, through viable farming practices, would generate economic growth and employment opportunities in the George Municipality. Although the George SDF discourages new rural settlements, this residential village aims to formalise the tenure rights of existing beneficiaries on the farm, rather than creating a new settlement.

6.1 Introduction

The farms proposed north of the N2 National Road will be used for more extensive agricultural purposes and will be reduced from six to five cadastral units. As there is no fundamental change to the existing scope of this portion and the focus will be on intensified agriculture, this assessment covers only the Hoogekraal Farms south of the N2.



Figure 14: Farm portions of the Hoogekraal application, to be consolidated and subdivided.

Source: Agri Informatics (2026)

³ Francois Knight is a registered scientist with the South African Council of Natural Scientific Professions (SACNASP, Reg No 149315)

The dominant farming activity in the area is the keeping of livestock on planted dryland pastures. The pastures are confined to land with moderate to flat slope gradients and suitable soil properties, covering a total area of 257 ha within the study area, and are considered the maximum extent of arable land (**Figure 15**).

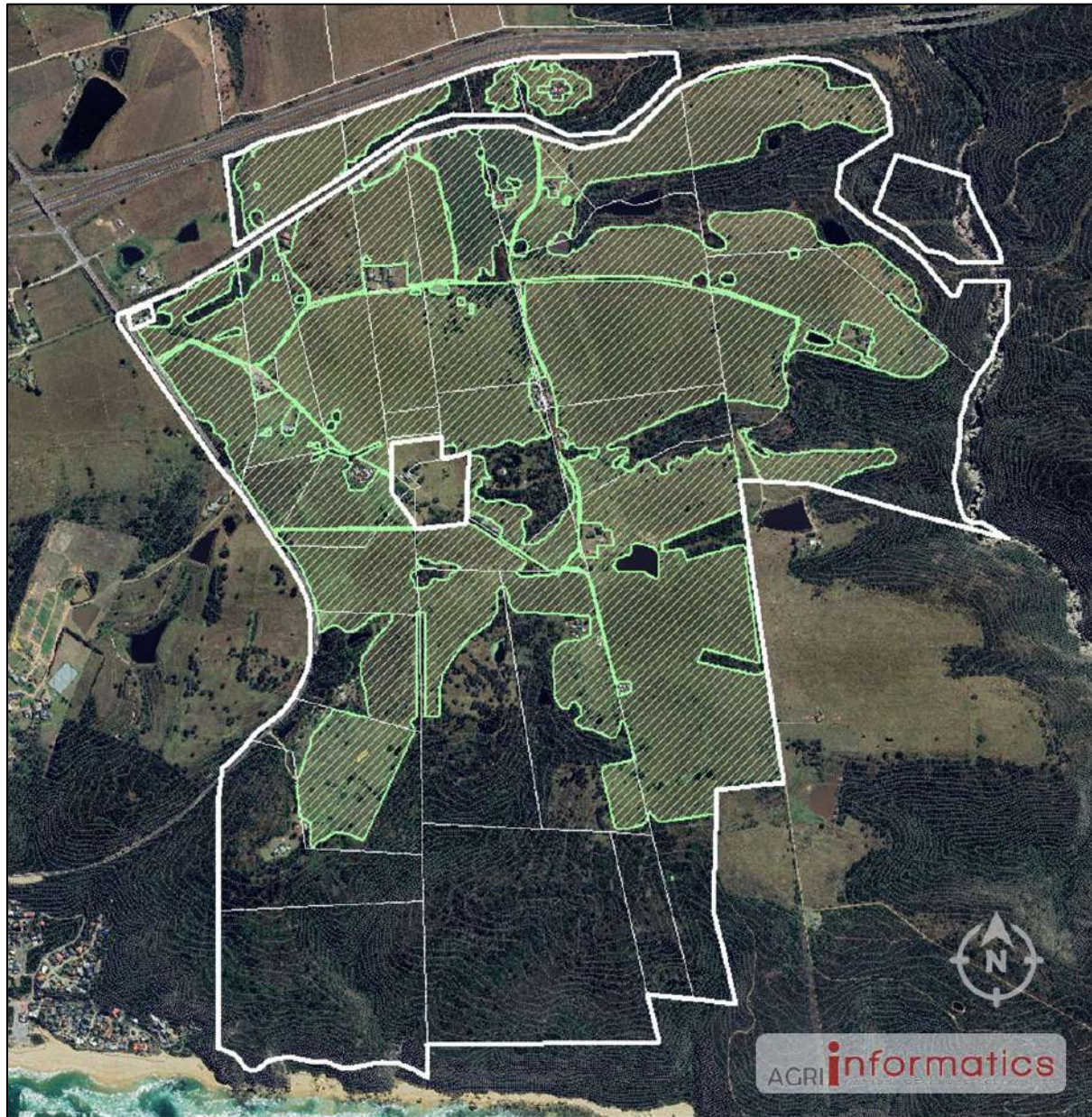


Figure 15: Maximum extent of the historically cultivated footprint.

Source: Agri Informatics (2026)

A base model covering 257 ha of dryland pastures and livestock was developed to represent the farms' historic maximum agricultural utilisation for grazing and livestock production.

It is useful to evaluate the Hoogekraal area in the context of the wider agricultural economy. The Western Cape contributes approximately 16% to South Africa's national agricultural Gross Value Added (GVA). This amounted to R25,6 billion in 2023. Within the Western Cape, the agricultural sector contributes about 4,7% to the provincial gross domestic product (GDP). In addition, primary agriculture supports over 202 000 jobs in the province, representing 7,3% of total employment. The Western Cape province is divided into six districts for agricultural



reporting purposes. Within this, the Garden Route District contributes about 13% (R3,01 billion) to the provincial Agriculture GVA, with the George municipality contributing around 4-5% (R1,28 billion)⁴.

The Agro Ecosystem Analysis (Malan, 2026) is aligned to the proposed reconfiguration of the Hoogekraal Farms 238. The following calculation estimates the available suitable soils for avocado and macadamia farming and aligns with the proposal to reconfigure the land portions into agricultural and conservation smallholdings.

Total extent of agricultural and conservation properties (Farm 238):	475 ha ⁵
Total extent of agricultural properties (57):	325 ha (70%)
Total extent of conservation properties (24):	150 ha (30%)
Total extent of hard surfaces for the agricultural properties:	28,5 ha (0,5 ha x 57)
Total net extent of properties available for agriculture:	256,7 ha
Apportion footprint to determine the extent of suitable soils:	40,8%
Total hectares available for macadamia or avocado farming ⁶ :	128 ha

The Agricultural Viability Analysis for avocado or macadamia nut farming can be based on a maximum land area of 128 ha. This may not align with what an owner of a small-scale farming unit would do with the 4,5 ha available for agricultural purposes, given any constraints that may exist (e.g., irrigation water). Furthermore, the small-scale farming units are considered for lifestyle farming, which is assumed not to be for profit or to achieve an investor return. Should any revenue be generated from the sale of crops or agricultural products, the intention is likely to cover running costs as far as possible. Agriculture would appeal to potential buyers for lifestyle reasons (e.g., partial self-sufficiency), the rural character, and the setting and aesthetic beauty, including the location's natural scenery.

6.2 Historical and existing land uses

A breakdown of the land uses of Hoogekraal Farm 238 is shown in **Table 3**. Dryland pastures and Fynbos/forests/tree clusters are the predominant land uses, with areas reserved for farmyards, dams/ponds, and roads making up the rest. As **Figure 16** clearly shows, pastures (associated with livestock) account for more than 50% of the area, followed by forests and Fynbos. These land uses represent about 95% (rounded) of the area. This clearly indicates that other land uses, such as orchards and other agricultural activities, are not prevalent on Hoogekraal Farm 238. Introducing avocado and macadamia orchards would add a new farming activity.

Table 3: Breakdown of land uses for Hoogekraal Farm 238

Land use class	Total area (ha)	Percentage
Dams and Ponds	6,4	1,2%
Drainage Areas	1,9	0,4%
Farm yards	10,8	2,0%
Forests and Fynbos	228,4	43,1%
Pastures	272,5	51,5%
Roads	9,4	1,8%
TOTAL	529,5	100,0%

Source: Agri Informatics (2026)

⁴ Garden Route District Municipality (2026)

⁵ Marike Vreken (2026)

⁶ *Ceteris paribus* means "all other things being equal," and is used to analyse the effect of one variable while holding other factors constant (e.g. supplemental irrigation water)

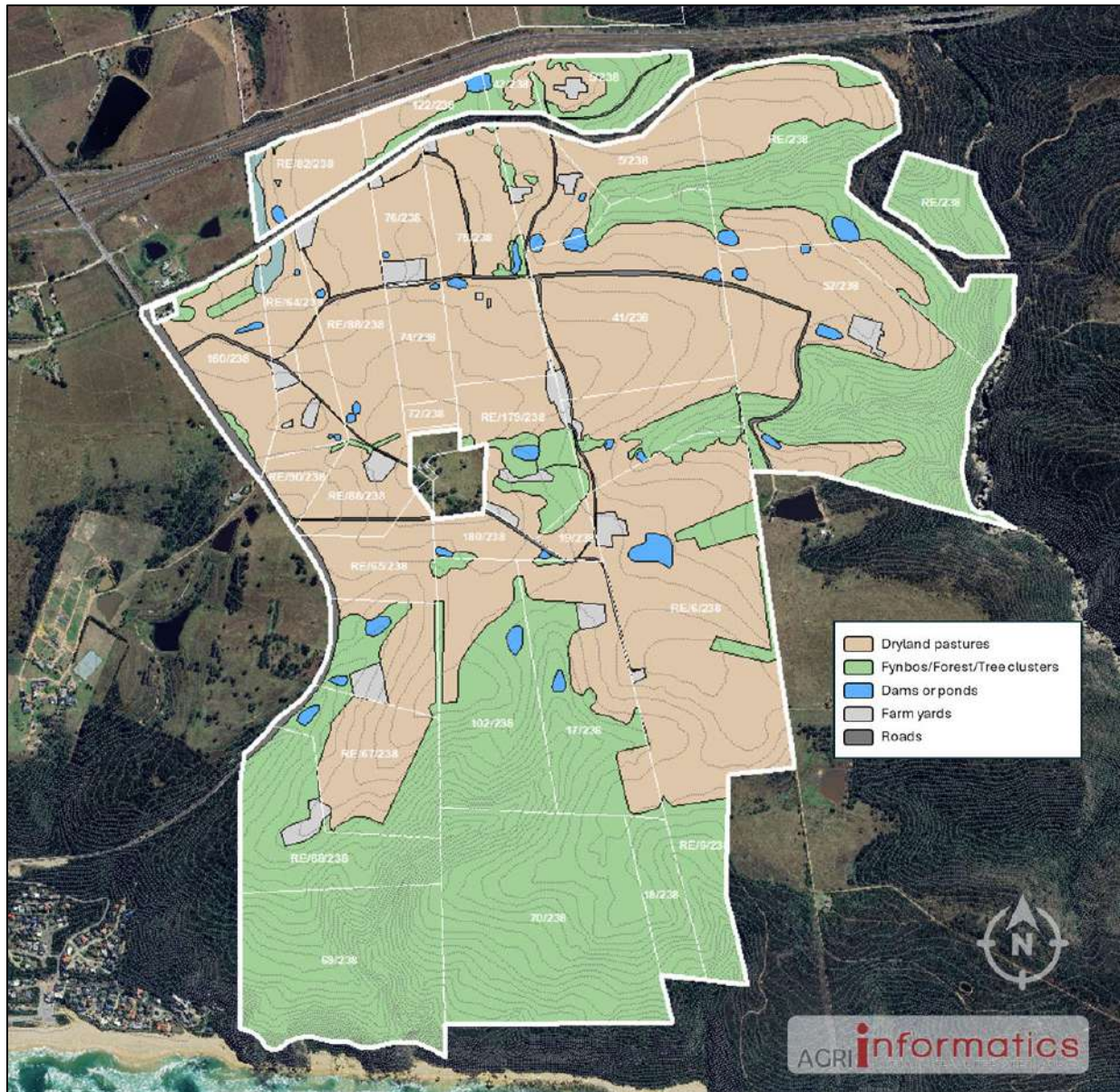


Figure 16: Current land use of the study area.

Source: Agri Informatics (2026)

Figure 17 illustrates a historical overview of Hoogekraal Farm 238 from 2015 to 2025. The time-lapse shows a permanent shift from intensive, localised irrigation to a broader, rain-fed (unirrigated) management system across the areas of the property where livestock graze. The dates of the aerial photos also show the effects of winter rainfall. These photos also align with the current land uses on the Hoogekraal Farm 238, as indicated in **Table 3**.

The grazing capacity of natural veld (as per the 2018 Cape Farm Mapper) is 71-80 ha/LSU (Large Stock Unit) (Malan, 2026). However, the grazing capacity of rain-fed pastures (low intensity) is estimated at 0,8 to 1,0 LSU's per ha (Agri Informatics, 2026). This significant difference is highlighted as an error in the Malan Report.

The historic (current) grazing capacity (on 257 ha) is estimated at about 300 LSU or 1 800 SSU. While George receives high rainfall, the natural vegetation in certain pockets (especially those with sandy or "sour" mountain fynbos) doesn't naturally provide high-protein grazing for cattle, which is likely why the shift moved toward higher-value permanent crops such as macadamia and avocado.



21 August 2015



11 August 2018



3 August 2020



14 May 2022



20 March 2024



14 September 2025



Figure 17: A time-lapse of agricultural activity at Hoogekraal Farm from 2015 to 2025.

Source: Agri Informatics, 2026



6.3 Natural resource base

While the George area is traditionally known for dairy, vegetables, and hops, it is emerging as a hub for cultivating high-value permanent crops such as macadamias and avocados. This shift is driven by a unique combination of its maritime climate, soil profile, and geographic position. Macadamias and avocados are subtropical trees that are notoriously frost-sensitive. George's proximity to the ocean helps regulate temperatures; George rarely experiences severe frost or extreme heat spikes (over 38°C), both of which could cause flower and fruit drop. The area typically records temperatures between 10°C and 28°C. For avocados, maintaining temperatures above 13°C during the flowering window (August/September) is critical for fruit set, and George can meet this condition.

Both crops require abundant water and high humidity to thrive. George is one of the few areas in South Africa with an "all-year-round" rainfall pattern. The area receives an average of 720 mm annually, as measured at the nearby Outeniqua experimental farm. While supplementary irrigation is still required for commercial yields, the high natural rainfall significantly reduces the risk of water stress compared with the drier northern provinces. High humidity (often exceeding 60% in George) reduces the trees' transpiration stress. This is vital during the hot summer months to prevent the nuts and fruit from shrivelling or falling prematurely.

Soils in the area have developed mainly from gneissic granite and granodiorite, resulting in shallow duplex soils (Malan, 2026). These soils are characterised by a light-textured topsoil (3-10% clay) overlying a heavy-textured subsoil (35-60% clay). The term Duplex therefore refers to a soil type with a sharp, abrupt contrast in texture between the topsoil (A horizon) and the subsoil (B horizon). Typically, it features sandy, porous topsoil overlying dense, heavy clay subsoil. Although duplex soils can be substantial in depth, this depth is often compromised after rain events, when water is retained in the underlying clay, leading to waterlogged conditions detrimental to plant roots. Malan (2026) indicates that most of these duplex soil types are categorised as low potential with a high erosion hazard. High-potential soils account for a small proportion (4,5%) of duplex soils.

Malan (2026) indicates that the suitability of the soils and the type of crop that may be suited to the soil class on the Hoogekraal Farm is as follows:

Percentage Class (Permanent Crops)	Proposed Agricultural Activity	Allocation (ha)
Not Recommended 59,2%	Grazing / Planted Pastures / Dryland Bale production, Vegetables	186
Conditionally Recommended 28,3%	Potential for Permanent crops – Avocado, Macadamia, Wine Grapes	89
Recommended 12,1%	Potential for Permanent Crops – Avocado, Macadamia, Wine Grapes	38
Highly Recommended 0,4%	High Potential for Permanent Crops - Avocado, Macadamia, Wine Grapes	1

Source: Malan (2026), p. 6

According to the Land Capability Assessment prepared by Schloms and Lambrechts (2005), as reported in Malan (2026), the farm is not viable for commercial cultivation of perennial or annual crops. This is partly due to limited soil potential and available irrigation water. Permanent crops such as avocados and macadamia nuts could be more suitable, depending on their profitability and the commercial viability of farming these crops. The area is rapidly becoming a popular growing area for these crops, as demonstrated by the neighbouring 60 ha avocado farm established by Summer 16.

The property has irrigation rights from the Maalgate River and has used them to fill some of the property's dams. Total water rights amount to roughly 100 000 m³ per annum (Malan, 2026). In total, 13 dams were built on the property to meet cattle water needs; limited, periodic irrigation is possible but uncommon. These dams will remain in use for future agricultural production. With an average annual rainfall of about 700 mm, supplemental irrigation will be needed in the drier summer months if macadamia and avocados are cultivated.

The Town Planner for the proposed development, Marike Vreken (2026), indicates that 475 ha of the Hoogekraal Farms would be reconfigured to represent agricultural and conservation smallholdings. The area for grazing/planted pastures is 186 ha (rounded). The remaining conditionally recommended, recommended, and highly recommended soils account for 41,8% (128 ha). For further analysis and determination of agricultural viability, 128 ha could be assessed for macadamia nut and avocado farming (refer to **Section 6.1**), ignoring water rights, annual rainfall and water availability, and based on soil potential. The pasture assessment, which refers to beef or mutton production and represents historic farming on the property, is based on 186 ha.

The proposed subdivision, as shown in an aerial view of Hoogekraal Farm 238 in **Figure 18**, considers the aquatic buffers applicable to the property.

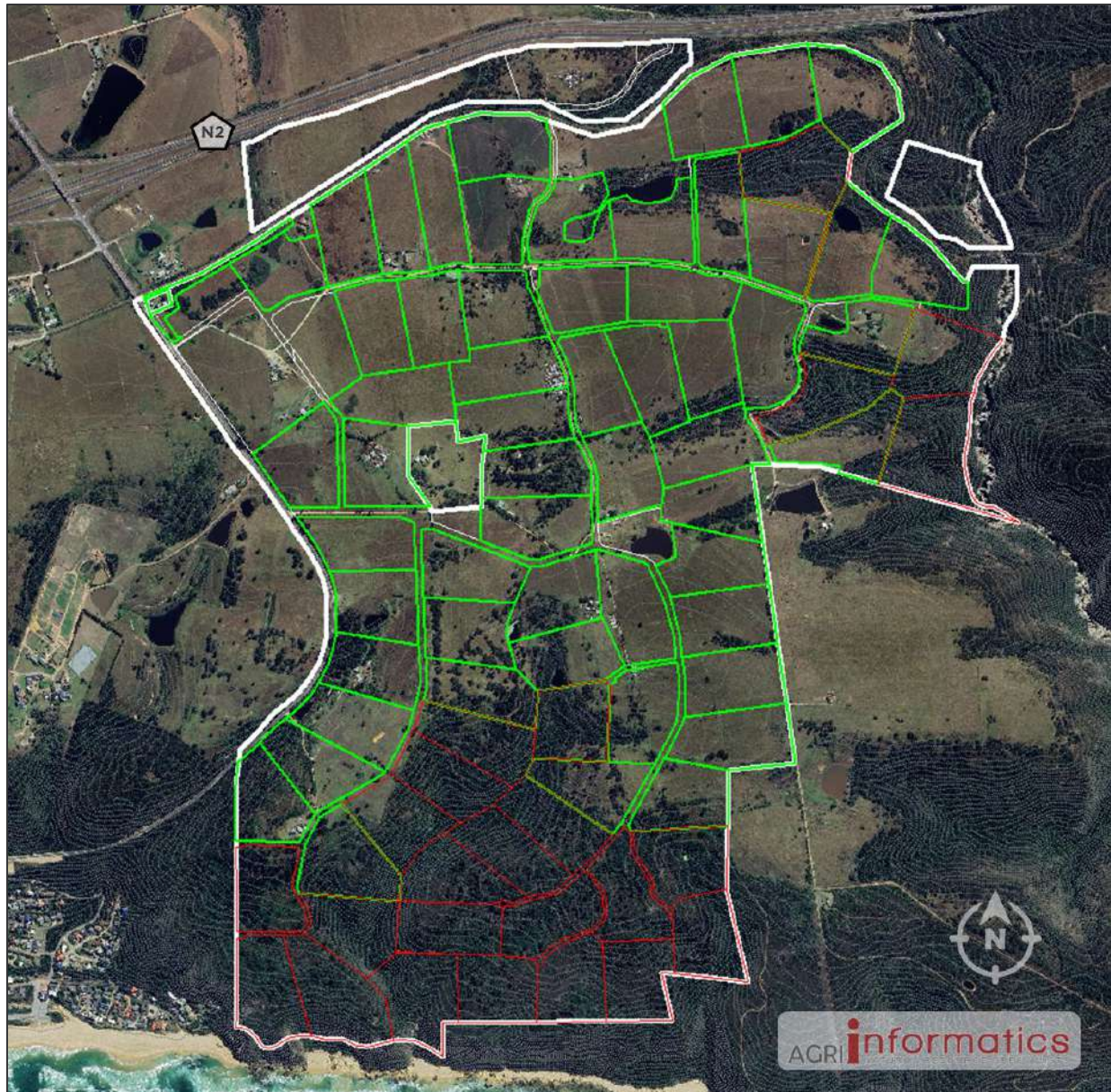


Figure 18: Proposed subdivision of the Hoogekraal farms. Agricultural smallholdings are indicated by green lines, and conservation parcels by red lines.

Source: Agri Informatics (2026)



6.4 Water requirement for avocado and macadamia trees per annum

In the George area of the Southern Cape, a mature avocado orchard typically requires approximately 8 000 to 9 000 m³ of water per hectare per annum (Carr, 2013). This figure represents the total crop water requirement. Because George is a year-round rainfall area (receiving about 700 mm annually), a significant portion of this requirement can be met by effective rainfall. However, to maintain commercial yields and fruit size, supplementary irrigation is essential, especially during the critical flowering and fruit-set stages.

For the George region, the supplemental water required for avocado orchards could range between 3 000 m³ and 4 500 m³/ha per annum (or approximately 300 mm to 450 mm of equivalent water depth; Taylor et al., 2021). For mature macadamia orchards in South Africa, the total annual crop water requirement (ETc) generally ranges from 7 500 to 9 500 m³/ha. A significant portion of this requirement can be met by effective rainfall. The net supplementary irrigation water required per annum for a hectare of macadamia nuts is 3 500 m³ to 4 500 m³. This supplemental water requirement is based on a 60% crop canopy coverage.

Number of hectares that can be cultivated with the supplemental water requirement:

Available water rights from existing dams: 100 000 m³

Average supplemental water requirement per annum per ha:

Avocado:	3 950 m ³
Macadamia:	4 000 m ³

Number of potential ha based on supplemental water requirement, water rights and availability:

Avocado:	25 ha (rounded)
Macadamia:	23 ha (rounded)

If supplemental water were not limited, then approximately 128 ha of orchards could be used for avocados or macadamia nuts. Based on the available water rights and the need for supplemental water for the orchards during the summer months, the number of hectares that could be cultivated is reduced to approximately 25 ha for avocados or 23 ha for macadamia nuts. The Agricultural Viability Analysis is based on the number of ha permissible given the water constraint, while the remaining arable land is used for dryland (rain-fed) pastures.

6.5 Viability of existing pastures and livestock farming

Figure 19 shows the farming units comprising the Hoogeland project south of the N2. The majority (20 of the 28 land portions) are less than 10 ha, and eight are larger than 10 ha. A single 43-ha farm is considered an outlier. The question is whether the individual farming units are viable for pasture and livestock farming.

For beef cattle to meet the commercial benchmark of an economically viable, independent livestock unit or enterprise, a herd of roughly 100 to 120 breeding cows is generally considered the baseline. To absorb fixed operational costs (handling facilities, bull genetics, transport, and labour), a minimum footprint of 60-80 ha is required. At a conservative dryland pasture stocking rate of 1,0 LSU per ha, a 70-hectare footprint sustainably carries about 70 adult stock units. Research suggests that if pasture management is optimised through intensive strip grazing or multi-species dryland mixes, it may be possible to reduce the footprint to 50-60 ha, but this reduces the safety buffer against anomalies that may occur in drier seasons.

Preservation and Development of Agricultural Land Act (PDALA) legislation refers to a viable farming unit that means “the minimum area of agricultural land required for a farming unit practising sustainable agriculture and that is economically viable and generates revenue from its agricultural production operations.....”. An evaluation of the land viability to develop a fully self-sustaining commercial livestock business without relying on external off-farm income, 80 ha of clean, arable dryland pasture is the safest structural minimum for cattle. Anything smaller transitions the venture into a part-time lifestyle farm or a specialised intensive backgrounding/feed lot system. **Figure 19** indicates that none of the individual farming units is viable based on the benchmark for a viable commercial production unit. Even the largest land portions fall short of the 60-ha benchmark.

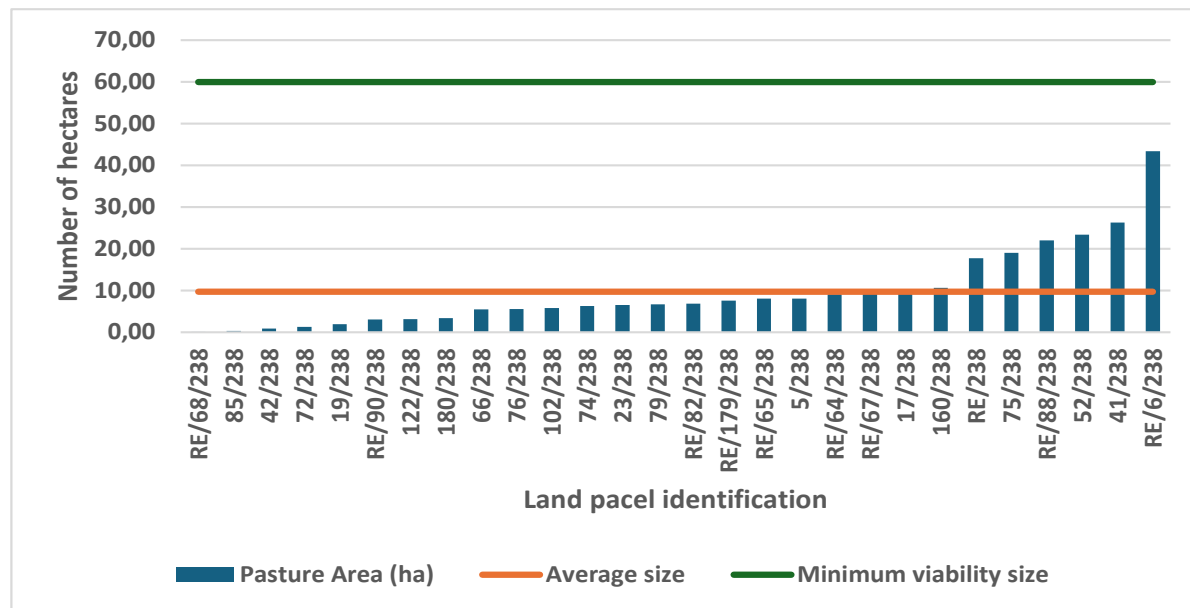


Figure 19: Farming units comprising the Hoogekraal Farm south of the N2.

In terms of Act 70 of 1970, there is case law, “Case CCT 78/07 [2008] ZACC 12: Wary Holdings (Pty) Ltd versus Stalwo (Pty) Ltd and Another”, to determine whether the Minister was correct in finding that the subdivision would result in the non-viability of the farm or lead to any part of the farm being uneconomical. *The essential purpose of the (Subdivision of) Agricultural Land Act has been identified as a measure by which the legislature, in the national interest, sought to prevent the fragmentation of agricultural land into small uneconomical units. In order to achieve this purpose, the legislature curtailed the common-law right of landowners to subdivide their agricultural property. It imposed the requirement of the Minister’s written consent as a prerequisite for subdivision, quite evidently to permit the Minister to decline any proposed subdivision which would have the unwanted result of uneconomic fragmentation.*” (Constitutional Court, 2008)

In Van der Bijl and Others v Louw and Another 1974 (2) SA 493 (C), the court considered the purpose of the Subdivision of Agricultural Land Act 70 of 1970. Baker J explained that the purpose of the Act is: “to prevent the situation where farming units are created which are not economical or could be described as non-viable sub-units.” The important implication from this judgment - and later SALA case law - is that the Act is aimed at **preventing the fragmentation of viable agricultural units into uneconomic units**, not at preserving land that is already economically non-viable as a farming unit.

In addition, Section 4.5 of the George Municipal Spatial Development Framework (MSDF) (2023-2027), which addresses Rural Development and Land Reform, outlines the George Municipality's intention to protect high-potential agricultural land while facilitating economic diversification. Intensification is highlighted as a policy that encourages the transition from "extensive" land uses (such as grazing) to "intensive" ones (such as orchards and berry crops), particularly in areas with proven water security and poor soil quality. However, embarking on such farming would need to be financially feasible (profitable) and carried out at scale.

6.6 Baseline model to estimate the historic agricultural viability for dryland pastures for raising beef cattle

The George Municipality acknowledges that grazing activity and pastures on the Hoogekraal Farms are declining, with a shift towards higher-value crops such as macadamia and avocado. From a grazing perspective, the area has been declining for various reasons. However, to establish a baseline and model the “maximum” agricultural potential, along with the area's related financial viability and sustainability, it seems reasonable to assess 257 ha for grazing and beef cattle rearing, even though this is not recommended in the Soil Suitability Analysis.



6.6.1 Methodology

It is assumed that the 2025/26 production costs and cattle prices are realistic and will remain constant throughout the 25-year assessment period. This means the estimated 2025/2026 profitability levels will form the basis for financial projections. Accordingly, projected monetary figures must be discounted at the real risk-adjusted rate to calculate a Present Value (PV). A cash flow model showing net cash flow is used for the financial calculations. As indicated, we assumed a 25-year assessment period, which is considered sufficient to illustrate the net cash flow effects of dryland pastures, avocado, and macadamia farming. The calculations are based on constant 2025/26 price levels. Future expected income and costs are discounted using a real risk-adjusted discount rate of 7,83% per annum (calculated from the current nominal prime rate of 10,25% per annum and an inflation rate (CPI) of 3,2%). A 1% premium is added to the real discount rate to reflect risk. The expected net cash flow is represented by the Net Present Value (NPV) in current terms over the 25-year assessment period.

6.6.2 Assumptions for dryland pastures and rearing of beef cattle

The Hoogekraal Farms are used for grazing cattle and for producing feed for the existing cattle and are not specifically farmed for lucerne production or dryland bale production. The approach adopted treats the combined properties as a footprint for dryland pastures and for the commercial rearing of beef cattle, reflecting the property's historic farming. **Table 4** indicates the key assumptions used for the analysis.

Table 4: Key assumptions adopted for dryland grazing and rearing beef cattle

Item	Value / Unit
Number of hectares (rounded)	257
Size of herd (Beef Cattle / LSU)	300
Stocking rate (ha per animal unit)	0.91 ha / LSU
Productive lifetime of breeding stock (years)	6 to 8
Age at first calving / marketing maturity (years)	2 to 2.5
Permanent labour / ha / year	R6 500
Management / ha / year	R4 200
Herd health and veterinary costs (R / LSU / year)	R450
Feed supplementation and licks (R / LSU / year)	R185
Operating costs of pastures (R / LSU / year)	R5 783
Stock handling and fencing maintenance / ha	R15 000
Mechanical and implements / ha	R48 000
Bare land outlay / ha (George / Southern Cape)	R55 000

Sources: Agribook (2024); Agrisell (2025); Red Meat Producers Organisation (2025); Western Cape Department of Agriculture (2024a)

Several items listed as assumptions in **Table 4** are unpacked below to support the inputs used in the cash flow modelling.

6.6.3 Revenue analysis

Revenue potential is determined by the market price per cattle unit and its weight per kg. Research on market prices and animal weight varies. For a semi-intensive operation focused on producing and selling weaners directly to feedlots, pricing is calculated per kilogram of live weight. National Benchmark indicates R40,50 – R42,90 per kg, and the Western Cape Specific Range is R37,80 – R41,90 per kg, based on a healthy 220 kg commercial weaner calf at local auctions (such as BKB or GWK sales in the George region).

We adopted this guidance to determine revenue, using an average price of R41,90 per kg and an average weight of 230 kg.



6.6.4 Establishment costs

The estimated establishment cost for the farm is R8 005 600, which translates to R29 325/ha (**Table 5**). The establishment costs are allocated based on an increasing production curve.

Table 5: Establishment costs and set-up capital requirements for a 257-ha dryland pasture

Category	Estimated Cost (R)	Key Items
Pasture Establishment	R2 025 000	Initial land preparation and agronomic inputs required to replace low-value native scrub or degraded veld
Fencing & Camp Layout	R175 250	Cost of dividing the property into a structured grid of grazing camps (paddocks) using durable, stock-proof fencing
Water Reticulation & Storage	R125 200	System required to extract, store, and pump clean drinking water across the entire camp layout, ensuring every single paddock has a reliable water source.
Handling, Kraals & Neck Clamp	R75 150	A centralised, heavy-duty sorting and processing facility (corral system) designed to safely confine, sort, and hold livestock for medical treatments, artificial insemination, branding, and loading.
Livestock purchase (herd and bulls)	R4 755 000	For dryland systems, the focus is strictly on hardy, adaptable breeds (such as Bonsmara, Brahman, or Nguni crossbreeds) that can cover long distances and maintain body condition on dry forage.
Machinery and implements	R850 000	The mechanised fleet and attached implements required to manage pasture maintenance, crop establishment, and daily farm logistics
Total	R8 005 600	

Sources: Western Cape Department of Agriculture (2025b)

6.6.5 Operating costs

For the purposes of the modelling, the operating costs are indicated per LSU (**Table 6**). Research suggests an estimated annual cost of R5 783 per LSU. The total annual operating costs for 300 beef cattle are R1 735 000 and are applied at constant rates over the assessment period.

Table 6: Breakdown of operating cost components per LSU

Cost Component	Description	Estimated Annual Cost per unit
Licks and supplements	Protein supplements (often containing urea) used during dry, dormant months to help the cattle digest coarse, dry grazing.	R1 500
Pasture fertilisation and feed	The cost of nitrogen, phosphorus, and potassium (NPK) fertilizers or lime applied to cultivated, irrigated, or dryland planted pastures (e.g., ryegrass, clover, or lucerne) to boost dry matter yield.	R1 500
Animal Health costs	Vaccinations and parasite control, veterinary care and medicines	R408
Marketing, Freight & Genetics	Commission fees paid to auctioneers or agents, freight: transport costs for hauling cattle and operating spend on artificial insemination (genetics)	R617
On-Farm Labour (Salaries & Casual)	Fence repairs, pump maintenance, equipment servicing	R575
Fuel, Implements and machinery (repairs and maintenance)	Salaries of permanent staff and casual labour, which could include temporary workers	R750



Cost Component	Description	Estimated Annual Cost per unit
Utilities, rates and security	Electricity costs for operating borehole pumps, electric fencing, pressure pumps, and farm workshop facilities, property rates on agricultural land and security costs related to safeguarding livestock	R433
Total		R5 783

Note: The initial capital cost does not include land acquisition costs, which are considered at R100 000 per ha.

Sources: KwaZulu-Natal Department of Agriculture and Rural Development (2021); Red Meat Producers' Organisation (2025); Western Cape Department of Agriculture (2025b)

6.6.6 Annual capital provision

At some point during the assessment period, certain asset upgrades and/or replacements will be required. Rather than providing lump-sum capital when the upgrade/replacement cost is incurred, a capital reserve is created with a constant annual funding provision. The annual capital provision is determined by the asset lifespans shown in **Table 7**. Based on the capital (asset) items and their estimated useful lives, an annual capital provision of R58 979 is included to create a sink fund for asset upgrades and replacements over the 25-year assessment period.

Table 7: Annual capital provision for farming equipment and irrigation infrastructure

Capital Expenditure Category	Primary Drivers / Components Included	Estimated Useful Life	Annual capital provision
Genetic Reinvestment	3 Commercial bulls, plus select replacement heifers	3 - 5 years	R31 000
Fencing & Camp Upgrades	High-tensile wire, treated poles, solar energisers, gates	10 - 15 years	R4 423
Water Infrastructure	Borehole pumps, solar panels, HDPE piping, concrete troughs	8 - 12 Years	R4 750
Pasture Renovation	Cyclical over-seeding equipment hire, seed varieties (perennial)	5 - 7 Years	R10 000
Handling Facilities Maintenance	Upgrades to crush pens, neck clamps, scales, and loading ramps	15 - 20 Years	R1 806
Machinery & Fleet Renewal	Tractor depreciation reserve/slasher parts, farm bakkie	7 - 10 Years	R7 000
Total estimated annual capex			R58 979

Sources: Meissner et al. (2013); Western Cape Department of Agriculture (2025b)

6.6.7 Annual net cash flow over 25 years in real terms

Table 8 shows annual net cash flow over 25 years, including the establishment year (year 0), at both constant and real prices. At a carrying capacity of 300 head of cattle, the cash flow at constant prices is R1 207 52. The term "initial capital" is phased in over 5 years. Land cost is a significant factor affecting the profitability of the farming enterprise.

The Net Present Value (NPV) over the 25 years is -R14,0 million (or -R46 728 per head of cattle), based on a real risk-adjusted discount rate of 7,83% and an IRR of -0,2%. This implies that revenue or income is insufficient to cover total operating costs and capital requirements in real terms, primarily due to land costs (estimated at R55 000 /ha) (Property24 / AgriConnect (2026). Based on the operating expenditure and capital input costs, the selling price will need to increase to R66,70 per kg to achieve a zero NPV at a real discount rate of 7,83%. This represents a 53,5% increase per tonne on the applied (assumed) market price of R43,50 per kg.



Table 8: Annual net cash flow per ha for 25 years in constant terms and real terms

Year	Number of cattle	Revenue	Operating Cost	Capex provision	Initial capital	Net Cash flow	Real net cash flow
0	0	R0	R0	R0	(R19 426 846)	(R19 426 846)	(R19 426 846)
1	50	R498 588	(R288 206)	(R58 979)	(R1 461 146)	(R1 309 743)	(R1 214 621)
2	96	R957 289	(R553 355)	(R58 979)	(R1 272 658)	(R927 703)	(R797 845)
3	152	R1 520 694	(R879 028)	(R58 979)	(R1 486 645)	(R903 958)	(R720 962)
4	218	R2 178 830	(R1 259 460)	(R58 979)	(R1 858 306)	(R997 915)	(R738 095)
5	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R828 264
6	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R768 110
7	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R712 325
8	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R660 592
9	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R612 615
10	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R568 123
11	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R526 863
12	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R488 598
13	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R453 113
14	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R420 205
15	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R389 687
16	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R361 386
17	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R335 140
18	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R310 800
19	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R288 228
20	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R267 295
21	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R247 882
22	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R229 879
23	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R213 184
24	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R197 701
25	300	R3 001 500	(R1 735 000)	(R58 979)	R0	R1 207 521	R183 343

Developing dry pastures and rearing beef cattle are affected by the bare land value per hectare. Given the LSU's carrying capacity and only 257 ha available, the scale may not be sufficient to generate a positive NPV over 25 years. A trend of decreasing cattle grazing and feed production on the Hoogekraal Farms is shifting towards higher-value crops, such as macadamia and avocado orchards. The reduction in cattle grazing and feed production is not the result of a single event, but rather a strategic shift in land use combined with regional economic pressures.

Strategic crop diversification, associated with the expansion of orchards for permanent crops, is the primary driver of reduced grazing and the shift from livestock to high-value horticultural crops. In the George and Garden Route region, there is a clear trend away from extensive cattle grazing towards intensive irrigation blocks for avocado and macadamia orchards. Permanent crops such as macadamia and avocado offer significantly higher returns on investment than cattle grazing, which in the Southern Cape typically relies on rain-fed pastures (low-intensity) with a grazing capacity estimated at 0.8 to 1.0 LSU per ha (Agri Informatics, 2026). By converting grazing land to orchards, the farm can generate more revenue from a smaller footprint.



6.7 Model to estimate the agricultural viability for macadamia and avocado farming

To evaluate the agricultural viability of Hoogekraal Farms, the Malan Report (2026) identified macadamia and avocado farming as suitable enterprises. Both are classified as permanent, high-value perennial orchard crops and are used in the financial evaluation. Macadamia and avocado farming are widely regarded as high-investment, high-reward ventures. They are capital-intensive and carry significant financial risks, mainly because of the "time-to-harvest" lag and the complexity of their biological requirements. Profitability is thus mainly determined by relative production and price levels.

6.7.1 Assumptions for avocado farming

The soil suitability analysis reported by Malan (2026) indicates that avocado farming is suitable for moderately recommended, recommended and highly recommended soils on the Hoogekraal Farm. Given water constraints and the need for annual supplemental water, along with existing water rights, about 25 ha of avocado orchards can be established. Table 9 summarises the key assumptions used in the avocado farming analysis, and the items below unpack the inputs used in the cash flow modelling.

Table 9: Key assumptions adopted for assessing the production of avocado farming

Item	Value / Unit
No of ha	27
Expected lifetime of orchards (years)	25
Years to full bearing (maturity) (years)	7
Permanent labour /ha/year	R82 500
Management /ha/year	R27 500
Establishment costs of pastures (R/ha)	R417 500
Running costs of pastures (R/ha/year)	R140 000
Irrigation water costs (R/ha/year)	R6 000
Irrigation outlay/ha	R100 000
Equipment outlay/ha	R225 000
Outlay for bare land (with irrigation water) (R/ha) (George/Southern Cape)	R450 000

Source: Western Cape Department of Agriculture (2024b, 2025a)

6.7.2 Yield analysis

Revenue or income potential depends on the product's market price and yield per hectare (**Table 10**). By Year 7 and onwards, the trees should reach maturity and achieve peak bearing levels.

Table 10: Expected yields of avocado over the lifecycle to maturity

Year	Growth Stage	Estimated Yield (Tons/Ha)
Year 1	Establishment	0
Year 2	Vegetative	0
Year 3	First Commercial	3,5
Year 4	Expansion	7,5
Year 5	Semi-Mature	12,5
Year 6	Mature Bearing	17,5
Year 7+	Maturity / Peak	20

Sources: ABSA (2026); South African Avocado Growers Association (2025-2026); Western Cape Department of Agriculture (2024b, 2025a)



South African Avocado Growers' Association (SAAGA) Industry Census & ZZZ Technical Reports indicate 18 to 22 t/ha at peak from years 8 to 15. From years 16 to 18, yields plateau at roughly 14 to 16 t/ha. At this stage, the tree is no longer increasing its canopy volume, and light penetration could become an issue. During the declining years from Year 19 onwards, yields often drop to 10-12 t/ha.

6.7.3 Establishment costs

The estimated establishment cost for 1 ha of avocado farming is R417 500, plus bare land value and management/labour costs of R560 000. The total establishment cost per ha is estimated at R977 500 (**Table 11**).

Table 11: Establishment costs and set-up capital requirements per ha for avocado

Category	Estimated Cost (R/ha)
Land Preparation	R42 000
Tree Stock (Seedlings)	R60 000
Irrigation System	R100 000
Wind Protection	R50 000
Planting Labour & Materials	R25 000
Infrastructure & Security	R107 500
Equipment (Allocated)	R32 500
Sub-total	R417 500
Management and labour	R110 000
Bare land with irrigation water (George/Garden Route)	R450 000
Total	R977 500

Sources: Subtrop (2025); South African Avocado Growers' Association (2025); Western Cape Department of Agriculture (2024b, 2025a - adjusted for 2026)

6.7.4 Selling prices

George is considered a late-window premium and seasonal market destination, which helps obtain higher prices. **Table 12** presents estimated prices for different market segments, with a percentage split among export, local, and processing. We adopted a blended price, or what could be termed a weighted-average price, of R23 225 per tonne to model and assess the financial viability of avocado farming.

Table 12: Estimated price per tonne and percentage market split for avocado markets

Classification	Estimated Price (Per Ton)	Percentage Split
Export (Gross)	R31 500	60%
Local Fresh Market	R14 000	25%
Local Processing	R5 500	15%

Sources: Absa (2026); AgriMag (2026); Subtrop (2025); South African Avocado Growers' Association (2026)

6.7.5 Running costs

Running costs are generally referred to as variable costs and include various items as listed in **Table 13**, but normally exclude labour and management expenses. For modelling purposes, management and labour costs are included in running costs, which are collectively referred to as operating costs. Permanent labour costs are estimated at R82 500 and management costs at R27 500 per ha per annum.



Table 13: Breakdown of running cost components for avocado farming per ha at full maturity (year 7)

Cost Component ⁷	Estimated Annual Cost (R/ha)
Fertilisers and lime	R35 000
Pest and disease control	R39 200
Seasonal labour harvest/prune	R28 000
Fuel and electricity	R14 000
Repairs and maintenance	R11 200
Pollination	R5 600
Total variable costs	R133 000

Sources: Farmers Weekly Q1 2026; SAAGA (2025); Subtrop (February/March 2026); Western Cape Department of Agriculture (2024b, 2025a)

The total annual operating cost for avocado farming at maturity is R 211 500 per ha and is applied at constant rates throughout the assessment period. In addition, variable costs increase until trees mature and reach peak delivery. **Table 14** shows the ramp-up in variable costs over the first seven years of the lifecycle, up to maturity.

Table 14: Progression of variable costs for the first seven years of an avocado orchard per ha

Year	Stage	Average variable cost (R/ha)
1	Establishing	R18 000
2	Vegetative	R28 000
3	Transition	R45 000
4	First Fruit	R68 000
5	Semi-Mature	R108 000
6	Near-Maturity	R128 000
7	Full Maturity	R133 000

Source: SAAGA (2017)

6.7.6 Annual capital provision

At some point during the assessment period, certain upgrades and/or replacements of assets are required. Rather than providing lump-sum capital when upgrade/replacement funding is required, a capital reserve is created with a constant annual contribution. The annual capital provision is determined by the asset lifespans shown in **Table 15**.

Table 15: Annual capital provision for farming equipment and irrigation for avocado farming

Component	Annual Replacement Reserve (Rand/ha)		Useful life (years)
	Year 1-3	Year 4-25	
Juvenile tree replacement	R4 259		3
Infrastructure renewal	R2 222	R2 222	5
Machinery and equipment upgrades or replacement	R3 148	R3 148	12
	R9 630	R5 370	

Note: Juvenile replacement only occurs in Years 1 - 3

⁷ **Fertilizers and Lime:** In the George area, higher rainfall levels can lead to more rapid soil acidification and nutrient leaching, requiring higher lime and fertilizer inputs compared to drier regions.

Chemicals: The high humidity of the Garden Route increases the risk of fungal diseases (like *Phytophthora* root rot and *Cercospora* spot), necessitating more intensive chemical spray programs.

Bee Rental (4%): This is a standard but critical operational cost for George avocado orchards to ensure fruit set, typically factored into the WCDa's intensive orchard models.



6.7.7 Re-establishment cost and declining production

No provision is made for re-establishment costs. However, according to the South African Avocado Growers' Association (2017), the landmark study *Economic Aspects of Avocado Production: Orchard Replacement* highlights that new technology, including new rootstocks like Dusa or higher-density planting patterns, often makes it more profitable to clear and re-establish a 20-year-old orchard rather than maintain a declining one. In the George area, older trees also become increasingly difficult to protect from wind and fungal disease as their height makes effective spraying harder.

We provided a replacement-cost scenario but used declining capacity to demonstrate the impact of declining production, thereby addressing the resulting losses or, conversely, the opportunity cost of not replacing the orchard. Table 16 shows the applied yields.

Table 16: Yield changes in the life cycle of avocado orchards

Phase	Year Range	Yield (Tons/ha)	Description of Decline
Peak Production	Years 1 – 7	18 - 22	Trees at full canopy capacity with maximum "fruit-bearing wood"
Early Decline	Years 13 – 17	14 – 17	Light Attenuation: Inner branches begin to die back due to shading (crowding)
Structural Decline	Years 18 – 22	10 – 13	The "Spray Ceiling": Trees become too tall for effective chemical penetration
Economic Threshold	Years 23+	< 9	Replacement Trigger: Costs exceed the value of the declining yield

Sources: SAAGA Yearbooks (2017-2026), which pinpoint Year 17–18 as the point when the amortised value of a new orchard exceeds the current margin of an old one. Western Cape Department of Agriculture (2025a): Capital Renewal guidelines for the Western Cape provide the specific yield-drop benchmarks that banks use to approve agricultural loans for replanting. The replacement per ha is estimated at R251 500, and it is envisaged that the replacement of the 27 ha of trees would occur over a period of six years, or some 4,1 ha per annum, from years 20 to 25. This could be extended to address cash flow shortfalls.

We adopted the above guidance, assessed the impact on profitability per ha, and provided for orchard replacement over the last six years of the assessment period. Table 17 shows an extract of the financial model for years 18 to 25.

Table 17: Net cash flow in constant terms for years 18 to 25 of the assessment period

Year	Yield (t/ha)	Revenue (R/ha)	Operating Cost (R/ha)	Orchard replacement capital (R/ha)	Capital asset provision (R/ha)	Net Cashflow (R/ha)
18	14,00	R325 150	(R249 000)		(R5 370)	R70 780
19	14,00	R325 150	(R234 060)		(R5 370)	R85 720
20	14,00	R325 150	(R220 016)	(R251 500)	(R5 370)	(R151 737)
21	14,00	R325 150	(R206 815)	(R251 500)	(R5 370)	(R138 536)
22	14,00	R325 150	(R194 406)	(R251 500)	(R5 370)	(R126 127)
23	9,00	R209 025	(R178 854)	(R251 500)	(R5 370)	(R226 699)
24	9,00	R209 025	(R164 546)	(R251 500)	(R5 370)	(R212 391)
25	9,00	R209 025	(R151 382)	(R251 500)	(R5 370)	(R199 227)



6.7.8 Annual net cash flow per ha over 25 years

Table 18 shows the net cash flow per ha per annum over 25 years, including the establishment year (year 0), in constant terms. At a yield of 20 tonnes per ha, the net cash flow at constant prices is estimated at R210 130 per ha. A salient point from the feasibility analysis is that, from year 13, the yield begins to decline, which means operating costs would also decline slightly due to lower harvesting labour, bin, and transport costs. This decline in operating costs continues as the production yield and stated costs decline.

Table 18: Net cash flow per ha per annum for 25 years of avocado farming

Year	Yield (t/ha)	Revenue (R/ha)	Operating Cost (R/ha)	Initial & replacement Capex (R/ha)	Replacement Capital (R/ha)	Net Cashflow (R/ha)
0	0,00	R0	(R55 000)	(R977 500)	R0	(R1 032 500)
1	0,00	R0	(R134 000)		(R9 630)	(R143 630)
2	0,00	R0	(R144 000)		(R9 630)	(R153 630)
3	3,50	R81 288	(R161 000)		(R9 630)	(R89 342)
4	7,50	R174 188	(R184 000)		(R5 370)	(R15 183)
5	12,50	R290 313	(R224 000)		(R5 370)	R60 942
6	17,50	R406 438	(R244 000)		(R5 370)	R157 067
7	20,00	R464 500	(R249 000)		(R5 370)	R210 130
8	20,00	R464 500	(R249 000)		(R5 370)	R210 130
9	20,00	R464 500	(R249 000)		(R5 370)	R210 130
10	20,00	R464 500	(R249 000)		(R5 370)	R210 130
11	20,00	R464 500	(R249 000)		(R5 370)	R210 130
12	20,00	R464 500	(R249 000)		(R5 370)	R210 130
13	18,00	R418 050	(R249 000)		(R5 370)	R163 680
14	18,00	R418 050	(R249 000)		(R5 370)	R163 680
15	18,00	R418 050	(R249 000)		(R5 370)	R163 680
16	18,00	R418 050	(R249 000)		(R5 370)	R163 680
17	14,00	R325 150	(R249 000)		(R5 370)	R70 780
18	14,00	R325 150	(R249 000)		(R5 370)	R70 780
19	14,00	R325 150	(R234 060)		(R5 370)	R85 720
20	14,00	R325 150	(R220 016)	(R251 500)	(R5 370)	(R151 737)
21	14,00	R325 150	(R206 815)	(R251 500)	(R5 370)	(R138 536)
22	14,00	R325 150	(R194 406)	(R251 500)	(R5 370)	(R126 127)
23	9,00	R209 025	(R178 854)	(R251 500)	(R5 370)	(R226 699)
24	9,00	R209 025	(R164 546)	(R251 500)	(R5 370)	(R212 391)
25	9,00	R209 025	(R151 382)	(R251 500)	(R5 370)	(R199 227)

Table 19 shows the net cash flow per annum in constant terms for 27 ha of avocado orchards, subject to water rights and available supplemental water (after accounting for annual rainfall). The Net Present Value (NPV) over the 25 years is negative R6,5 million (or negative R239 118 per ha), based on the real risk-adjusted discount rate of 7,83%, yielding an IRR of 5,8%. This implies an inherent risk later in the trees' lifecycle due to declining yields in current terms.

To achieve an NPV of 0, the blended price of R23 225 per tonne will need to be adjusted to R24 993 per tonne, an increase of 7,6%. Given the costly and risky nature of the production at the enterprise in question, it is doubtful



whether acceptable output levels of more than 20 tonnes per ha will be achievable. Even with a shift towards higher-value crops such as avocado orchards, the inherent risks remain. It will take approximately 10 years to recoup the capital invested in operations, at which point net cash flow at constant prices becomes positive. This implies that investors would only begin to achieve a cash-flow return on investment from 12 years onwards.

Table 19: Net cash flow per annum for 25 years for avocado production on 25 ha in constant and real terms⁸

Year	Yield (tonnes)	Revenue	Operating Cost	Initial & replacement Capex	Replacement Capital	Net Cash flow	Real cash flow
0	0	R0	R0	(R26 392 500)	R0	(R26 392 500)	(R26 392 500)
1	0	R0	(R3 618 000)	R0	(R260 000)	(R3 878 000)	(R3 596 355)
2	0	R0	(R3 888 000)	R0	(R260 000)	(R4 148 000)	(R3 567 371)
3	95	R2 194 763	(R4 347 000)	R0	(R260 000)	(R2 412 238)	(R1 923 908)
4	203	R4 703 063	(R4 968 000)	R0	(R145 000)	(R409 938)	(R303 205)
5	338	R7 838 438	(R6 048 000)	R0	(R145 000)	R1 645 438	R1 128 640
6	473	R10 973 813	(R6 588 000)	R0	(R145 000)	R4 240 813	R2 697 601
7	540	R12 541 500	(R6 723 000)	R0	(R145 000)	R5 673 500	R3 346 836
8	540	R12 541 500	(R6 723 000)	R0	(R145 000)	R5 673 500	R3 103 768
9	540	R12 541 500	(R6 723 000)	R0	(R145 000)	R5 673 500	R2 878 353
10	540	R12 541 500	(R6 723 000)	R0	(R145 000)	R5 673 500	R2 669 309
11	540	R12 541 500	(R6 723 000)	R0	(R145 000)	R5 673 500	R2 475 447
12	540	R12 541 500	(R6 723 000)	R0	(R145 000)	R5 673 500	R2 295 664
13	486	R11 287 350	(R6 723 000)	R0	(R145 000)	R4 419 350	R1 658 328
14	486	R11 287 350	(R6 723 000)	R0	(R145 000)	R4 419 350	R1 537 890
15	486	R11 287 350	(R6 723 000)	R0	(R145 000)	R4 419 350	R1 426 199
16	486	R11 287 350	(R6 723 000)	R0	(R145 000)	R4 419 350	R1 322 619
17	378	R8 779 050	(R6 723 000)	R0	(R145 000)	R1 911 050	R530 400
18	378	R8 779 050	(R6 723 000)	R0	(R145 000)	R1 911 050	R491 879
19	378	R8 779 050	(R6 319 620)	R0	(R145 000)	R2 314 430	R552 440
20	378	R8 779 050	(R5 940 443)	(R1 046 240)	(R145 000)	R1 647 367	R364 658
21	378	R8 779 050	(R5 584 016)	(R1 046 240)	(R145 000)	R2 003 794	R411 342
22	378	R8 779 050	(R5 248 975)	(R1 046 240)	(R145 000)	R2 338 835	R445 251
23	243	R5 643 675	(R4 829 057)	(R1 046 240)	(R145 000)	(R376 622)	(R66 491)
24	243	R5 643 675	(R4 442 733)	(R1 046 240)	(R145 000)	R9 702	R1 589
25	243	R5 643 675	(R4 087 314)	(R1 046 240)	(R145 000)	R365 121	R55 438

6.8 Macadamia farming

6.8.1 Assumptions for macadamia farming

The soil analysis results reported by Malan (2026) indicate that macadamia farming is suitable for moderately recommended, recommended and highly recommended soils on the Hoogekraal Farms. Given water constraints, the need for annual supplemental water, and the confines of existing water rights, about 23 ha of macadamia orchards could be established. **Table 20** indicates the key assumptions used for the macadamia farming analysis, and the section below unpacks several to support the inputs used in the cash flow modelling.

⁸ In an agricultural context, constant prices refer to a specific fixed base year. Real prices are adjusted to account for inflation, reflecting purchasing power over time.



Table 20: Key assumptions adopted for assessing the production of macadamia farming

Item	Value / Unit
No of ha	25
Expected lifetime of orchard (years)	25
Years to full bearing (maturity) (years)	12
Permanent labour /ha/year	R52 500
Management /ha/year	R25 000
Establishment costs of macadamia orchard (R/ha)*	R394 800
Running costs of orchard (R/ha/year) maturity	R75 000
Irrigation water costs (R/ha)	R3 000
Irrigation outlay/ha	R65 000
Equipment outlay/ha	R175 000
Bare land outlay/ha (George/Southern Cape)	R450 000

Source: Western Cape Department of Agriculture, 2024b, 2025a

* Excludes fixed canopy netting structure and bare land value per ha

6.8.2 Yield analysis

Revenue or income potential depends on product price and yield per hectare. Research on macadamia yields, expressed as tonnes per ha per annum, indicates yields progress toward maturity, as shown in **Table 21**. SAMAC (Macadamias South Africa) industry statistics (2025/26)⁹ indicate 2.0 to 3,2 t/ha in the maturation years from year 8 to 12. From Year 12 to 25, a yield of 4 tonnes/ha is assumed to represent peak maturity.

Table 21: Yield estimates for macadamia over the lifecycle to maturity

Yield progression	Tree Age	Yield (t/ha)	Development Status	Yield (t/ha) applied in the model
Establishment	Year 1 – 4	0,0 – 0,3	Vegetative growth; focus on structural pruning.	Year 1-3 = 0 Year 4 = 0,3
Early Bearing	Year 5 – 7	0,8 – 1,8	First commercial crops; volume doubles annually.	1,3
Maturation	Year 8 – 11	2,0 – 3,2	Rapid growth as the canopy expands to fill the rows.	2,75
Peak Maturity	Year 12 – 25	3,5 – 4,5	Full production; maximum yield efficiency.	4,0

Sources: Macadamias South Africa (2025, 2026); Western Cape Department of Agriculture (2025a)

6.8.3 Establishment costs

The establishment cost for 1 ha of macadamia trees is estimated at R89 750, plus set-up capital of R240 000 (**Table 22**). The total establishment cost, inclusive of the bare land value and a fixed canopy netting structure, is estimated at R1 284 750 per ha. Note that the bare land value for farms of 10 ha to 50 ha ranges from R450 000 to R850 000 (Western Cape Department of Agriculture, 2026). These prices are for farms closer to George, and the value is affected by proximity to the N2. The value used is the average of the range to reflect the property's location and potential utilisation.

⁹ The t/ha figures for early bearing (Years 5–7) and maturation (Years 8–12) are based on their annual Tree Census and Crop Production reports, which track the performance of approximately 81 000 hectares of macadamia orchards across the country.



Table 22: Establishment costs and set-up capital requirements per ha

Category	Estimated Cost (R/ha)
Nursery Trees	R18 000
Soil Preparation	R47 500
Soil Amelioration	R52 500
Irrigation and material	R6 500
Pest and weed control	R4 000
Planting Labour	R4 000
Fuel repairs and maintenance	R4 500
Sub-total	R89 750
Irrigation and equipment	R240 000
Fixed crop shade structure	R305 000
Bare land George/Garden Route)	R450 000
Total	R1 284 800

Sources: SAAGA (2025); Subtrop (2025); Western Cape Department of Agriculture (2024b, 2025a)

6.8.4 Selling prices

The macadamia pricing environment for the 2026 production season offers several positive indicators for growers in the Southern Cape and George areas as the global market transitions away from the sharp volatility seen over the previous few years. **Table 23** presents estimated prices for different market segments, with a percentage split among Nut-In-Shell (NIS), Whole Kernels (Style 0/1), and Halves and Pieces. We adopted a blended price, or weighted-average price, of R134 950 per tonne for macadamia nuts to model and assess the profitability of macadamia farming.

Table 23: Estimated price per tonne and percentage based on product split

Classification	Estimated Price (Per Tonne)	Percentage Split
Nut-In-Shell (NIS)	R70 000	55%
Whole Kernels (Style 0/1)	R233 000	35%
Halves & Pieces	R149 000	10%

Sources: Botha (2026b); FreshPlaza (2026); Macadamias South Africa (2025, 2026); Western Cape Department of Agriculture (2025a)

6.8.5 Running costs

Running costs, generally referred to as variable costs, include the items listed in **Table 24**, but exclude labour and management expenditure. For the modelling, management and labour costs are included in the running costs, which are collectively referred to as operating costs. Permanent labour is estimated at R50 000 per ha and management costs at R21 500 per ha per year.

Table 24: Breakdown of components of running costs for macadamia per ha at full maturity

Cost Component	Estimated Annual Cost (R/ha)
Fertiliser and nutrition	R21 250
Pest and disease control	R18 500
Direct seasonal labour	R14 250
Electricity and irrigation	R8 750



Cost Component	Estimated Annual Cost (R/ha)
Fuel and vehicle maintenance	R7 500
Repairs and maintenance	R4 750
Total Variable Costs	R75 000
Labour and management	R77 500
Total operating costs	R152 500

Source: Macadamias South Africa (2025)

In addition, variable costs also ramp up until trees are mature and deliver peak harvests. **Table 25** shows the increase in variable costs over the first seven years of the lifecycle.

Table 25: Progression of variable costs for the first seven years of a macadamia orchard per ha

Year	Stage	Average variable cost (R/ha)
1	Juvenile	R20 000
2	Juvenile	R25 000
3	Juvenile	R31 500
4	Pre-Bearing	R43 000
5	Initial Bearing	R53 000
6	Bearing	R60 000
7	Mature	R75 000

Sources: Agribiz (2026); Department of Agriculture (2025); Macadamias South Africa (2026); Western Cape Department of Agriculture (2026)

6.8.6 Annual capital provision

At some point during the assessment period, certain upgrades and/or asset replacements will be required. Rather than providing for a lump-sum capital requirement when the upgrade/replacement is needed, a capital reserve or provision is created as a sink fund with a constant annual contribution over the 25-year assessment period. **Table 26** shows the annual capital provision, based on the assets' lifespans.

Table 26: Annual capital provision for farming equipment and irrigation infrastructure

Provision Item	Annual Reserve (R/ha/year)	Detail of item
Rolling stock	R12 500	Tractors, trailers, and sprayers (10 to 12-year life)
Processing fixed assets	R4 500	De-hushing lines, drying bins, and moisture meters
Irrigation and water	R6 000	Pumps, pipes, and automation hardware
Infrastructure/fencing	R2 500	Security, sheds, and road maintenance
Total Capital annual provision	R25 500	Total annual "Sinking Fund" requirement

Sources:

Macadamias South Africa (2025, 2026): These provide technical requirements and standard lifecycle expectations for equipment such as tractors, sprayers, and de-hushing lines (e.g., a 10–12-year life for rolling stock).

Western Cape Department of Agriculture (2025a): This source provides foundational enterprise budgets and capital replacement guides specific to the Southern Cape, used to calculate the R/ha/year reserves for infrastructure, irrigation, and fixed assets.

Agbiz (2026): Current pricing for machinery and irrigation hardware is updated using recent market analysis from institutions to ensure the "Sinking Fund" reflects the replacement costs in the 2026 economic environment.



6.8.7 Re-establishment cost and declining production of macadamia

No provision is made for re-establishment costs, as the assessment period is 25 years and no decline in yield is anticipated. Industry benchmarking by Macadamias South Africa (2025, 2026) indicates that tree maintenance occurs from Year 25 to 40, which slightly reduces yield to between 3 and 3,5 tonnes per ha due to light competition and tree height. From Year 40, senescence (biological ageing of the trees) commences, and yields could decline to less than 2,5 tonnes per ha, a trend that could continue if aggressive rejuvenation is employed.

6.8.8 Net cash flow per ha per annum over 25 years for macadamia

Table 27 indicates the net cash flow per ha per annum over 25 years, including the establishment year (year 0). At a yield of 4 tonnes per ha, which represents the yield at maturity, the net cash flow is estimated at R361 800 per ha. From Year 8, the project achieves an annual net positive cash flow. In year 15, the cumulative net cash flow turns positive in constant terms. This is the first year that investors will receive a payback on their capital.

Table 27: Net cash flow for macadamia farming per ha per annum over 25 years

Year	Yield (t/ha)	Revenue (R/t)	Operating Cost (R/ha)	Initial & replacement Capex (R/ha) p.a.	Net Cashflow (R/ha)
0	0,00	R0	(R77 500)	(R1 284 750)	(R1 362 250)
1	0,00	R0	(R102 500)	(R25 500)	(R128 000)
2	0,00	R0	(R109 000)	(R25 500)	(R134 500)
3	0,00	R0	(R120 500)	(R25 500)	(R146 000)
4	0,30	R40 485	(R130 500)	(R25 500)	(R115 515)
5	1,30	R175 435	(R137 500)	(R25 500)	R12 435
6	1,30	R175 435	(R152 500)	(R25 500)	(R2 565)
7	1,30	R175 435	(R152 500)	(R25 500)	(R2 565)
8	2,75	R371 113	(R152 500)	(R25 500)	R193 113
9	2,75	R371 113	(R152 500)	(R25 500)	R193 113
10	2,75	R371 113	(R152 500)	(R25 500)	R193 113
11	2,75	R371 113	(R152 500)	(R25 500)	R193 113
12	4,00	R539 800	(R152 500)	(R25 500)	R361 800
13	4,00	R539 800	(R152 500)	(R25 500)	R361 800
14	4,00	R539 800	(R152 500)	(R25 500)	R361 800
15	4,00	R539 800	(R152 500)	(R25 500)	R361 800
16	4,00	R539 800	(R152 500)	(R25 500)	R361 800
17	4,00	R539 800	(R152 500)	(R25 500)	R361 800
18	4,00	R539 800	(R152 500)	(R25 500)	R361 800
19	4,00	R539 800	(R152 500)	(R25 500)	R361 800
20	4,00	R539 800	(R152 500)	(R25 500)	R361 800
21	4,00	R539 800	(R152 500)	(R25 500)	R361 800
22	4,00	R539 800	(R152 500)	(R25 500)	R361 800
23	4,00	R539 800	(R152 500)	(R25 500)	R361 800
24	4,00	R539 800	(R152 500)	(R25 500)	R361 800
25	4,00	R539 800	(R152 500)	(R25 500)	R361 800



Table 28 shows the net cash flow per annum for the 27 ha of macadamia orchards, subject to water rights and to the availability of supplemental water (after accounting for annual rainfall). The Net Present Value (NPV) over 25 years is negative R2,5 million (or negative R100 118 per ha) at a real risk-adjusted discount rate of 7,83%, yielding an IRR of 7,4%. The analysis does not indicate a viable outcome, and even at a 7,83% risk level, an NPV greater than 1 cannot be achieved, indicating that the project is not financially viable at the level of risk investors are prepared to take. To achieve an NPV = 0, the blended price of R134 950 per tonne will need to be adjusted to R139 374 per tonne, an increase of 3,3%.

Table 28: Net cash flow per annum for 25 years for macadamia production on 25 ha in constant and real terms

Year	Yield (tonnes)	Revenue	Operating Cost	Initial & replacement Capex	Net Cashflow (nominal)	Real Net cash flow (current)
0	0,0	R0	(R1 937 500)	(R32 118 750)	(R34 056 250)	(R34 056 250)
1	0,0	R0	(R2 562 500)	(R637 500)	(R3 200 000)	(R2 967 596)
2	0,0	R0	(R2 725 000)	(R637 500)	(R3 362 500)	(R2 891 824)
3	0,0	R0	(R3 012 500)	(R637 500)	(R3 650 000)	(R2 911 100)
4	0,3	R1 012 125	(R3 262 500)	(R637 500)	(R2 887 875)	(R2 135 982)
5	1,3	R4 385 875	(R3 437 500)	(R637 500)	R310 875	R213 236
6	1,3	R4 385 875	(R3 812 500)	(R637 500)	(R64 125)	(R40 790)
7	1,3	R4 385 875	(R3 812 500)	(R637 500)	(R64 125)	(R37 828)
8	2,8	R9 277 813	(R3 812 500)	(R637 500)	R4 827 813	R2 641 123
9	2,8	R9 277 813	(R3 812 500)	(R637 500)	R4 827 813	R2 449 308
10	2,8	R9 277 813	(R3 812 500)	(R637 500)	R4 827 813	R2 271 424
11	2,8	R9 277 813	(R3 812 500)	(R637 500)	R4 827 813	R2 106 459
12	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R3 659 872
13	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R3 394 069
14	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R3 147 570
15	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R2 918 974
16	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R2 706 980
17	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R2 510 382
18	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R2 328 062
19	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R2 158 983
20	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R2 002 184
21	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R1 856 773
22	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R1 721 923
23	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R1 596 866
24	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R1 480 891
25	4,0	R13 495 000	(R3 812 500)	(R637 500)	R9 045 000	R1 373 340

Farming macadamias in the George region offers unique opportunities but carries specific risks. As of 2026, the industry has shifted from a "boom" phase to a period of strategic consolidation, making efficiency and risk management more critical than ever (Absa, 2026). The South African macadamia nut industry is almost entirely export-driven. A stronger Rand can reduce on-farm income by up to 15%, even if global dollar prices remain stable (Botha, 2026a).

Changes in US tariffs (fluctuating between 10% and 15%) and the possible phase-out of the AGOA agreement create uncertainty for "Style 4" kernels, and rising costs for fertiliser, fuel, and specialised labour (pruning and harvesting)



continue to squeeze margins, especially for farms in "marginal" production areas. George and the broader Southern Cape are often considered "marginal" or non-traditional production areas compared to the core subtropical hubs like Limpopo, Mpumalanga, and KwaZulu-Natal. While the industry in George is growing, it faces specific regional constraints that differ from the "ideal" subtropical conditions found in the north. According to Macadamias South Africa (2024), the Western Cape accounts for 0,9% of the macadamia market (Botha, 2026a; FreshPlaza, 2026; Mundus Agri, 2026).

6.9 Conclusion

Pastures for grazing were, and to some extent still are, the historical farming enterprise of the Hoogekraal Farms. However, cattle grazing and feed production are declining in favour of higher-value crops such as avocado and macadamia. According to Malan (2026), these two crops could be considered for cultivation on 41,8% of the soils on the Hoogekraal Farms (all else being equal).

Strategic Crop Diversification (Orchard Expansion) is the primary driver of the reduction in grazing, as it reflects the transition from livestock to high-value horticultural crops. In the George and Garden Route region, there is a clear trend away from extensive cattle grazing towards intensive irrigation blocks for avocado and macadamia orchards. Permanent crops such as macadamia and avocado offer significantly higher returns on investment than cattle grazing, which in the Southern Cape typically relies on rain-fed pastures (low-intensity) with a grazing capacity estimated at 0.8 to 1.0 LSU per ha (Agri Informatics, 2026). By converting grazing land to orchards, the farm can generate more revenue from a smaller footprint.

The agricultural viability of avocados and macadamia nuts is assessed over a 25-year period. The financial viability analyses indicate that, given the assumptions, avocado and macadamia production will be under pressure to achieve acceptable profit levels (refer to **Tables 19** and **28**) if scale cannot be achieved.

The financial analysis confirms that the inherent agricultural viability of farming on the Hoogekraal land is limited by constrained irrigation capacity (supplemental water requirements), rising input costs, and other external factors, including foreign exchange fluctuations, given that large portions of the harvest are exported. Even assuming maximum historical land use for dryland pasture and livestock, the projected returns are insufficient to meet the definition of an economically viable and sustainable agricultural operation, with a negative NPV and a sub-optimal IRR over 25 years.

Farming avocados and macadamia with a more focused, capital-intensive strategy, concentrating production on higher-potential soils, would allow only a small cultivated footprint because of water constraints and the assumption that future returns will take time to realise. Both the avocado and macadamia farming models show negative NPV and a modest IRR; however, they perform better on a smaller agricultural footprint than the historic scenario of dryland pastures and livestock.

In comparative terms, historic farming (cattle) and farming of higher-value crops (avocados and macadamia) do not materially diminish agricultural output or the area's regional economic contribution relative to the area's realistic productive potential and should therefore not negatively impact food security or agricultural production in the area. Apart from retaining the land's agricultural capacity, the impact should be considered against the fact that none of the current farm units constitutes an economically viable and sustainable farming entity.

If one assumes that only 25 ha of avocado and 23 ha of macadamia orchards are possible, irrespective of the profitability of the farming enterprise, it would still be possible to reconfigure the remaining agricultural portion (excluding the conservation portion), resulting in a net 285 ha available for reconfiguration based on the avocado footprint and 287 ha based on the macadamia footprint. If the net 290 ha (net of the avocado footprint) and 292 ha (net of the macadamia footprint) are divided by 5 ha (the average envisaged size of the small-scale farming units), the envisaged number of 57 units would still be achieved (all else being equal). This may imply that avocado or macadamia orchards of up to 25 ha could still be included in the proposed reconfiguration of the property without reducing the number of small-scale agricultural units. As mentioned, a "co-operative"/out-grower model could be considered, with orchards located on the most suitable small-scale farms (soil and access to water), while the rest maintain dryland pastures and/or low-intensity vegetables or fruit trees for their own use.



7 SOCIO-ECONOMIC COST-BENEFIT ANALYSIS

7.1 Introduction

The aim of this Socio-Economic Cost-Benefit Analysis is to assess the proposal to reconfigure the existing Hoogekraal agricultural footprint (for which consent for consolidation and subdivision was granted in 2021 by the Department of Agriculture, Land Reform and Rural Development) (hereafter referred to as the Reconfiguration Proposal), against the continued use of the property for grazing and livestock farming, or the introduction and cultivation of high-value crops such as avocados and macadamia (noting the constraints of irrigation water, wind and other factors). This section should be read with the Agricultural Viability Analysis (see **Section 6**) and the Agriculture Agro-Ecosystem Assessment (Malan, 2026), which includes the Soil Suitability Analysis prepared by Schloms and Lambrechts (2005).

The Reconfiguration Proposal entails subdividing 529 ha into 57 small-scale agricultural farms, each at least 5 ha, and 24 conservation parcels, resulting in 81 subdivided freehold properties. Notably, there is no change in land use under the proposed Reconfiguration. The proposal ensures the properties remain agricultural, while owners of portions sold on a freehold basis can establish a farming enterprise on a 4,5-ha portion of the farm unit, with a maximum hard-surface footprint of 0,5 ha for a dwelling and other supporting infrastructure. The farming enterprise could involve dryland (rain-fed) pastures and livestock farming, or high-value crops such as avocados or macadamias. Based on their water requirements, these high-value (irrigated) crops would be restricted to 25 ha of avocados, or 23 ha of macadamias, or a mixture of these that doesn't exceed 24 ha. The owners may also consider other crops, such as vegetables.

The objectives of the Socio-Economic Cost-Benefit Analysis are as follows:

- To develop a socio-economic cost-benefit model to estimate the impacts associated with the construction of dwellings and envisaged farming activities on each reconfigured land parcel.
- To use the Agricultural Viability Analysis (see **Section 6**) to provide the necessary input to offset against the benefits associated with farming on the small-scale farming units and conservation of the conservation properties.
- To quantify the socio-economic, monetary and fiscal benefits arising from the proposed reconfiguration, including the determination of property rates associated with the development of a residential unit on the small-scale farming units and conservation properties, and the treatment of farming or conservation activities on the remainder as agriculture for the rates base.
- To assess, on a like-for-like basis, whether a net benefit is achieved by reconfiguring the Hoogekraal approved subdivision, rather than using the land for pastures and livestock farming or for avocado or macadamia production.

7.2 Methodology

This Socio-Economic Cost-Benefit Analysis deviates slightly from the traditional cost-benefit analysis, which aims to determine whether costs exceed benefits, or *vice versa*, in current terms over a predetermined period, using an appropriate discount rate for a single project. The cost-benefit methodology illustrated in **Figure 20** compares dryland farming pastures and livestock, or avocado or macadamia nuts, with the Reconfiguration Proposal to determine whether a net benefit or cost would accrue. In this instance, the Reconfiguration Proposal is considered the "benefit," and the "cost" relates to farming either dryland pastures and livestock or avocados or macadamias.

A Socio-Economic Cost-Benefit Analysis is an equation that balances costs on one side and benefits on the other. One major challenge in a cost-benefit analysis is determining what constitutes a cost or a benefit. Once the quantifiable costs and benefits are categorised, all figures are converted to equivalent annual Rand amounts, the assessment period is determined, and a discount rate is applied to convert constant net cash flows (costs) and benefits into current terms.



We have developed three scenarios to assess whether the Reconfiguration Proposal (5-ha farms with agricultural activity permissible on 4,5 ha) would deliver a net benefit when compared to farming with pastures and livestock or high-value crops such as avocados or macadamia (i.e. without the Reconfiguration):

- **Scenario 1:** A reconfiguration of 529 ha to represent 57 small-scale farming units and 24 conservation parcels, as opposed to 257,0 ha of dryland pasture and livestock production.
- **Scenario 2:** A reconfiguration of 529 ha to represent 57 small-scale farming units and 24 conservation parcels as opposed to 25 ha of potential avocado orchards (constrained due to irrigation requirements).
- **Scenario 3:** A reconfiguration of 529 ha to represent 57 small-scale farming units and 24 conservation parcels as opposed to 23 ha of potential macadamia farming (constrained due to irrigation requirements).

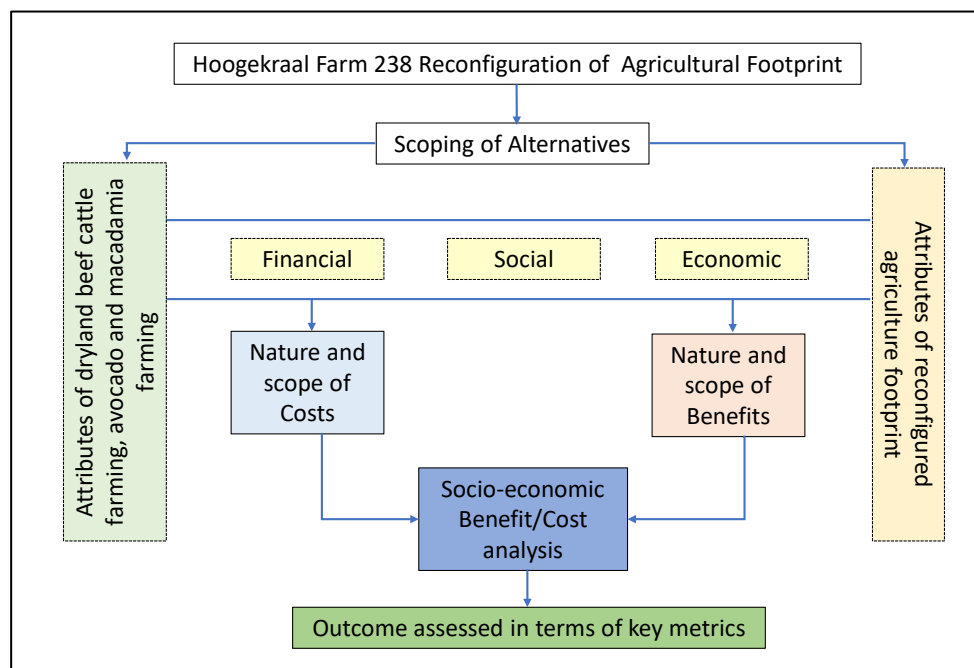


Figure 20: Methodology for a Socio-Economic Cost-Benefit Analysis of three scenarios

Source: Multi-Purpose Business Solutions (2026)

This Socio-Economic Cost-Benefit Analysis distinguishes two approaches of presenting the results, rather than a single blended figure.

The first is a **Micro cost-benefit approach**. This decision test compares the capital expenditure required for the Reconfiguration Proposal with the recurring economic income the reconfigured land use generates once operational (farming and conservation activities on the small-scale units), with each discounted at the same rate. This approach excludes economic income generated during construction because that income is produced by the capital expenditure being tested as a cost. Counting the same amount as both a cost and a benefit would overstate the case for the Reconfiguration Proposal.

The second is a broader **Macroeconomic impact approach**. This adds the economic income generated during construction, and the induced effects of household spending, to the recurring operational income, and compares the total to the capital expenditure. It is retained because it reflects the total economic and social contribution of the Reconfiguration Proposal, and because construction and induced effects are a legitimate part of that contribution. It is not, however, a benefit-cost decision test in the strict sense, because it counts the capital expenditure as a cost while simultaneously counting the value that same capital expenditure produces as a benefit.

Both approaches are presented for each of the three scenarios in **Section 7.9**, together with a reconciliation of the two, so the reader can see what each answers and is not left to infer which figure is decision-relevant.



7.3 Clarification of cost-benefit principles

It is necessary to note that the following items do not form part of a Socio-Economic Cost-Benefit Analysis:

- **Sunk costs** are irrecoverable cash outlays incurred before the project is assessed and are therefore excluded; only present and future costs and benefits are assessed. For instance, process-related fees and any past farming costs are sunk costs and are excluded.
- **Depreciation** is not a cash item and relates to cash expenditure on capital acquisitions in previous periods. Depreciation on capital items (assets) is also excluded from a cost-benefit analysis, as the basis for cost-benefit analysis is cash, not accruals.
- **Financing charges** involve transferring money from the borrower to the lender and do not represent the actual consumption of resources. Actual resource costs (materials, labour, land, etc.) are important, and the benefits produced stem from the utilisation of resources, not from how the capital requirement is financed.

The converse of what is stated above is that any change to the status quo (i.e. the Reconfiguration Proposal) results in a benefit or a cost. This means that capital expenditure and operating costs are incurred to achieve future benefits (which may include savings) and are expressed in current or real terms.

7.3.1 Benefits

The benefit is the reconfiguration of the existing DALRRD approval for subdivision into farming units of varying sizes, with a minimum size of 5 ha. The Reconfiguration Proposal has social, economic, fiscal, and monetary impacts. Social benefits arise from temporary employment opportunities and associated spending during the construction of dwellings, and from permanent employment associated with the envisaged agriculture that owners of the small-scale farming units would introduce on the 4,5-ha footprint. Various small businesses, such as garden services, plumbers, electricians, and general handymen, would periodically benefit from services required by residents and by the commercial and social components. To be included in the Socio-Economic Cost-Benefit Analysis, benefits must be quantified. If insufficient information prevents quantification, the benefits are classified as intangible and excluded from the analysis.

Property rates accruing to the George Municipality are treated differently from the other benefits. A property rate is a transfer from a ratepayer to the Municipality rather than new value created by the Reconfiguration Proposal. Fiscal and monetary revenue benefits are therefore shown as a stand-alone item alongside the results in **Section 7.9**, and are excluded from the net benefit calculated under the Micro cost-benefit approach described in **Section 7.2**, though they remain part of the broader Macroeconomic impact approach.

7.3.2 Costs

The cost included in this Socio-Economic Cost-Benefit Analysis refers to the farming “offset”, i.e., the amount that reduces the impact (positive benefit) of the Reconfiguration Proposal. In this case, the reference would be a 257-ha farming footprint, taking into account soil suitability and irrigation constraints (all else being equal). This entails consideration of “historic” agricultural activity (pastures for grazing and livestock), or the introduction of avocado or macadamia orchards.

The premise for assessing the cost side of the cost-benefit equation is to understand the potential of farming, expressed in constant terms, as the net cash flow derived from revenue, operating costs, and capital expenditure. An economic-financial perspective on the production potential of dryland pasture and livestock (historically), avocados or macadamia provides annual information over a 25-year period.

7.3.3 Intangible impacts

Intangible costs or benefits cannot be measured in monetary terms. Although these non-quantified items cannot be included in a Socio-Economic Cost-Benefit Analysis, they should be stated and contextualised. The following, which is not an exhaustive list, are considered intangible (non-quantifiable) impacts:

- Monetary benefit accruing to the local Municipality in terms of the sale of electricity and water.



- Transitioning from large-scale monoculture to smaller, diversified agricultural units often creates micro-habitats, reduces chemical runoff, and improves soil health. This improves natural pest control, pollination, and water retention, enhancing ecosystem services and biodiversity.
- Smaller, specialised units encourage the adoption of high-value, niche crops and advanced farming techniques. This creates a hub for agricultural experimentation and skills development, supporting knowledge transfer and innovation.
- Retaining the rural landscape character through the Reconfiguration Proposal preserves the visual and cultural heritage of an area, which can have indirect positive impacts on local agritourism.

All these non-quantified benefits would accrue once the reconfiguration is complete and owners begin farming. Therefore, the fact that these benefits are non-quantifiable does not mean there is no subsequent impact once small-scale farms become operational.

Various assumptions underpin the calculation of benefits and costs. These assumptions need to be credible and realistic, as they affect the outcome when costs are offset against benefits. The following section sets out the assumptions used to determine the benefits and costs.

7.4 Limitations of the assessment

Any assignment presents challenges, particularly the need for data and information to make informed decisions and develop defensible models. It is necessary to state the limitations in relation to the envisaged objectives and potential outcomes. The following limitations were noted:

- Not all benefits and costs are quantifiable, and only those that can be quantified are included in the socio-economic cost-benefit model. The analysis notes non-quantifiable or intangible benefits and costs but does not include them in the Net Present Value (NPV) calculation.
- Estimates of other/additional costs of a capital and/or operational nature are currently unknown; they may arise and/or require adjustment due to the long timeframe considered for the analysis.
- The nature of farming is unknown, as is the nature of the input, i.e. whether a low-, moderate- or high-end farming enterprise will be introduced and the nature of the farming (e.g. avocado, macadamia, fruit orchards, vegetables, dryland (rain-fed) pastures and livestock, etc.).
- Revenue accruing to the George Municipality from the sale of electricity and water depends on the tariff in force at the time and on the occupancy or take-up of the 81 properties.
- Annual escalation rates, where applicable, are held constant for an assessment of agriculture over the term to estimate future benefits and costs, whereas capital expenditure for the construction of the permissible dwellings and hard surfaces is escalated by CPI, which is unknown over time.
- It is not possible to assess the potential downside or upside risk with any degree of accuracy in relation to the envisaged returns that may accrue to the developer. Notwithstanding, we have considered the nature and scope of the project and current market trends when determining the introduction of services, the sell-out curve for farming units, the construction of dwellings on small farms and conservation parcels, and the commencement of farming activity.

7.5 Premise and Assumptions for Socio-Economic Cost-Benefit Analysis

A Socio-Economic Cost-Benefit Analysis is forward-looking, needs to be realistic and requires credible assumptions. The information derived from research, specialist input and other sources is believed to be reliable, but no representation or warranty, express or implied, is made as to its accuracy, completeness or correctness. The assumptions are made on the basis that all other things are equal (*ceteris paribus*).



A Socio-Economic Cost-Benefit Analysis aims to determine the Net Present Value (NPV) of future benefits and costs. This requires using a discount rate to convert future annual benefits and costs into present value. The discount rate applied is a nominal interest rate adjusted for inflation and a risk premium. By way of explanation, the proposed reconfiguration and development of small-scale agricultural farms and conservation land parcels over 25 years (benefit) results in a positive NPV if “historical” farming with pastures and livestock, or with high-value crops such as avocados or macadamia (referred to as the three crops and considered as “cost”), does not yield a value greater than the benefit. A negative NPV for farming with any of the three crops is treated as a saving and therefore added back, rather than offset against the benefit (i.e., the Reconfiguration Proposal). The premise is that losses from farming any of the three crops impose an opportunity cost, implying that the funds required to cover those losses could be used for other purposes, such as funding the infrastructure for the Reconfiguration Proposal. Opportunity cost is an economic term that refers to the value of the next-best alternative forgone when making a choice. Therefore, the negative NPV of farming operations associated with either of the three crops is added back as a “saving”, thereby enhancing the benefit resulting from the Reconfiguration Proposal.

7.5.1 Assumptions to prepare financial models used for the cost-benefit analysis

7.5.1.1 Infrastructure assumptions

Jodan Construction (2026) prepared a Bill of Quantities (BoQ) with cost items for the infrastructure requirements associated with the Reconfiguration Proposal for Matla Quantity Surveyors. This BoQ covers internal works and external civil bulk upgrades. The infrastructure cost forms part of the capital expenditure requirement and is apportioned to the three core development components (workers' village, small-scale agricultural units and conservation parcels) as follows:

Farmworker village	2%
Agri small farms	69%
Nature conservation area	29%

It is also assumed that the infrastructure will be introduced over three years, with the village infrastructure introduced in Year 0. The Town Planning Application (Marika Vreken, 2026) indicates that the farm worker village needs to be completed before embarking on the small-scale agriculture farms and conservation parcels. This will complete the relocation and enable the introduction of the Reconfiguration Proposal. The allocation of infrastructure to the agriculture and conservation footprint over the three years is assumed as follows:

Percentage infrastructure	Year 1	Year 2	Year 3
Agri small farms	30%	40%	30%
Nature conservation area	20%	50%	30%

7.5.1.2 Curve for sell-out, dwelling construction development of freehold portions

The financial modelling used to determine annual expenditure, and therefore the socio-economic impact and cost-benefit outcomes, depends on assumed projections of sales, the construction of dwellings, other structures, and infrastructure, the establishment of farming activities on small-scale agricultural farms, and the introduction of trails and low-impact amenities on the conservation parcels. Shared costs may be incurred between adjacent landowners of conservation parcels. For this analysis, we assume each landowner will introduce their own trails and low-impact amenities and that an average cost applies. The assumed sale of properties is spread over 10 years, with construction of dwellings and other top and infrastructure following a 1-year lag, while the establishment of agriculture and provision of amenities on the conservation parcels occur two years after the sale. Sales follow a normal distribution, with the annual allocation presented in **Table 29**.



Table 29: Sell-out curve, timing for construction of different project components

Sell-out curve over 10 years	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Number of units	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Agriculture															
Sell	100%	2%	3%	5%	10%	15%	20%	18%	12%	9%	6%				
Build	100%		2%	3%	5%	10%	15%	20%	18%	12%	9%	6%			
Unit (sell)	57	1	2	3	6	9	11	10	7	5	3	0			
Units (build)		0	1	2	3	6	9	11	10	7	5	3			
Establish agriculture				1	3	5	5	4	4	7	5	4	5	5	4
Conservation															
Sell	100%	2%	3%	5%	10%	15%	20%	18%	12%	9%	6%				
Build	100%		2%	3%	5%	10%	15%	20%	18%	12%	9%	6%			
Unit (sell)	24	0	1	1	2	4	5	4	3	2	1	0			
Units (build)			0	1	1	2	4	5	4	3	2	1			
Establish lifestyle				0	1	1	2	4	5	4	3	2	1		
Village	100%		50%	50%											
Build	110		55	55											

7.5.1.3 Financial models for farming

Farming with pastures and livestock, or with avocados or macadamias, is based on the Agricultural Viability Analysis provided in **Section 6**. The annual net cash flow in constant terms is incorporated into the socio-economic cost-benefit model for each crop. The intention is not to highlight each assumption applied in the Agricultural Viability Analysis, but to focus on the primary categories of assumptions:

- **Capital** refers to establishment costs, irrigation, equipment, farm buildings and homesteads, and the value of bare land. A provision for asset upgrades and replacement is made annually, rather than providing funding as a lump-sum capital amount in the year the expenditure is required.
- **Revenue** for the three crops is based on the following extent:
 - 257 ha for dryland pasture and livestock
 - 25 ha for Avocado production (limited by irrigation water)
 - 23 ha for Macadamia production (limited by irrigation water)

An outgrower model is proposed to enable the development of a variable farming unit (see **Section 6**).

- **Operating costs, management and labour costs** include management, labour and running costs and are applied to farming with either of the three crops.
- **Assumptions to determine property rates for dwellings and agriculture:**
 - Property rate tariffs determined by the George Municipality for agriculture (2025/2026)
 - Property rates are applied per annum, indicated at nominal prices reflecting a 4% annual increase.
 - Bare land value is applied as follows:
 - R1 650 000/ha is applied to the 0,5-ha representing the hard surfaces (including the dwelling(s) and residential property rates apply
 - Property rates for agriculture are determined based on the following bare land value:
 - R100 000/ha for dryland pasture and livestock
 - R650 000/ha for macadamia farming
 - R450 000/ha for avocado farming
- The estimated annual escalation in value, which is unknown, is aligned with the increase in the annual property rates.



7.5.1.4 Development of the farming units (excluding agricultural portion)

As stated previously, the 5-ha small-scale farms have a permissible hard-surface footprint of 5 000 m², with the remainder used for agricultural activities. The following assumptions are used to determine the breakdown of the allocated footprints and to derive the size of the dwellings:

Development footprint:

Hardened surface (m ²)		5 000
Top structures:	Farmhouse	650
	Farm Manager's House	350
	Garage and outbuildings	1 500
	Driveways and yard paving	2 500

The average house size is derived by deducting the farm manager's dwelling, garage, outbuildings, driveways, and yard paving from the permissible hard service footprint. These figures are estimates, and each owner will tailor development within their 5 000 m² footprint to suit their lifestyle. Construction cost rates per m² are sourced from AECOM, as stated in the Rode Report (2025:4). The BER Escalation Building Cost Index is used to project per-m² construction cost rates for the envisaged construction period.

7.5.1.5 Small-scale agriculture within an irrigation water constraint¹⁰

The same water rights available for conventional farming also apply to small-scale agriculture. The 100 000 m³ of water rights indicated in the Malan (2026) report is divided equally among the 57 small-scale farming units, which translates to 1 754 m³ per annum. The question then is what could be cultivated within the constraints of an average rainfall of about 700 mm per annum and the stated water allocation.

With an average annual rainfall of 700 mm in the George area, the area is considered "sub-humid," typical of the Garden Route. However, the supplementary water allocation of 1 754 m³ per annum is equivalent to only 36,5 mm of additional "rainfall". In this environment, rain-fed (dryland) farming for small-scale farming units is likely to be viable, with the supplementary water used exclusively as an "insurance policy" for high-value micro-blocks. Several options/models provide guidance on selecting crops for farming.

A "Focused High-Value" Model aims to provide full irrigation to a very small portion of the footprint. For instance, macadamias or avocados could be cultivated on 0,4 to 0,5 ha. A mature orchard in George requires about 3 500 m³ to 4 500 m³/ha of irrigation to supplement the 700 mm annual rainfall (refer to **Section 6**). It would be possible to maintain about 0,4 ha (about 120 to 160 trees) at full production levels with a 1 754 m³ irrigation water allocation.

Dryland (rain-fed) pasture and livestock farming (e.g. beef cattle) would be suitable if the small-scale farmer's objective is livestock or land maintenance. Livestock, such as beef cattle, are considered units that cannot be used for high-value crops.

Small, high-value crops such as avocados and macadamia are likely suitable for farming. We identified three possible options for 57 agricultural units and apportioned uptake based on water constraints, crop requirements and the previous analysis. Other fruit orchards may also be applicable, but to demonstrate the socio-economic impact, the selected crops are a fair representation of what farming may include. Note, this assumes that all 57 farms participate, but only 24 ha of avocado or Macadamia can be irrigated based on the available water rights.

Avocado	5%
Macadamia	5%
Dryland (rain-fed) pastures and livestock	89%
	100%

¹⁰ Department of Agriculture, Forestry and Fisheries (2020); Fereres and Connor (2012); Gush and Taylor (2014); Raath (2012); Water Research Commission (2022)



Farming activities will not commence in the same year. We used a 13-year timeframe and split the farming enterprise across agricultural activity types. A 2-year lag is applied from the date of sale to determine the year in which the establishment costs associated with the agricultural and conservation parcels are incurred, after which maintenance commences.

	Units	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Total	57	1	3	5	5	4	4	7	5	4	5	5	4	5
Avocado	3	1		1	1									
Macadamia	3		1	1	1									
Dryland pasture (rain-fed) & livestock	51		2	3	3	4	4	7	5	4	5	5	4	5

7.6 Implementing an Outgrower model after sub-division

Regardless of whether farming is considered a lifestyle, and to demonstrate the viability of the farming unit, we propose establishing an outgrower organisation (often synonymous with contract farming). Individual small-scale farming units are unlikely to be viable except for lifestyle purposes. However, a collective approach could be considered to demonstrate that the farming units, collectively, could be viable.

The proposal is a structured partnership between a commercial company (which the owners may establish themselves) and a network of independent small-scale farmers (Eaton and Shepherd, 2001). The structure mitigates risk for both parties: the company secures a stable supply of high-quality produce without owning all the land, while farmers gain access to technical expertise, inputs, and a guaranteed market. The stakeholders are the following core participants

- **The Integrator**, which may be a buyer and/or a processor, is a private company with a processing plant (e.g. a macadamia processing facility). They provide the "pull" factor by guaranteeing to buy the crop at a pre-agreed price or according to a formula.
- **The Outgrowers** are farmers who are independent landowners who provide the labour and land. They are contractually bound to follow specific production protocols set by the integrator.

Given the nature of the proposed farming with high-value crops, i.e., avocados and macadamia, the structure is a centralised, pure buyer-driven model in which the company owns no land but manages farmers identified through an analysis of the 57 small-scale farming units that produce these crops.

We demonstrate that the risk independently borne by each small-scale farmer, arising from high establishment and running costs, is mitigated through offtake agreements that farmers could collectively establish, thereby enhancing the value chain. In addition, substantial savings in establishment capital costs could be achieved, for example, by using shared equipment to serve each small-scale farm. Labour benefits would also accrue.

The functional components of a well-structured outgrower organisation include technical support to ensure farmers' compliance with organic standards, the correct application of fertilisers and pesticides, and accurate yield forecasting to plan processing schedules. In addition, input supply and credit linkages are provided, offering liquidity often lacking and acting as a credit vehicle (e.g. provision of trees, fertilisers, and equipment upfront in the form of an "in-kind loan" or a clawback mechanism, where the costs of the inputs are deducted from the farmer's final payout at harvest).

A proposal is to split avocado and macadamia cultivation; a group structure is proposed, with one centralised outgrower organisation comprising two legs: one for avocados and one for macadamia. This provides a shared-services outcome, dealing with both crops under one umbrella. The pastures and livestock could form an additional arm within the outgrower model.



7.6.1.1 Rationale for the outgrower model

A farming operation needs a certain scale to be viable and ultimately feasible. Regarding the Reconfiguration Proposal, it is necessary to determine the minimum size of an avocado and macadamia orchard to be considered viable. Research provides some indication of whether the approach of considering 12 ha of avocados and 12 ha of macadamia (aligned with the maximum number of ha, about 24 ha, for either crop (see **Section 6**) is reasonable.

Avocado farming

In the George and broader Garden Route region, determining the minimum feasible size for a commercial avocado orchard requires assessing operational and logistical viability, as well as the household's economic survival. George is a late-maturing production zone that offers a distinct market-window advantage. However, high establishment costs and specific machinery requirements would guide the scale thresholds.

For an independent, standalone commercial venture, 5-10 ha is widely considered the absolute operational minimum, though this depends on whether it is a fully commercial export venture or a diversified or part-time operation¹¹. For instance, utilisation of machinery or equipment is not financially justified on footprints of less than 5 ha. On smaller footprints, this expensive capital expenditure is idle most of the year, resulting in a declining return on investment. The same rationale of scale applies to logistics.

Although the agricultural viability of a farming unit is key under the PADALA legislation, a part-time or intensive smallholding of 2–3 ha would require an orchard to be considered a high-value diversification block on an existing farm, leveraging shared tractors, labour, and water infrastructure. Tree spacing would require high-density layouts, with planting up to 800 trees per ha, and reliance on manual labour or contracted services for spraying and harvesting to keep fixed overheads within acceptable bounds.

Macadamia farming

In the George and Garden Route area, research indicates that a financially and operationally feasible standalone commercial macadamia orchard would be 10 to 15 ha¹². While macadamias share many climatic similarities with avocados, the unique harvesting, sorting, and drying requirements necessitate a larger minimum footprint to achieve profitability.

Macadamia nuts are picked directly from the tree and sent to a packhouse for immediate, specialised on-farm processing before entering other elements of the value chain. This post-harvest processing creates a high "capital expenditure floor" that requires scale to justify. On a small parcel of 2-3 ha, the fixed overhead cost of the processing infrastructure per kilogram of nuts significantly reduces net margins. If the orchard is added as a high-value diversification block to an existing farm that already owns tractors and spray infrastructure, the threshold drops to 5 ha. A minimum of 10 ha is required to generate the tonnage needed to amortise this equipment.

For farming purposes, an avocado and macadamia footprint could fit within the 4,5 ha of a small farm, but the large capital outlay would require consolidation to recoup the investment. The outgrower option provides an opportunity to overcome the limitations outlined above and achieve the required economies of scale. It addresses the viability of the farming unit and enables the crops to be sold commercially.

7.7 Assumptions

7.7.1 Farming the small-scale farms

The underlying assumptions for small-scale farming are based on a split among avocados, macadamia, and livestock pastures. The establishment and operating costs for avocados, macadamia and pastures with livestock are provided below.

Avocado orchards (12 ha)

Introducing avocado orchards covering 12 ha within the ambit of the small-scale farms would require 2,7 of the 4,5-

¹¹ Franco Sánchez (2018)

¹² Western Cape Department of Agriculture (2024b); Macadamias South Africa (2025)



ha farms available for agriculture. We researched the establishment costs and determined a range of R140 000 to R180 000 per ha¹³. These costs typically include land preparation and soil amelioration, certified tree seedlings, irrigation system (micro/drip), windbreak establishment, trellising, fencing, and basic field piping. No bare land cost is considered, as the farming unit is bought regardless of whether farming occurs.

Operating costs could range between R110 000 and R150 000 per ha¹⁴ and include fertilisers and soil nutrition, crop protection chemicals and biologicals, irrigation and energy (electricity for pumping), direct and seasonal labour, fuel, repairs and maintenance and sundries.

Macadamia orchards (12 ha)

Introducing macadamia orchards covering 12 ha within the ambit of the small-scale farms would require 2,7 small-scale farms of the 4,5 ha available for agriculture. We researched the establishment costs and determined a range of R142 000 to R182 000 per ha¹⁵. Land preparation and earthworks, irrigation infrastructure, trees and planting material, fencing and windbreaks, and a contingency based on the estimate of first-year expenses.

Operating costs could range between R516 000 and R660 350 per ha and include crop protection chemicals, electricity for irrigation, casual labour for weeding and harvesting, fuel and mechanisation running costs and interest on working capital

Dryland (rain-fed) pastures and livestock for 249 ha

The remaining agricultural areas, totalling 51 units or 249 ha, could be used for dryland (rain-fed) grazing and rearing, say, beef cattle. Research suggests that using a ratio of 1,4 ha per LSU across the 249 ha indicates a carrying capacity of 178 LSUs. For a standard commercial cow-calf system, this supports a breeding herd structure of 165 mature cows, 6 bulls, and approximately 30 replacement heifers/young stock remaining on the farm at any given time.

To prepare the pastures and acquire the LSUs, an establishment cost of R48 373 and R81 550 per ha¹⁶ is assumed. These establishment costs include pasture establishment (planting & rectifications), fixed infrastructure (fencing, kraals, handling gear, solar water), a core breeding herd (165 cows, 6 bulls), and a working capital reserve that represents a contingency for the first operational year.

Operating costs could range between R8 070 and R14 200 per LSU¹⁷ for pastures and livestock farming and includes crop protection chemicals, electricity for irrigation, casual labour for weeding and harvesting, fuel and mechanisation running costs and interest on working capital.

7.7.2 Conservation land parcels

A total of 24 small-scale conservation units with a land area of 5 ha or more have a permissible hard-surface footprint of 2 000 m². According to the Town Planning Report (Marike Vreken, 2026), the remainder that doesn't form part of the demarcated 2 000 m² footprint will be preserved as natural landscape, with trails or low-impact amenities designed to minimise ecological disturbance. The following assumptions are applied:

Development footprint:

Hardened surface (m²)	2 000
Top structures:	
Dwelling	650
Garage and outbuildings	500
Driveways and yard paving	850

¹³ Western Cape Department of Agriculture (2024b); SAAGA (2024a, b)

¹⁴ Western Cape Department of Agriculture (2024b)

¹⁵ Western Cape Department of Agriculture (2025a)

¹⁶ Land Bank (2025) pp. 32-35; Western Cape Department of Agriculture (2025b)

¹⁷ Land Bank (2025) pp. 40-44; Western Cape Department of Agriculture (2025b)



The average house size is derived by deducting the garage, outbuildings, driveways, and yard paving from the permissible hard service footprint. These numbers are estimates, and each owner will tailor the development on their 2 000 m² footprint to suit their lifestyle. The sources for the construction costs are AECOM, as stated in the Rode Report (2025:4). As before, the Escalation building cost index of the Bureau for Economic Research (BER)¹⁸ is used for projecting building rates per m² over the envisaged development period.

Establishment costs

To align with the Town Planning Application, we considered introducing trails and low-impact amenities on each conservation land unit. The premise for the determination of capital expenditure and ongoing maintenance is based on the following:

- Trail density: 1,5 – 3,0 km of walking trails (low-impact loop network)
- Trail type: natural surface and minimal grading (no heavy engineering)
- Amenities: basic “low-footprint” infrastructure
- Terrain: mixed (edges, moderate slope variability)

Initial establishment costs for the trails and low-impact amenities are estimated at R376 000 for each conservation property. The capital expenditure for 24 conservation parcels, assuming the average cost of R376 000, is R9,0 million (International Mountain Bicycling Association (IMBA) South Africa / Amarider, 2023)

Item	Assumption	Amount
Trails		
Trail length (km)	2 km average	
Basic cleared trail (/km)	R500 – R10k/km	R15 000
Moderate engineered sections (30–40%)	R20k – R50k/km	R26 000
Small boardwalk crossings (50–150 m total)	Localised	R150 000
Sub-total		R191 000
Low Impact Amenities		
Picnic node (benches, shade structures)		R65 000
Composting toilet (eco unit)		R120 000
Sub-total		R185 000
Total		R376 000

The trails and low-impact amenities (picnic node, benches, shade structures) and composting toilet (eco unit) require annual maintenance.

Maintenance expenditure: Trails

Trail maintenance includes vegetation clearing/trimming, erosion repairs (storm damage, washouts), path resurfacing (gravel/natural stabilisation), boardwalk inspections and minor repairs (if any), invasive alien plant control, firebreak maintenance (where applicable), and habitat protection/rehabilitation. The average maintenance cost for the trails is estimated at R127 500 per annum per conservation parcel.

Maintenance expenditure: Low-impact amenities

Maintenance for the low-impact amenities includes activities such as composting toilet servicing (sludge removal and cleaning), picnic area upkeep (benches, shade coverings), and signage repair/replacement. The average maintenance cost for the low-impact amenities is estimated at R44 000 per annum per conservation parcel. Should

¹⁸ Bureau for Economic Research published forecasts of in-contract building costs based on the Haylett Formula



both trails and low-impact amenities be introduced, the total annual maintenance cost in Year 1 could be about R171 500 per conservation parcel.

7.7.3 Farmworker village

The envisaged farm worker village aims to resettle 110 farm workers spread across the Hoogekraal Farm. The assumptions applied are as follows:

Number of units	110
Size of unit (m ²)	60
Rate/m ²	R5 500

7.8 Economic income and employment impact of farmworker village and reconfigured agricultural land parcels

The economies of the Western Cape, Garden Route and George will benefit from temporary employment, the procurement of goods and services, and the spending of wages and salaries by construction workers and others associated with the development of small-scale farming units and conservation parcels, as well as the construction of the workers' village. Once complete, the operational phase commences, further impacting the economy and the sustainability of employment opportunities.

A high-level estimate of socio-economic impacts during construction and operations requires an analysis based on a Social Accounting Matrix (SAM) applicable to the Western Cape. The results would also apply to the George economy, although its narrow economic base would lead to a lower impact, given the high prevalence of leakages relative to the Western Cape Province. The economic impact of construction and operations expenditure is represented by GGP, income and output multipliers, temporary job opportunities, and the impact of household spending on wages for workers directly or indirectly involved in the construction and operational phases. The impacts are direct, indirect, and induced, with the latter representing spending on salaries and wages in the local economy by workers associated with the development and operational phases of the Reconfiguration Proposal.

7.8.1 Construction

Construction of the top structures is envisaged for the farmworker village, farmsteads, and manager dwellings on the small-scale farming units, for dwellings on the conservation parcels, and for the establishment of small-scale farms. **Figure 21** shows the nominal combined capital cost of infrastructure, top structures, and capital related to the establishment of the farms over approximately 15 years.

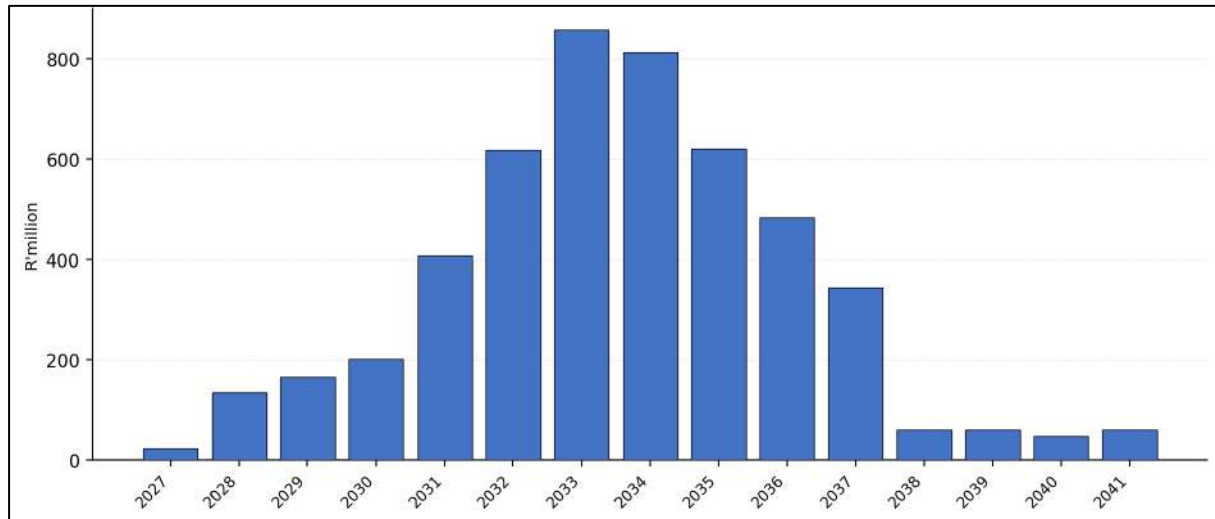


Figure 21: Estimated infrastructure, top structure and capital related to the establishment of farm and conservation lifestyle (2027 - 2041)

The anticipated sell-out curve and subsequent development cycle will be determined by market demand and by the proposed development's nature and scope. As with many building projects, traction may take some time. We have adopted a conservative approach, using the bell curve (normal distribution) as an indicator of sales. Total capital expenditure in nominal terms over the development cycle to completion is R4 899,8 million, or an average of R408,3 million per annum. The highest capital spend, R858,2 million, is expected in 2033. Most capital expenditure in the first three years relates to infrastructure.

Table 30 estimates the economic impact of the envisaged construction spending from 2027 to 2041, focusing on Output¹⁹, Gross Geographic Product (GGP)²⁰, jobs, and nominal household income.

Table 30: Estimates of direct, indirect and induced impact of spending related to GGP, output, household income and jobs during construction (2027 - 2041)

Economic measure	Direct	Indirect	Induced	Total
Gross Geographic product (GGP) (R' million)	R944,2	R1 954,0	R1 000,0	R3 898,2
Production (output) (R' million)	R4 157,5	R5 642,3	R2 524,2	R12 323,9
Household income (R' million)	R550,0	R913,5	R402,7	R1 866,1
Jobs sustained by construction expenditure	2 906	10 839	3 362	17 106

Source: Multi-Purpose Business Solutions SAM model

Note that employment opportunities do not necessarily imply NEW jobs, but rather sustainable employment for employees of contracted service providers who are not operating at full capacity. If the company doesn't have spare capacity, it may appoint additional workers, in which case NEW jobs will be created during the construction phase. Thereafter, the employment opportunities will taper off. Certain highly skilled and skilled jobs may be sourced from outside the George Municipality.

The information in **Table 30** indicates the following for the envisaged construction period:

- An estimated R4 899,8 million of capital investment in nominal terms could generate R12 323,9 million in **new business sales**, referred to as the production (or output) that generates or creates the demand for business activity during construction. This translates to an average of R821,6 million per annum in nominal terms over 15 years.
- The increase in production output could add R3 898,2 million (net of import leakage) to the **GGP** of the

¹⁹ Output is the quantity of goods or services produced within a specific period.

²⁰ Gross Geographic Product is the total monetary or market value of all the finished goods and services produced in a region in a specific period.



Western Cape, with the George Municipal area a direct and significant beneficiary. This translates to an average of R259,9 million per annum in nominal terms over 15 years.

- The capital spending on the project over the construction period could **sustain** about 17 106 (rounded) **employment opportunities** (direct, indirect and induced). This translates to sustaining an average of 1 140 jobs per annum over 15 years.
- Spending of salaries and wages by employees associated with the construction elements of the Reconfiguration Proposal could increase **economic income** by R1 866,1 million over 15 years, which translates to R124,4 million in nominal terms (escalated values) on average per annum.

Figure 22 illustrates the annual impacts for the individual items used to assess the impact, covering the indicative 15-year construction period.

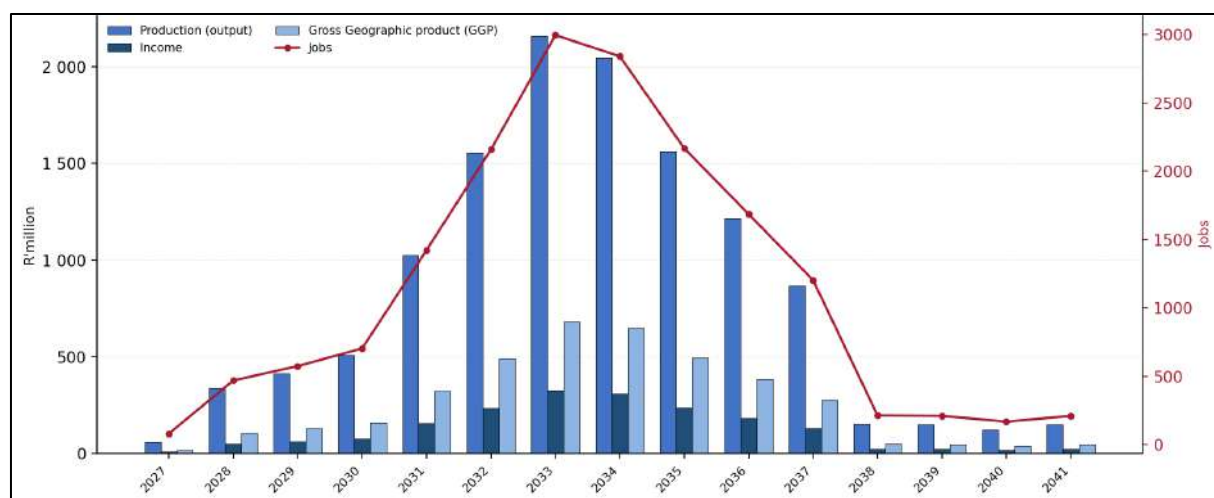


Figure 22: Impact of infrastructure, construction of top structures and farm establishment on an annual basis over 15 years

Table 31 indicates figures for several key economic indicators:

- The economy will benefit by an average of R259,9 million per annum after leakages, with a maximum of R682,8 million and a minimum of R18,4 million.
- The average output from 2027 to 2041 is estimated at R821,6 million per annum, reaching a maximum of R2 158,5 million and a minimum of R58,0 million.
- An average number of 1 140 direct, indirect and induced jobs could be sustained per annum over the construction period from 2027 to 2041, reaching a maximum of 2 996 and a minimum of 81.

Table 31: Impact of capital expenditure over the construction period

Economic measure	Total	Average (p.a.)	Maximum	Minimum
Gross Geographic product (GGP, R' million)	R3 898,2	R259,9	R682,8	R18,4
Production (output, R' million)	R12 323,9	R821,6	R2 158,5	R58,0
Income (household spending) (R' million)	R1 866,1	R124,4	R326,8	R8,8
Sustainable jobs (number)	17 106	1 140	2 996	81

Source: Multi-Purpose Business Solutions SAM model



7.8.2 Operations

Maintenance of dryland (rain-fed) pastures and livestock, or of avocado or macadamia, constitutes ongoing operational expenditure throughout the agricultural activity's lifecycle. In addition, the trails and low-impact amenities on the conservation parcels need to be maintained, and this is also included as operational expenditure. To assess the operational impact, we assumed a 25-year term (2030 to 2054) for operations, aligning with the assessment of farming dryland (rain-fed) and livestock, or avocados or macadamia, on a conventional basis without the Reconfiguration Proposal.

Table 32 estimates the socio-economic impact of the envisaged operational spending over the period 2030 - 2054, focusing on Output²¹, Gross Geographic Product (GGP)²², jobs, and nominal household income. Note that employment opportunities do not necessarily imply NEW jobs, but rather sustainable employment for employees of contracted service providers who are not operating at full capacity. If the company doesn't have spare capacity, it may appoint additional workers, in which case NEW jobs will be created during the construction phase. Thereafter, employment opportunities will taper off. Certain highly skilled and skilled jobs may likely be reserved for individuals from outside the George Municipality.

Table 32: Estimates of direct, indirect and induced impact of operational spending related to GGP, output, household income and jobs during operations (2030 – 2054)

Economic measure	Direct	Indirect	Induced	Total
Gross Geographic product (GGP, R' million)	R1 186,3	R733,3	R624,0	R2 543,7
Production (output, R' million)	R2 518,3	R1 607,6	R1 547,4	R5 673,4
Income (household spending) (R' million)	R538,5	R289,8	R251,8	R1 080,2
Sustainable jobs (number)	2 091	2 265	2 107	6 462

Source: Multi-Purpose Business Solutions SAM model

The information provided in **Table 32** indicates the following for the operational period:

- An estimated R1 992,1 million of operational spending over the period, in nominal terms, could generate R5 673,4 million in **new business sales**, referred to as the production (or output) that generates or creates the demand for business activity during operations. This translates to an average of R226,9 million per annum over 25 years, in nominal terms.
- The increase in production output could add R2 543,7 million (net of import leakage) to the **GGP** of the Western Cape, with the George Municipal area a direct and significant beneficiary. This translates to an average of R101,7 million per annum over 25 years.
- The capital spending on the project over the development period could **sustain** about 6 462 (rounded) **employment opportunities** (direct, indirect and induced) during operations. This translates to sustaining an average of 258 jobs per annum over 25 years.
- Spending on salaries and wages by employees associated with operations could increase **economic income** by R1 080,2 million over 25 years. This translates to an average of R43,2 million per annum.

Figure 23 illustrates the annual impacts for the individual items used to assess the impact, covering the indicative 25-year operational period.

²¹ Output is the quantity of goods or services produced within a specific period.

²² Gross Geographic Product is the total monetary or market value of all the finished goods and services produced on a region in a specific period.

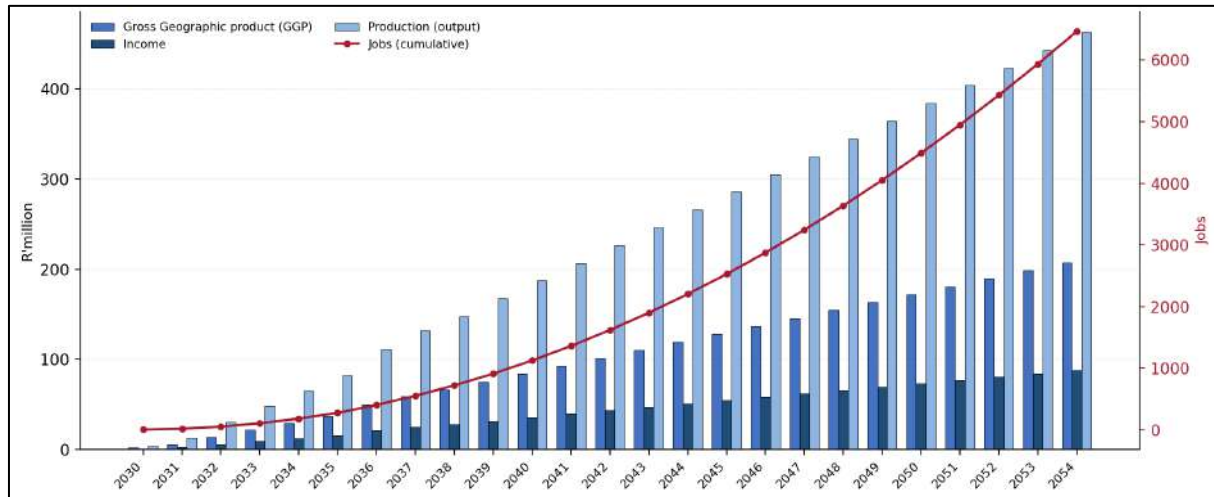


Figure 23: Impact of operational spending on an annual basis over 25 years

Table 33 indicates figures for several key economic indicators:

- The economy will benefit by an average of R101,7 million per annum after leakages, with a maximum of R207,3 million and a minimum of R1,7 million.
- The average output from 2030 to 2054 is estimated at R226,9 million per annum, reaching a maximum of R462,5 million and a minimum of R3,8 million.
- A total of 258 direct, indirect and induced jobs could be sustained each year on average over the operational period from 2030 to 2054, reaching a maximum of 527 and a minimum of 4.

Table 33: Impact of capital expenditure during the first 25 years of operations

Economic measure	Total	Average (p.a.)	Maximum	Minimum
Gross Geographic product (GGP, R' million)	R2 543,7	R101,7	R207,3	R1,7
Production (output, R' million)	R5 673,4	R226,9	R462,5	R3,8
Income (household spending) (R' million)	R1 080,2	R43,2	R88,1	R0,7
Sustainable jobs (number)	6 462	258	527	4

Source: Multi-Purpose Business Solutions SAM model

7.9 Socio-economic cost-benefit analysis results and interpretation

Cost-benefit methods evaluate an investment in broad economic terms and are based on a financial model of the proposed project. The Benefit-Cost Ratio is a key metric, representing the annual value of benefits divided by the annual value of costs, expressed in current terms and discounted over a predetermined period using an appropriate discount rate. Benefits and costs are determined by converting all applicable items to annual equivalents, since many development projects have long economic lives and are generally phased.

We assessed whether the identified costs and benefits could be quantified. The following items are considered in the Socio-Economic Cost-Benefit Analysis of the Reconfiguration Proposal as opposed to farming without it.

- Financial cost, which includes capital expenditure, relates to bulk services, internal infrastructure and top structures, as well as capital for establishing farming activities on the small-scale farming units and for introducing trails and low-impact amenities within the conservation parcels.
- Socio-economic benefit is represented by the generation of economic income due to capital expenditure during construction and to spending during operations on the maintenance of farming activities and the upkeep of trails and low-impact amenities.



- Agricultural offset (annual equivalent cash flow) if the NPV is positive for farming over 25 years, based on an agricultural footprint of 257 ha for dryland (rain-fed) and livestock production, 25 ha for avocados and 23 ha for macadamia farming.
- Fiscal and monetary revenue benefits in the form of property rates accruing to the George Municipality from completed residential dwellings and agricultural activities on the small-scale farming units. Agricultural rates are also applied to the undeveloped areas of the conservation parcels.
- Social benefits are represented by the spending of wages and salaries of employees directly or indirectly associated with the development of infrastructure and top structures, and by employment in agriculture or conservation activities that are part of the Reconfiguration Proposal.

As previously indicated, we have developed three scenarios to assess whether the Reconfiguration Proposal would deliver a net benefit when compared to farming with pastures and livestock or avocados or macadamia (i.e. without the Reconfiguration Proposal):

- **Scenario 1:** A reconfiguration of 529 ha to represent 57 small-scale farming units and 24 conservation parcels, as opposed to 257,0 ha of dryland pasture and livestock production.
- **Scenario 2:** A reconfiguration of 529 ha to represent 57 small-scale farming units and 24 conservation parcels as opposed to 25 ha of potential avocado orchards (constrained due to irrigation requirements).
- **Scenario 3:** A reconfiguration of 529 ha to represent 57 small-scale farming units and 24 conservation parcels as opposed to 23 ha of potential macadamia farming (constrained due to irrigation requirements).

Several metrics could be used to assess the results of the three scenarios in current terms and are also suitable for comparative purposes:

- Net socio-economic benefit/(loss) as a percentage of capital expenditure (socio-economic return)
- Net socio-economic benefit/(loss) per R1 investment
- Net socio-economic benefit/(loss) per employee (construction & operations)
- Socio-economic NPV (current terms) (R'million)
- Net socio-economic NPV per capita in George Municipality (2022)
- Net socio-economic NPV per household in George Municipality (2022)
- Net Jobs sustained per R1m of capital cost (construction)
- Net Jobs sustained per R1m of operational spend

A Benefit-Cost Ratio (BCR) is also considered, but this metric is not applicable to the scenarios, as the “cost” side (farming) for each of the three crops is negative.

The results and interpretation of the three scenarios are presented hereafter by summing the benefits and costs in current terms over 25 years, categorising them as applicable to the construction of infrastructure and top structures on the small-scale farming units and conservation parcels and for farming, calculating an NPV for each land use, and computing several metrics to inform the findings of each scenario.

For each scenario, the results are presented under the Micro cost-benefit approach and the Macroeconomic impact approach described in **Section 7.2. Tables 34, 36, and 38** report both approaches, together with a reconciliation. The Micro cost-benefit approach is the decision test from a bona fide agriculture perspective. However, this is not conventional farming but a mix of lifestyle farming and biodiversity protection.

7.9.1 Scenario 1: Utilisation of 257 ha of dryland pasture and livestock farming

For an assessment of the 257 ha of dryland pasture and livestock farming, free cash flow figures are used (see **Section 6**), covering a 25-year period starting in 2029 (year 0).



Section 7.8 provides information on the costs and benefits of capital expenditure on the construction of dwellings and other infrastructure, the capital required to establish farming, and the capital required for trails and amenities on the conservation parcels. **Table 34** presents the benefit and cost items for capital costs and operational expenditure for the Reconfiguration Proposal and for dryland (rain-fed) pasture and livestock farming over 25 years.

It shows the individual cost and benefit items of the Reconfiguration Proposal and dryland pasture and livestock farming, in current terms, together with the results under the Micro cost-benefit approach and the Macroeconomic impact approach described in **Section 7.2**. Capital expenditure on infrastructure, top structures, and the establishment of farming represents an outflow of funds. This spending creates direct, indirect, and induced socio-economic impacts, as well as impacts from wages and salaries earned by employees during the construction and operations phases, which are spent in the local economy. The latter is recorded as a social benefit under the Macroeconomic impact approach.

Table 34: Dryland (rain-fed) pasture and livestock farming (Scenario 1) offset against the Reconfiguration Proposal over 25 years in current terms

Land use (R'million)	Total (R 'million)
N. Micro cost-benefit approach: Benefit (PV)	R499,2
N. Micro cost-benefit approach: Cost (PV)	R3 038,6
N. Micro cost-benefit approach: Net Present Value	(R2 539,4)
N. Micro cost-benefit approach: Benefit-Cost Ratio	0,164x
M. Macroeconomic impact: Benefit (PV)	R3 249,8
M. Macroeconomic impact: Cost (PV)	R3 038,6
M. Macroeconomic impact: Net Present Value	R211,2
M. Macroeconomic impact: Benefit-Cost Ratio	1,070x

Notes:

- Net-benefit refers to the socio-economic benefits/costs of farming offset against the socio-economic benefits of the Reconfiguration Proposal of 529 ha of the Hoogekraal Farm over a period of 25 years in current terms
- As the intention is to determine a net benefit or cost, the property rates applicable to agriculture (dryland and livestock without the Configuration Proposal) are subtracted, as this is treated as a cost and therefore an offset in the cost-benefit analysis, even though it is a positive benefit to the fiscus.
- Figures in parentheses refer to negative numbers and are treated as a cost.

The results in **Table 34** can also be presented as a waterfall of costs and benefits under each approach. **Figure 24** presents the outcome as a flow of funds, showing the benefits and costs of the Reconfiguration Proposal under both the Micro cost-benefit approach and the Macroeconomic impact approach.

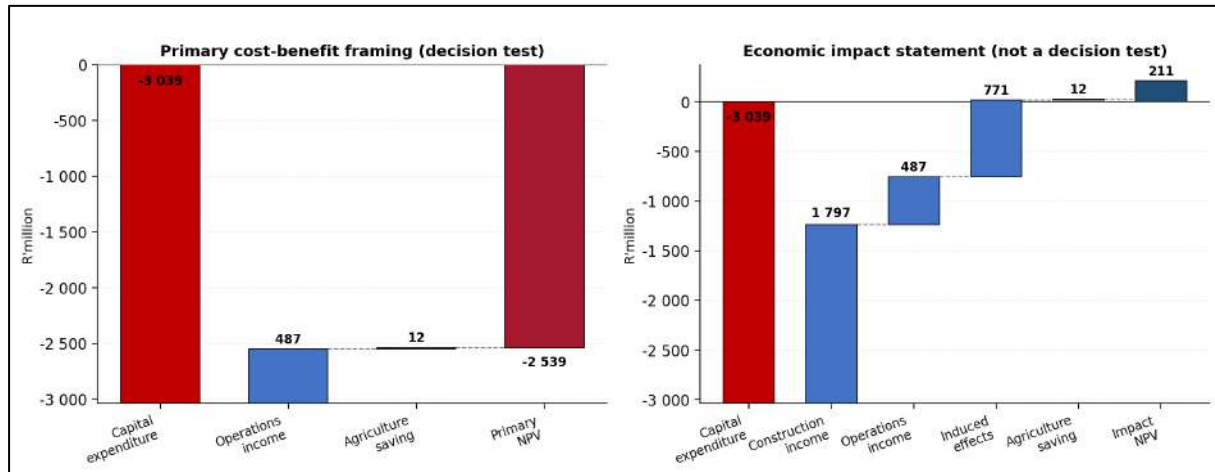


Figure 24: Reconciled waterfall of dryland pasture and livestock (257 ha, Scenario 1) against the Reconfiguration Proposal, showing the Micro cost-benefit approach and the Macroeconomic impact approach separately

Part 2 of **Table 34** presents the results under the Micro cost-benefit approach and the Macroeconomic impact approach described in **Section 7.2**. Under the Micro cost-benefit approach, which compares the capital expenditure of R3 038,6 million against the recurring operations income of R499,2 million (including the saving from the loss-making dryland pasture and livestock offset), the net present value is minus R2 539,4 million, and the benefit-cost ratio is 0,164. Ongoing operations alone do not recover the capital invested. Under the broader Macroeconomic impact approach, which also counts construction income, property rates and induced household spending, the benefit is R3 249,8 million against the same R3 038,6 million cost, giving a net present value of R211,2 million and a benefit-cost ratio of 1,070.

The two approaches answer different questions and should not be blended into one figure. The Micro cost-benefit approach tests whether the capital invested in the Reconfiguration Proposal pays for itself through the recurring value of ongoing farming and conservation operations, without also counting the construction spending that the same capital produced as a separate benefit. The Macroeconomic impact approach states the total economic and social contribution of the Reconfiguration Proposal, including construction income, property rates and induced household spending, and is not a benefit-cost decision test in the strict sense. Both figures are presented in **Table 34**.

To assess whether the benefits exceed the costs in current terms, a Benefit-Cost Ratio (BCR) could be used, calculated as the Present Value (PV) of the costs and benefits associated with the Reconfiguration Proposal, divided by the PV of the costs and benefits associated with dryland pasture and livestock farming on 257 ha over a period of 25 years, in current terms.

The following equation demonstrates the calculation of the BCR:

$$BCR = \frac{\sum_{i=1}^n \frac{B_t}{(1+d)^t}}{\sum_{t=1}^n \frac{C_t}{(1+d)^t}}$$

where BCR represents the Benefit-Cost Ratio;

" B_t " is the benefit in time " t " (Reconfiguration Proposal);

" C_t " is the cost in time " t "; (pastures and livestock, avocado or macadamia)

" d " represents the discount rate to reflect the cost of capital

A Benefit-Cost Ratio is determinable under both approaches once they are kept separate and consistently



discounted. Under the Micro cost-benefit approach, the ratio is 0,164, meaning the recurring value produced does not recover the capital invested. Under the Macroeconomic impact approach, the ratio is 1,070, meaning the total economic and social contribution, including construction and induced effects, exceeds the capital cost. The same approach applies to avocado and macadamia farming in **Sections 7.9.2 and 7.9.3**.

The metrics in **Table 35** are calculated on the Macroeconomic impact approach, consistent with the figures presented in **Table 34**, and are not benchmarked against the Micro cost-benefit approach. On this basis, the Reconfiguration Proposal generates a net socio-economic return of 6,95% in current terms, equivalent to 6c per Rand of capital expenditure, and the socio-economic benefit per employee at peak employment over the 25-year period is R9 212. The impact-approach NPV is positive at R211 million. Under the Micro cost-benefit approach described in **Section 7.2**, the net present value is minus R2 539 million and the benefit-cost ratio is 0,164, meaning the capital invested is not recovered from recurring operations alone.

Table 35: Metrics (indicators) of a socio-economic nature related to Scenario 1

Indicators (current terms)	Impact of Reconfiguration Proposal - Scenario 1
Net socio-economic benefit as a percentage of capital expenditure (socio-economic return)	6,95%
Net socio-economic benefit per R1 investment	R0,07
Net socio-economic benefit per employee (construction & operations)	R9 212
Socio-economic NPV (current terms)	R211
Net socio-economic present value per capita in George Municipality (2022)	R718
Net socio-economic present value per household in George Municipality (2022)	R2 464
Net Jobs sustained per R1m of capital cost (construction)	5,44
Net Jobs sustained per R1m of operational spending	3,24

Note: These metrics are not benchmarked but offer a comparison with other land uses

The impact at the municipal level suggests a per-capita benefit of R718, based on the net socio-economic benefit of the Reconfiguration Proposal (in current terms) and George Municipality's 2022 population (294 929)²³. The current net socio-economic benefit is R2 464 per household in the George Municipality, based on 2022 figures²⁴. Based on the cumulative number of employment opportunities created by the Reconfiguration Proposal during construction, the equivalent of 5,44 jobs could be sustained for every R1 million of capital spent. Operational spend from farming and conservation activities suggests that 3,24 jobs could be sustained for every R1 million of estimated operational expenditure (essentially maintenance and operations for small-scale agricultural farming and maintenance and upkeep of trails and low-impact amenities on the conservation parcels).

The Reconfiguration Proposal, as opposed to dryland pasture and livestock farming, is underpinned by the fact that even with a benchmark of dryland pasture and livestock farming that assumes maximum (historical) land use on 257,0 ha, the projected returns are insufficient to meet the definition of an economically viable and sustainable pasture and livestock farming operation. A negative NPV of R14,0 million (rounded) and an IRR of 0,2% over 25 years, which would not meet the minimum required return that investors would require. This does not mean the Reconfiguration Proposal recovers its own capital cost outright: under the Micro cost-benefit approach, it does not. It means the Reconfiguration Proposal is the better of the two options considered, and that its broader economic and social contribution, under the Macroeconomic impact approach, is positive.

7.9.2 Scenario 2: Utilisation of 25 ha for avocado farming

For a similar assessment of avocado farming, free cash flow figures are used (see **Section 6.7**), covering a 25-year period starting in 2029 (year 0). **Section 7.8** provides information on the costs and benefits of capital expended on constructing dwellings and other infrastructure, and on the capital required to establish farming, trails, and

²³ George Municipality 2024/2025 Annual report

²⁴ George Municipality Integrated Development Plan (IDP): The 2026/2027 IDP review is based on a household size of 3,4.



amenities on the conservation parcels.

Table 36 presents the benefit and cost items for the impact of capital costs and operational expenditure for the Reconfiguration Proposal compared to the potential to farm avocados on a 25-ha footprint over 25 years (constrained by irrigation water).

Table 36: Avocado farming (Scenario 2) offset against the Reconfiguration Proposal over 25 years in current terms

Land use (R'million)	Total (R'million)
N. Micro cost-benefit approach: Benefit (PV)	R492,9
N. Micro cost-benefit approach: Cost (PV)	R3 038,6
N. Micro cost-benefit approach: Net Present Value	(R2 545,7)
N. Micro cost-benefit approach: Benefit-Cost Ratio	0,162x
M. Macroeconomic impact: Benefit (PV)	R3 243,4
M. Macroeconomic impact: Cost (PV)	R3 038,6
M. Macroeconomic impact: Net Present Value	R204,9
M. Macroeconomic impact: Benefit-Cost Ratio	1,067x

Notes:

- Net-benefit refers to the socio-economic benefits/costs of farming offset against the socio-economic benefits of the Reconfiguration Proposal of 529 ha of the Hoogekraal Farm over a period of 25 years in current terms
- As the intention is to determine a net benefit or cost, the property rates applicable to agriculture (dryland and livestock without the Configuration Proposal) are subtracted, as this is treated as a cost and therefore an offset in the cost-benefit analysis, even though it is a positive benefit to the fiscus.
- Figures in parentheses refer to negative numbers and are treated as a cost.

Table 36 presents the results under the Micro cost-benefit and the Macroeconomic impact approaches described in **Section 7.2**. Under the Micro cost-benefit approach, the capital expenditure of R3 038,6 million is compared against recurring operations income of R492,9 million (including savings from the loss-making avocado offset), giving a net present value of minus R2 545,7 million and a benefit-cost ratio of 0,162. Under the broader Macroeconomic impact approach, which also counts construction income, property rates and induced household spending, the benefit is R3 243,4 million against the same cost, giving a net present value of R204,9 million and a benefit-cost ratio of 1,067.

Table 36 indicates a net benefit of R205,3 million in current terms for the reconfiguration proposal relative to farming on 25 ha with avocados over 25 years (Scenario 2). The results in **Table 36** can also be presented as a waterfall of costs and benefits under each approach. **Figure 25** presents the outcome as a flow of funds, showing the benefits and costs of the Reconfiguration Proposal compared with farming 25 ha of avocados, under both the Micro cost-benefit approach and the Macroeconomic impact approach.

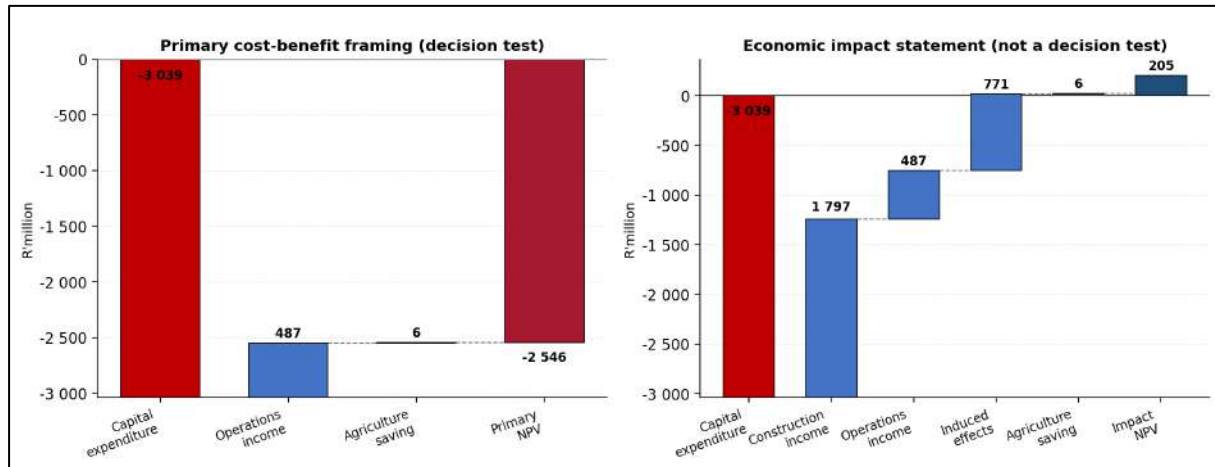


Figure 25: Reconciled waterfall of avocado farming (25 ha, Scenario 2) against the Reconfiguration Proposal, showing the Micro cost-benefit approach and the Macroeconomic impact approach separately

A Benefit-Cost Ratio is determinable under both approaches once they are kept separate and consistently discounted, as set out in **Section 7.9.1**. Under the Micro cost-benefit approach, the ratio is 0,162. Under the Macroeconomic impact approach, it is 1,067. The metrics calculated for Scenario 1 (see **Section 7.9.1**) are also applied to Scenario 2 (**Table 37**), on the Macroeconomic impact approach.

Table 37: Metrics (indicators) of a socio-economic nature related to Scenario 2

Indicators (current terms)	Impact of Reconfiguration Proposal - Scenario 2
Net socio-economic benefit as a percentage of capital expenditure (socio-economic return in current terms)	6,74%
Net socio-economic benefit per R1 investment	R0,07
Net socio-economic benefit per employee (construction & operations)	R8 927
Socio-economic NPV (current terms)	R205
Net socio-economic present value per capita in George Municipality (2022)	R695
Net socio-economic present value per household in George Municipality (2022)	R2 388
Net Jobs sustained per R1m of capital cost (construction)	5,44
Net Jobs sustained per R1m of maintenance spending	3,24

The metrics in **Table 37** are calculated on the Macroeconomic impact approach, and are not benchmarked against the Micro cost-benefit approach. On this basis, the Reconfiguration Proposal generates a net socio-economic return of 6,74% in current terms, equivalent to 6c per Rand of capital expenditure, and the socio-economic benefit per employee at peak employment over the 25-year period is R8 927. The impact-approach NPV is positive at R205 million. Under the Micro cost-benefit approach, by contrast, the net present value is minus R2 546 million, and the benefit-cost ratio is 0,162.

The impact at the municipal level suggests the per capita benefit is R695, based on the net socio-economic benefit of the Reconfiguration Proposal (in current terms) and George Municipality's 2022 population (294 929)²⁵. The current net socio-economic benefit is R2 388 per household in the George Municipality, based on 2022 figures²⁶. Based on the cumulative number of employment opportunities created by the Reconfiguration Proposal during

²⁵ George Municipality 2024/2025 Annual report

²⁶ George Municipality Integrated Development Plan (IDP): The 2026/2027 IDP review based on a household size of 3,4



construction, the equivalent of 5,44 jobs could be sustained for every R1 million of capital spent. Operational spend from farming and conservation activities suggests that 3,24 jobs could be sustained for every R1 million of estimated operational expenditure (essentially maintenance and operations for small-scale agricultural farming and maintenance and upkeep of trails and low-impact amenities on the conservation parcels).

Even under a benchmark of avocado farming that assumes maximum land use on 25 ha (within the irrigation constraints), the projected returns appear insufficient to meet the definition of an economically viable and sustainable farming operation, with a negative NPV of R6,0 million and a sub-optimal IRR of 5,8% over 25 years. As with Scenario 1, this shows that the Reconfiguration Proposal is the better of the two options considered, and that its broader economic and social contribution is positive under the Macroeconomic impact approach; however, it does not recover its own capital cost under the Micro cost-benefit approach.

7.9.3 Scenario 3: Utilisation of 23 ha for macadamia farming

To assess macadamia nut farming, free cash flow figures are used (see **Section 6.8**), covering a 25-year period starting in 2029 (year 0). **Section 7.8** provides information on the costs and benefits of capital expenditure for constructing dwellings and other infrastructure, and on the capital required to establish farming, trails, and amenities on the conservation parcels. **Table 38** presents the benefit and cost items for the impact of capital costs and operational expenditures for the Reconfiguration Proposal and for the potential to farm 23 ha of macadamia within irrigation water constraints over 25 years.

Table 38: Macadamia farming (Scenario 3) offset against the Reconfiguration Proposal over 25 years in current terms

Land use (R'million)	Total (R 'million)
N. Micro cost-benefit approach: Benefit (PV)	R488,3
N. Micro cost-benefit approach: Cost (PV)	R3 038,6
N. Micro cost-benefit approach: Net Present Value	(R2 550,3)
N. Micro cost-benefit approach: Benefit-Cost Ratio	0,161x
M. Macroeconomic impact: Benefit (PV)	R3 238,9
M. Macroeconomic impact: Cost (PV)	R3 038,6
M. Macroeconomic impact: Net Present Value	R200,3
M. Macroeconomic impact: Benefit-Cost Ratio	1,066x

Notes:

- Net-benefit refers to the socio-economic benefits/costs of farming offset against the socio-economic benefits of the Reconfiguration Proposal of 529 ha of the Hoogekraal Farm over a period of 25 years in current terms
- As the intention is to determine a net benefit or cost, the property rates applicable to agriculture (dryland and livestock without the Configuration Proposal) are subtracted, as this is treated as a cost and therefore an offset in the cost-benefit analysis, even though it is a positive benefit to the fiscus.
- Figures in parentheses refer to negative numbers and are treated as a cost.

Table 38 presents the results under the Micro cost-benefit approach and the Macroeconomic impact approach described in **Section 7.2**. Under the Micro cost-benefit approach, the capital expenditure of R3 038,6 million is compared against a recurring operations income of R488,3 million (including the saving from the loss-making macadamia offset), giving a net present value of minus R2 550,3 million and a benefit-cost ratio of 0,161. Under the broader Macroeconomic impact approach, which also counts construction income, property rates and induced household spending, the benefit is R3 238,9 million against the same cost, giving a net present value of R200,3 million and a benefit-cost ratio of 1,066.

Table 38 shows the individual cost and benefit items of the Reconfiguration Proposal and macadamia farming, in current terms, together with the results under the Micro cost-benefit approach and the Macroeconomic impact approach described in **Section 7.2**. These results can also be presented as a waterfall of costs and benefits under each approach. **Figure 26** presents the outcome as a flow of funds, showing the benefits and costs of the Reconfiguration Proposal under both the Micro cost-benefit approach and the Macroeconomic impact approach.

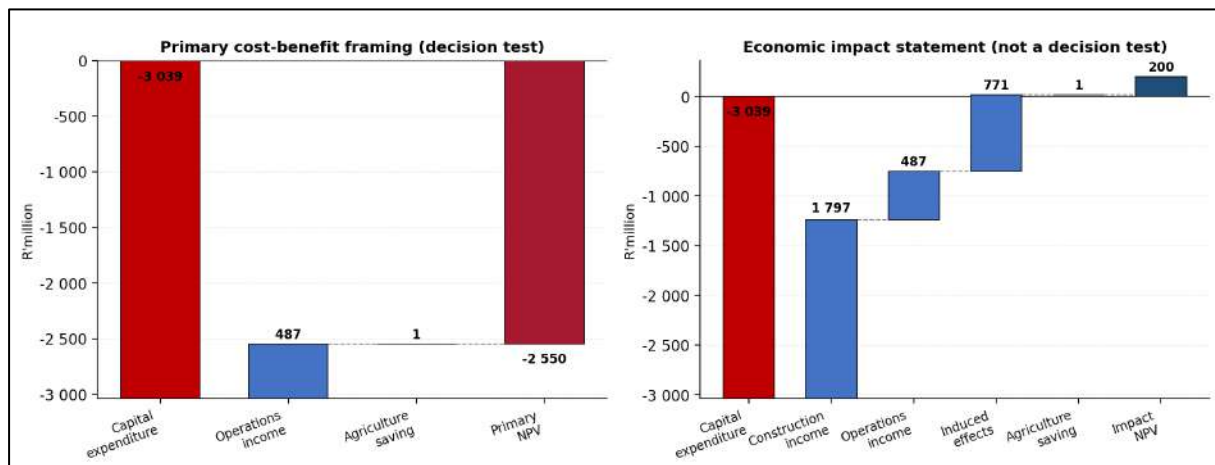


Figure 26: Reconciled waterfall of macadamia farming (23 ha, Scenario 3) against the Reconfiguration Proposal, showing the Micro cost-benefit approach and the Macroeconomic impact approach separately

A Benefit-Cost Ratio is determinable under both approaches once they are kept separate and consistently discounted, as set out in **Section 7.9.1**. Under the Micro cost-benefit approach, the ratio is 0,161. Under the Macroeconomic impact approach, it is 1,066. The metrics calculated for Scenario 1 (see **Section 7.9.1**) are also applied to Scenario 3 (**Table 39**), on the Macroeconomic impact approach.

Table 39: Metrics (indicators) of a socio-economic nature related to Scenario 3

Indicators (current terms)	Impact of reconfiguration proposal - Scenario 3
Net socio-economic benefit as a percentage of capital expenditure (socio-economic return in current terms)	6,59%
Net socio-economic benefit per R1 investment	R0,07
Net socio-economic benefit per employee (construction & operations)	R8 722
Socio-economic NPV (current terms) (million)	R200
Net socio-economic present value per capita in George Municipality (2022)	R680
Net socio-economic present value per household in George Municipality (2022)	R2 333
Net Jobs sustained per R1m of investment (construction)	5,44
Net Jobs sustained per R1m of maintenance spending	3,24

The metrics in **Table 39** are calculated on the Macroeconomic impact approach, and are not benchmarked against the Micro cost-benefit approach. On this basis, the Reconfiguration Proposal generates a net socio-economic return of 6,59% in current terms, equivalent to 7c per Rand of capital expenditure, and the socio-economic benefit per employee at peak employment over the 25-year period is R8 722. The impact-approach NPV is positive at R200 million. Under the Micro cost-benefit approach, by contrast, the net present value is minus R2 550 million, and the benefit-cost ratio is 0,161.

The impact at the municipal level suggests the per capita benefit is R680, based on the net socio-economic benefit of the Hoogeland development (in current terms) and George Municipality's 2022 population (294 929)²⁷. The current net socio-economic benefit is R2 333 per household in the George Municipality, based on 2022 figures²⁸. Based on the cumulative number of employment opportunities created by the Reconfiguration Proposal during

²⁷ George Municipality 2024/2025 Annual report

²⁸ George Municipality Integrated Development Plan (IDP): The 2026/2027 IDP review based on a household size of 3,4



construction, the equivalent of 5,44 jobs could be sustained for every R1 million of capital spent. Operational spend from farming and conservation activities suggests that 3,24 jobs could be sustained for every R1 million of estimated operational expenditure (essentially maintenance and operations for small-scale agricultural farming and maintenance and upkeep of trails and low-impact amenities on the conservation parcels).

Even under a benchmark macadamia farming scenario, which assumes the use of 23 ha due to irrigation constraints, the projected returns are insufficient to meet the definition of an economically viable and sustainable macadamia farming operation, with a negative NPV of R1,1 million and a sub-optimal IRR of 7,4% over 25 years. This is most likely due to the working capital requirement and the need for scale, which is not achievable on a small footprint (all else being equal). As with Scenarios 1 and 2, this establishes that the Reconfiguration Proposal is the better of the two options considered under the Macroeconomic impact approach; it does not mean the Reconfiguration Proposal recovers its own capital cost under the Micro cost-benefit approach.

7.10 Comparison of current benefits and costs for Scenarios 1 -3

Table 40 presents the benefits and costs of the three scenarios in current terms, and the net benefit of considering the Reconfiguration Proposal compared with farming 257 ha of dryland (rain-fed) and livestock, 25 ha of avocados, or 23 ha of macadamia. All the scenarios assume the Reconfiguration Proposal as a baseline. The net outcome depends on farming the three crops under irrigation constraints, all else equal. The property rates applicable to the agricultural value (without the Reconfiguration Proposal) are offset by the property rates generated by the introduction of the Reconfiguration Proposal.

The figures in **Table 40**, **Table 41** and **Table 42** are presented on the Macroeconomic impact approach described in **Section 7.2**, consistent with the individual scenario tables. Under the Micro cost-benefit approach, which excludes construction income, property rates and induced effects to avoid double counting against the capital expenditure, the net present value is minus R2 539,4 million for Scenario 1, minus R2 545,7 million for Scenario 2, and minus R2 550,3 million for Scenario 3, with a benefit-cost ratio ranging from 0,161 to 0,164 across the three scenarios. Under none of the three scenarios is the capital expenditure recovered from recurring operations income alone. The reconciliation of the two approaches for each scenario is presented in **Sections 7.9.1 to 7.9.3**.

Table 40: Three farming options (Scenario 1, 2 and 3) offset against the Reconfiguration Proposal over 25 years in current terms

Indicator (R'million)	Scenario 1	Scenario 2	Scenario 3
N. Micro cost-benefit approach: Benefit (PV)	R499,2	R492,9	R488,3
N. Micro cost-benefit approach: Cost (PV)	R3 038,6	R3 038,6	R3 038,6
N. Micro cost-benefit approach: Net Present Value	(R2 539,4)	(R2 545,7)	(R2 550,3)
N. Micro cost-benefit approach: Benefit-Cost Ratio	0,164x	0,162x	0,161x
M. Macroeconomic impact: Benefit (PV)	R3 249,8	R3 243,4	R3 238,9
M. Macroeconomic impact: Cost (PV)	R3 038,6	R3 038,6	R3 038,6
M. Macroeconomic impact: Net Present Value	R211,2	R204,9	R200,3
M. Macroeconomic impact: Benefit-Cost Ratio	1,070x	1,067x	1,066x



Verdict at the assumptions applied	Costs exceed benefits (Micro); benefits exceed costs (impact)	Costs exceed benefits (Micro); benefits exceed costs (impact)	Costs exceed benefits (Micro); benefits exceed costs (impact)
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Note: Scenario 1, Reconfiguration Proposal replaces 257 ha of dryland pasture and livestock. Scenario 2, Reconfiguration Proposal replaces 25 ha of avocado orchards. Scenario 3, Reconfiguration Proposal replaces 23 ha of macadamia orchards.

Note: Scenario 1, Reconfiguration Proposal replaces 257 ha of dryland pasture and livestock
Scenario 2, Reconfiguration Proposal replaces 25 ha of avocado orchards
Scenario 3, Reconfiguration Proposal replaces 23 ha of macadamia orchards

7.10.1 Net benefit-cost in nominal terms and current terms

The premise of the Socio-Economic Cost-Benefit Analysis is to determine whether a net benefit or cost results from offsetting the costs against the benefits. In this case, agricultural use only (dryland pastures and livestock, avocados or macadamia) is offset against the benefits of the Reconfiguration Proposal under Scenarios 1, 2 and 3. **Table 41** indicates the current and nominal net benefit/(cost) over 25 years and on an average annual basis.

Table 41: Comparison of net benefit/(cost) in current and nominal terms for each scenario over 25 years and on average per annum

(R 'million)	Scenario 1	Scenario 2	Scenario 3
Nominal net benefit/(cost)	R2 182,9	R2 154,8	R2 085,3
Nominal net benefit/(cost) p.a.	R87,3	R86,2	R83,4
Current net benefit/(cost) (Macroeconomic impact approach)	R213,1	R205,3	R200,4
Current net benefit/(cost) (Micro approach)	(R2 539,4)	(R2 545,7)	(R2 550,3)
Current net benefit/(cost) p.a.	R8,5	R8,2	R8,0

Note: Scenario 1, Reconfiguration Proposal replaces 257 ha of dryland pasture and livestock
Scenario 2, Reconfiguration Proposal replaces 25 ha of avocado orchards
Scenario 3, Reconfiguration Proposal replaces 23 ha of macadamia orchards

Cost-benefit analysis focuses on net benefit or cost, expressed in current terms. The nominal figures are provided for information purposes only. **Table 41** indicates a positive net benefit for the Reconfiguration Proposal across all three scenarios. This highlights that the Reconfiguration Proposal offers a superior return compared to farming on a more conventional basis (without the Reconfiguration Proposal), which yields a negative NPV and sub-optimal IRR.

Table 41 presents the net benefit on the Macroeconomic impact approach. On the Micro cost-benefit approach, the comparable current net cost is minus R2 539,4 million (Scenario 1), minus R2 545,7 million (Scenario 2), and minus R2 550,3 million (Scenario 3), reflecting that the capital expenditure is not recovered from recurring operations income alone in any of the three scenarios.

7.10.2 Key comparative metrics

The comparison of key metrics in **Table 42** highlights the differences between the three scenarios. The metrics clearly show that, all else being equal, the Reconfiguration Proposal offers a net benefit in current terms over dryland (rain-fed) and livestock, avocado, and macadamia nut farming covered in the analysis. More significantly, the Reconfiguration Proposal generates more than R680 per capita in the George Municipal area. The construction and operational spending, given that the Reconfiguration Proposal is intended to create a viable farming operation within the constraints of irrigation water using a co-operative/outgrower model, will add value through the scope of farming envisaged and enable ongoing employment and sustainability, particularly once farming commences.

Table 42: Key metrics related to outcomes of the Reconfiguration Proposal in terms of each scenario



Indicators (current terms)	Scenario 1	Scenario 2	Scenario 3
Net socio-economic benefit as a percentage of capital expenditure (socio-economic return in current terms)	6,95%	6,74%	6,59%
Net socio-economic benefit per R1 investment	R0,07	R0,07	R0,07
Net socio-economic benefit per employee (construction & operations)	R9 212	R8 927	R8 722
Socio-economic NPV (current terms) (Macroeconomic impact approach)	R211	R205	R200
Socio-economic NPV (current terms) (Micro approach)	(R2 539)	(R2 546)	(R2 550)
Net socio-economic present value per capita in George Municipality	R718	R695	R680
Net socio-economic present value per household in George Municipality	R2 464	R2 388	R2 333
Net Jobs sustained per R1m of capital cost (construction)	5,44	5,44	5,44
Net Jobs sustained per R1m of operational spend	3,24	3,24	3,24

Note: Scenario 1, Reconfiguration Proposal replaces 257 ha of dryland pasture and livestock
Scenario 2, Reconfiguration Proposal replaces 25 ha of avocado orchards
Scenario 3, Reconfiguration Proposal replaces 23 ha of macadamia orchards

The metrics in **Table 42** are calculated on the Macroeconomic impact approach. Under the Micro cost-benefit approach, the benefit-cost ratio ranges from 0,161 to 0,164 across the three scenarios, meaning the capital invested is not recovered from recurring operations income alone; the Macroeconomic impact approach benefit-cost ratio, ranging from 1,066 to 1,070, reflects the total economic and social contribution once construction income, property rates and induced effects are included.

Note that these metrics provide context and are not assessed against a benchmark, except for the net socio-economic return, which is considered within the “good” range. However, they are useful for comparing the three scenarios. For instance, the GGP per capita in the George area in 2022 was estimated at R109 780 (George Municipality (2023)). The net benefit of the Configuration Proposal in current (2025) terms is estimated to be R680. If we deflate this number by three years (Western Cape Provincial Treasury, 2026) to align with the 2022 per capita figure based on the Gross Value Added (GVA), the figure is R571, which represents 0,5% of the GGP per capita in George in 2022.

7.11 Social/employment comparison

Any change in land use has social implications reflected in “on-site” employment. It is possible to consider the employment impact of the Reconfiguration Proposal, which enables employment creation at three levels. The small-scale farms would generate employment from farming activities and the residential component. For the conservation parcels, employment creation relates to conservation-lifestyle living (residential component) and the upkeep of the conservation lifestyle (trails and low-impact amenities). The converse entails assessing employment for dryland pasture and livestock, avocado, or macadamia, to the extent permissible under irrigation constraints (without the Reconfiguration Proposal). This part of the analysis excludes direct on-site construction employment, as it represents temporary jobs that will taper off once the infrastructure is in place and the top structures are complete.

7.11.1 Employment related to small-scale farms and conservation properties

The Reconfiguration Proposal entails 57 small-scale farming units and 24 conservation parcels. Given the nature of the properties and the dwellings' high-end focus, the following scenarios could unfold. We assumed a mix between Family-Focused and Fully Staffed, as per the guidance below, and applied an average of three staff per household (main dwelling) across agricultural smallholdings and conservation properties. We also assume that one person will be employed to maintain the farm manager's dwelling on the agricultural properties. The staffing complement for the agricultural properties is as follows: main farm dwellings (171) and farm managers' houses (57), resulting in a total of 229 direct employment equivalents. For the conservation units, 72 direct employment equivalents are envisaged, with a total permanent employment complement of 301 associated with the dwellings on the small-scale farming units and conservation properties once all the dwellings are built and occupied.



Tier	Number of Staff	Typical Roles	Focus Area
Tier 1: Core / Basic	1 to 2	1 Full-Time Housekeeper & 1 Gardener	Basic cleaning, laundry, property upkeep, and exterior maintenance.
Tier 2: Family-Focused	2 to 3	1 Housekeeper, 1 Nanny / Au Pair, 1 Gardener	Adds childcare and active supervision while covering the home and grounds.
Tier 3: Fully Staffed	3 to 5	1 House Manager/Butler, 1–2 Housekeepers, 1 Private Chef, 1 Groundskeeper	Comprehensive service, cooking, entertaining, and high-end wardrobe/interior care.

Source: Tiger Recruitment (2024)

7.11.2 Employment related to farming with dryland pasture and livestock, avocado or macadamia

We adopted an approach that considers three types of agricultural activity on smallholdings, with the following assumed apportionment of small-scale farms: Dryland pasture and livestock (51), avocado (3), and macadamia (3). This allocation is based on irrigation water availability. Guidance on the permanent and seasonal employment for the three crop types is provided below.

Crop Type	Permanent workers (per ha)	Total FTE ²⁹ needed (4,5 ha)	Seasonal harvest labour	Primary labour activities
Dryland and livestock	0,05 - 0,10 FTE	1 - 2 workers	Low (1)	Fence maintenance, rotational grazing shifts, water infrastructure monitoring, basic animal husbandry, weed management and pasture fertilisation.
Macadamias	1 FTE	4 - 5 workers	Low (1-2 additional)	Harvesting, pruning, weeding, and orchard floor management
Avocados	1 to 1,2 FTE	5 - 6 workers	Moderate (3-5 additional)	Harvesting, foliar spraying, manual weed control, and pruning

Source: Western Cape Department of Agriculture (2025a, b)

Based on the above guidance, we adopted the following breakdown for permanent and seasonal workers on a 4,5-ha small-scale farm. Based on the crop allocation, a weighted average of four (rounded) permanent and seasonal workers would be required. **This translates to a total weighted employment of 228 persons for the 57 farming units.**

Crop type (per 4,5 ha)	Permanent	Seasonal	Total
Dryland (rain-fed) and livestock	2	1	3
Macadamia	4	2	6
Avocados	5	4	9
Arithmetic Average	5	4	9

7.11.3 Employment related to conservation lifestyle areas

²⁹ FTE = Full-Time Equivalent



The conservation area (excluding the dwelling), which is assumed to have trails and low-impact amenities, would require regular upkeep using a lean staffing model. For these purposes, the following guidance is used:

- A full-time, dedicated conservation worker for a 4,8-ha conservation property is rarely required unless the land is heavily infested with alien invasive plants (AIPs). Most conservation lifestyle areas of this scale operate effectively with **one permanent general worker** (or a half-time staff member) who manages both the conservation area and general property maintenance.
- Seasonal and specialised employment is required for alien clearing (annual/biannual), which requires a specialised contractor team (typically 4 - 8 people) for 2 - 5 days, once or twice a year, to perform intensive hacking or spraying. Trail Reconstruction (post-rainy season) may be required due to the climate, and heavy rains can cause erosion on slopes in the Garden Route. A seasonal team may be needed for one week per year to repair drainage bars and re-surface trail sections. A permanent worker could maintain firebreak preparation. However, the initial clearing of a 4,8-ha perimeter often requires a "blitz" effort over 2 - 3 days involving a team of 3 - 4 people to ensure the area is compliant before the peak fire season.

Based on annual employment, using the number of person-days (see below) as a guide and 21,67 workdays per month, the staff requirement is three persons (rounded). Annually, the staff requirement is less than one. **For the 24 conservation properties envisaged, the guidance specifies a staff requirement of 72.**

Task Type	Frequency	Estimated Effort (Person-Days)
Routine Trail Maintenance	Monthly	2–4 days per month
Amenity Inspection/Cleaning	Weekly	1 day per month (cumulative)
Invasive Plant Management	Quarterly	5–10 days per year
Boundary Firebreak Maintenance	Annual	3–6 days per year
TOTAL ESTIMATED³⁰	Annual	45–65 person-days

7.11.4 Employment with and without the Reconfiguration Proposal

The employment analysis below contrasts the employment impact under the Reconfiguration Proposal with that of conventional farming on 257 ha of dryland pasture, 25 ha of avocado, or 23 ha of macadamia. **Table 43** presents the full-time direct jobs and seasonal employment associated with the Reconfiguration Proposal and conventional farming. It also provides a further breakdown of employment created by dwellings and farming activities, per crop type, on small-scale farming units. In addition, a breakdown of employment figures is also provided for the conservation properties as they relate to dwellings and maintenance of trails and low-impact amenities.

Table 43: Direct full-time and seasonal employment with and without the Reconfiguration Proposal

Crop	Permanent	Seasonal	Total
RECONFIGURATION PROPOSAL			
Agri small-scale units (57)	239		265
Dwellings	229		229
Agriculture	10		36
Avocado Orchards (12)	4	13	17
Macadamia Orchards (12)	4	10	14
Dryland and livestock (249)	2	3	5

³⁰ The specific labour ratios (e.g., 45–65 person-days) are derived from **comparative land-use modelling**. This involves taking the **Full-Time Equivalent (FTE)** coefficients for "Low-Input Horticulture" or "Extensive Pasture Management" provided by Elsenburg and adjusting them for non-commercial conservation activities, such as AIP Management: Using the Working for Water (DWS) standards for clearing person-days per hectare based on density. Trail Maintenance: Using standard SANParks or CapeNature guidelines for "Light Footpath Maintenance" which averages 1 man-day per kilometre of trail per month.



Crop	Permanent	Seasonal	Total
Conservation properties (24)	96		96
Dwellings	72		72
Conservation lifestyle	24	47	71
Total			361
FARM UTILISATION (NO RECONFIGURATION)			
Dryland and livestock (257 ha)	2	3	5
Avocado (25 ha)	10	20	30
Macadamia (23 ha)	8	15	23
Arithmetic Average	7	13	20

The information in **Table 43** is further analysed and unpacked below, focusing on salient points. Conventional farming with any of the three crops on the Hoogekraal Farm would, on average, sustain 20 jobs per annum (noting that provision can only be made for one crop), while the Reconfiguration Proposal could sustain 361 jobs per annum. Jobs from conventional farming represent only 5,5% of the total jobs created by the Reconfiguration Proposal. Stated differently, implementing the Reconfiguration Proposal creates 18 jobs for every 1 job in conventional farming (without the Reconfiguration Proposal). **Figure 27** illustrates the employment created through conventional farming vs the Reconfiguration Proposal. The Reconfiguration Proposal accounts for almost 72,8% of employment, while 27,2% is associated with conservation properties

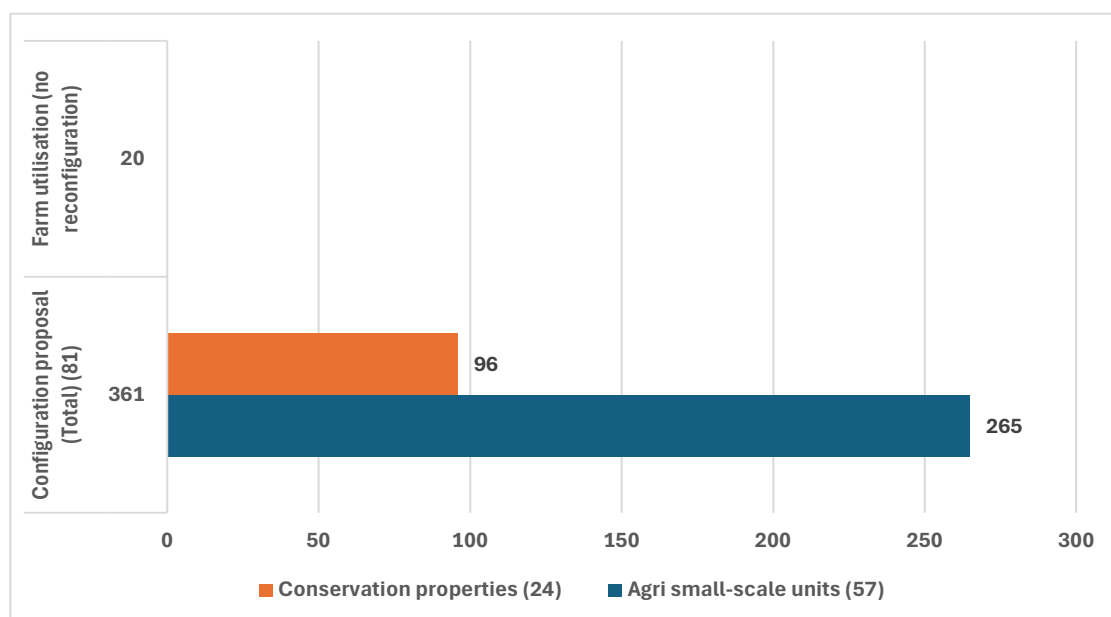


Figure 24: Total employment for conventional farming and the Reconfiguration Proposal

Figure 28 illustrates a breakdown of total employment (permanent and seasonal) across the three types of agricultural activities used for small-scale farming and related to the dwellings. Avocado is the most labour-intensive, while pastures and livestock are the least labour-intensive. The dwellings provide the largest staff complement.

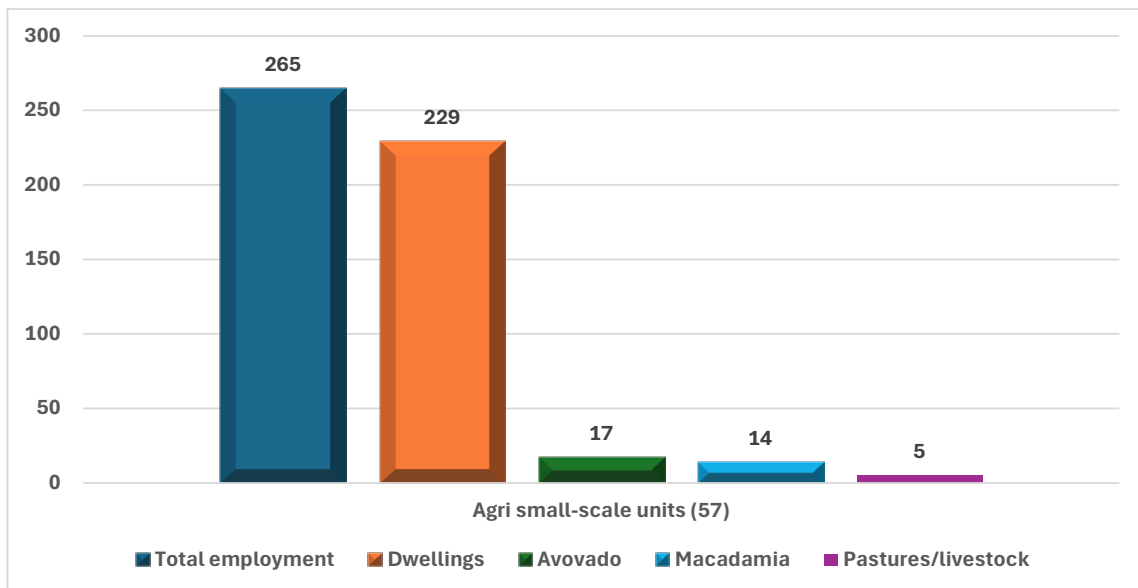


Figure 25: Total full-time and seasonal employment applicable to farming units that farm with dryland pastures and livestock, avocado and macadamia, as well as dwelling units

7.12 Conclusion

Consent for the consolidation and subdivision of several farms to create the 529-ha Hoogeland development was granted in 2021 by the Department of Agriculture, Land Reform and Rural Development), but this development was never taken forward. A new Reconfiguration Proposal for the Hoogeland footprint entails subdividing 529 ha into 57 small-scale agricultural farms, each with a minimum size of 5 ha, and 24 conservation parcels, resulting in 81 subdivided freehold properties. The proposal ensures the properties remain agricultural, while owners of portions sold on a freehold basis could establish a farming enterprise on a 4,5-ha portion of the farm unit, with a maximum hard-surface footprint of 0,5 ha for a dwelling and other supporting infrastructure.

The results suggest that conventional farming, whether with dryland pastures and livestock or with avocados or macadamia, is not economically viable under the applied assumptions. Higher-value crops are constrained by irrigation water availability and, therefore, by the number of hectares that could be planted, suggesting that scale may be a challenge in justifying working capital and establishment costs. This results in a negative NPV; although the Internal Rate of Return (IRR) is positive for avocado and macadamia, it is sub-optimal given the risk associated with the nature and scope of farming. This represents an opportunity cost, implying that funding losses should be channelled to the next-best option, namely the Reconfiguration Proposal. Subtracting a negative NPV for conventional farming effectively adds to the NPV of the Reconfiguration Proposal, as it represents a saving. The results for the three scenarios are as follows:

Indicator (R'million)	Scenario 1	Scenario 2	Scenario 3
Micro cost-benefit approach: Net Present Value	(R2 539,4)	(R2 545,7)	(R2 550,3)
Micro cost-benefit approach: Benefit-Cost Ratio	0,164x	0,162x	0,161x
Macroeconomic impact approach: Net Present Value	R211,2	R204,9	R200,3
Macroeconomic impact approach: Benefit-Cost Ratio	1,070x	1,067x	1,066x
Internal Rate of Return (IRR) (no reconfiguration)	0,2%	5,8%	7,4%

Under the Micro cost-benefit approach, the decision-relevant test, the capital invested in the Reconfiguration Proposal is not recovered from the recurring value of ongoing farming and conservation operations alone, in any of the three scenarios (benefit-cost ratio ranging from 0,161 to 0,164). Under the broader Macroeconomic impact approach, which also includes construction income, property rates and induced household spending, the Reconfiguration Proposal shows a positive net benefit relative to conventional farming with pastures and livestock, avocado, or macadamia (within the constraints of irrigation water) over 25 years. The questionable feasibility of



conventional farming under irrigation water constraints, compared with the Reconfiguration Proposal, which would incur a loss of only 16,2 ha of low-quality soil, suggests that the Reconfiguration Proposal remains the preferable option among those assessed, based on its broader economic and social contribution.

The analysis also shows that conventional farming with any of the three crops would, on average, sustain 20 jobs per annum (noting that provision can only be made for one crop), while the reconfiguration proposal could sustain 361 jobs per annum. The Reconfiguration Proposal accounts for almost 72,8% of employment, while 27,2% is associated with conservation properties. A breakdown of total employment (permanent and seasonal) indicates that avocado farming is the most labour-intensive, while pastures and livestock are the least labour-intensive. However, the dwellings provide the largest staff complement.



8 ASSESSMENT OF IMPACTS

8.1 Introduction

Various qualitative and quantitative impacts are associated with a property-related development project; these impacts can be divided into the construction and post-construction (operational) phases. Indications are that construction of the proposed reconfiguration (including the introduction of the requisite infrastructure) will be phased over 12 years.

Potential positive socio-economic impacts during construction and/or operations associated with the proposed reconfiguration include the following: -

- Creating new employment opportunities (construction and operations)
- Local economic income (construction and operations)
- Revenue accruing to local authorities (operations)
- Agricultural production and new business opportunities (operations)
- Providing housing and amenities to farmworkers (operations)
- Impact on surrounding property values (operations)

Potential negative socio-economic impacts are as follows: -

- Nuisance factors, such as dust and noise (construction)
- Influx of job seekers (construction)
- Increase in local crime (construction)
- Impact on vehicular traffic (construction and operations)
- Sense of place (operations)

As per NEMA EIA Regulations (2014, as amended – see **Annexure B**), the potential impacts of the Preferred Alternative 1 are assessed and compared with the No-Go Alternative using the impact rating methodology described in **Annexure A**:

- **Preferred Alternative:** 57 Agricultural Farms, 24 Nature Conservation Farms, 110 group housing units in the Farming Village, and Private Open Spaces
- **No-Go Alternative:** No reconfiguration, i.e. the 2021 consolidation and subdivision are retained.

Cumulative impacts refer to other developments and existing activities in the immediate area that could compound any positive or negative impacts associated with the proposed reconfiguration. This usually refers to similar developments whose construction and/or operational phases may overlap with that of the proposed reconfiguration, thus contributing to a cumulative impact on sensitive receptors.

Where applicable, appropriate **mitigation measures** are proposed to reduce the significance of the specific impacts. **Residual impacts** are the significance scores that remain after the implementation of mitigation measures.

8.2 Construction Phase

The negative qualitative impacts during the construction phase mainly involve large construction vehicles on access roads, noise and dust, influx of job seekers, and increased criminal activity in the area. Potential positive impacts include temporary employment and a contribution to local economic development, particularly in the construction, retail, and services sectors. Note that the duration of these impacts is based on a 12-year construction period.

8.2.1 Vehicular traffic due to construction activities

Nature of impact

The movement of large construction vehicles will affect traffic flows and residents along the access routes.

Scope and consequence of impact

The proposed reconfiguration comprises 81 upmarket residential erven and 110 formal housing units for low-income residents, to be retained within the Agri-Village footprint. EDS Structural, Civil, and Transportation Engineers (2026b) carried out a Traffic Impact Assessment for the proposed reconfiguration. The assessment identifies two main access points: one south of the N2 for the 81 farm units, and a service entrance nearer the N2 that will also serve the 110 Agri-Village units (**Figure 29**). Access to the site will be via two public roads: Morrison Road (MR 348), forming the western boundary south of the N2, and OP 6847, which passes through farms north of the N2. Entry to the site will be through Main Road 348 onto existing minor roads. The proposed reconfiguration is estimated to generate an additional 59 peak-hour trips during the morning and afternoon peaks, which is not significant from a traffic engineering perspective.

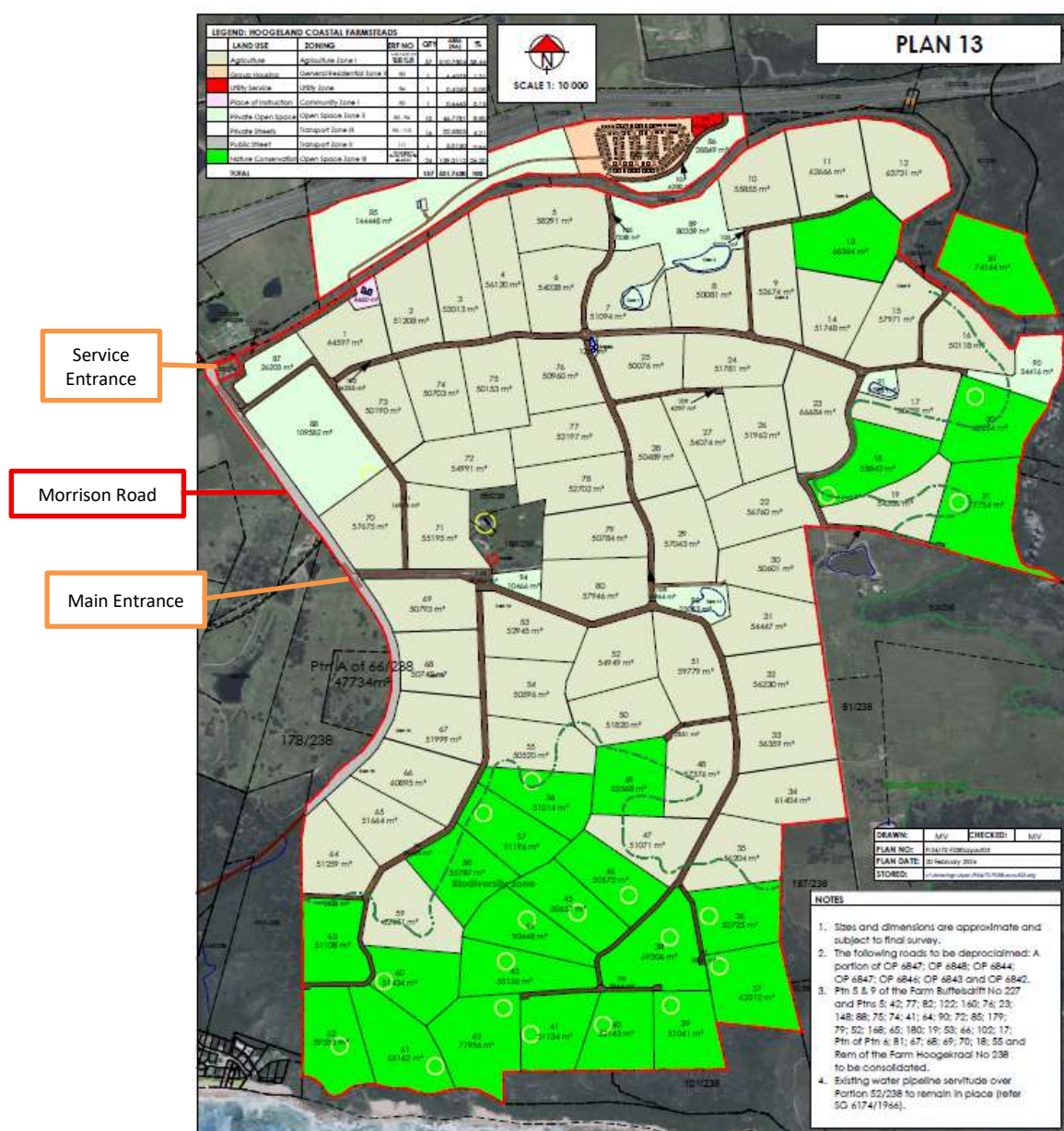


Figure 26: Proposed access roads and entry points for the Hoogeland Farmstead development

Source: EDS Structural, Civil and Transportation Engineers (2026b)



No-Go Alternative

Without the proposed reconfiguration, there will be no traffic impact linked to the site.

Cumulative Impact

Other developments in the immediate area would increase the number of vehicles on the access routes (MR348 and Main Road).

Mitigation measures

The Traffic Impact Assessment recommends that dedicated right- and left-turn lanes be provided at the development accesses on Morrison Road and Main Road, as well as at the service entrance, to reduce congestion at the accesses and improve traffic safety.

Impact Rating

The Transport Impact Assessment did not assess the significance of the impact but recommended implementing mitigation measures to avoid congestion.

8.2.2 Nuisance factors (dust and noise)

Nature of impact

Construction activities generate dust and noise that would affect nearby receptors.

Scope and consequence of impact

During the introduction of bulk services and the construction of top structures, large earth-moving equipment will generate noise and dust. Although these will be confined to the construction site, prevailing winds could carry dust and noise towards nearby properties, thereby affecting residents, their living conditions, and the surrounding environment. The residents most likely to be affected are land users just west of Morrison Road and along the N2 north of the development site (see **Section 2.2**). Significant site preparation will be required for the Farming Village, with dust potentially affecting road users along the N2.

The impact of nuisance factors could be significant in an urban setting where the receptors are close to the development site. However, Hoogeland is in a rural area with significant distances between homesteads, resulting in nuisance factors affecting only a few sensitive receptors.

No-Go Alternative

Without the proposed reconfiguration, there will be no impact linked to the site.

Cumulative Impact

Additional construction activities in the immediate area will compound the nuisance factors if they coincide with or overlap with construction at Hoogeland Farmsteads.

Mitigation measures

Dust and noise emissions during construction should be minimised by implementing a Construction Environmental Management Plan (CEMP) that includes measures and trigger mechanisms to mitigate potential impacts on nearby receptors.

Impact Rating

The impact will be **direct**, with a **low negative** residual significance and a similar cumulative impact.

8.2.3 Influx of job seekers

Nature of impact

An influx of job seekers will lead to competition with residents for employment opportunities.



Scope and consequence of impact

Contractors working on large development projects usually have permanently employed construction workers who move from site to site. These workers are often away from their families for extended periods, depending on the site location. If the latter requires them to reside near the construction site, they may seek out the local community for leisure and social activities. This could lead to an increase in alcohol and drug abuse, or sexual interactions that could lead to an increase in prostitution, unwanted pregnancies and sexually transmitted diseases (STDs), including HIV. All these may impact local families and their social structures, but can also damage the construction workers' family structures at home.

An influx typically involves individuals from outside the Municipal area who flock to the construction site in search of casual employment. While the rise in job seekers may not cause direct social impacts, this movement can still lead to indirect social issues, including harm to community networks, increased crime, and disruption of social services. Since construction is limited to a specific period, non-local workers might be stranded in the area afterwards, leading to increased competition for jobs, housing, and social services.

Given the project's scale and nature, contractors with existing workforces are likely to be engaged. During the building phase, workers with earth-moving and construction skills can be hired, with further opportunities in security, transport, and related fields. The George area has high unemployment, with many low-income communities nearby, especially Pacaltsdorp and Thembaletu, from which job seekers are likely to come. Some farm workers currently residing on the properties may also seek employment.

No-Go Alternative

Without the proposed reconfiguration, there will be no impact on the site, but other construction activities in the area may attract job seekers.

Cumulative Impact

Given the high unemployment in the area, multiple construction projects are likely to draw job seekers from the local communities.

Mitigation measures

Contractors must commit to employing local residents.

Impact Rating

The impact will be **direct**, with a **low negative** residual significance and a similar cumulative impact.

8.2.4 Increase in local crime

Nature of impact

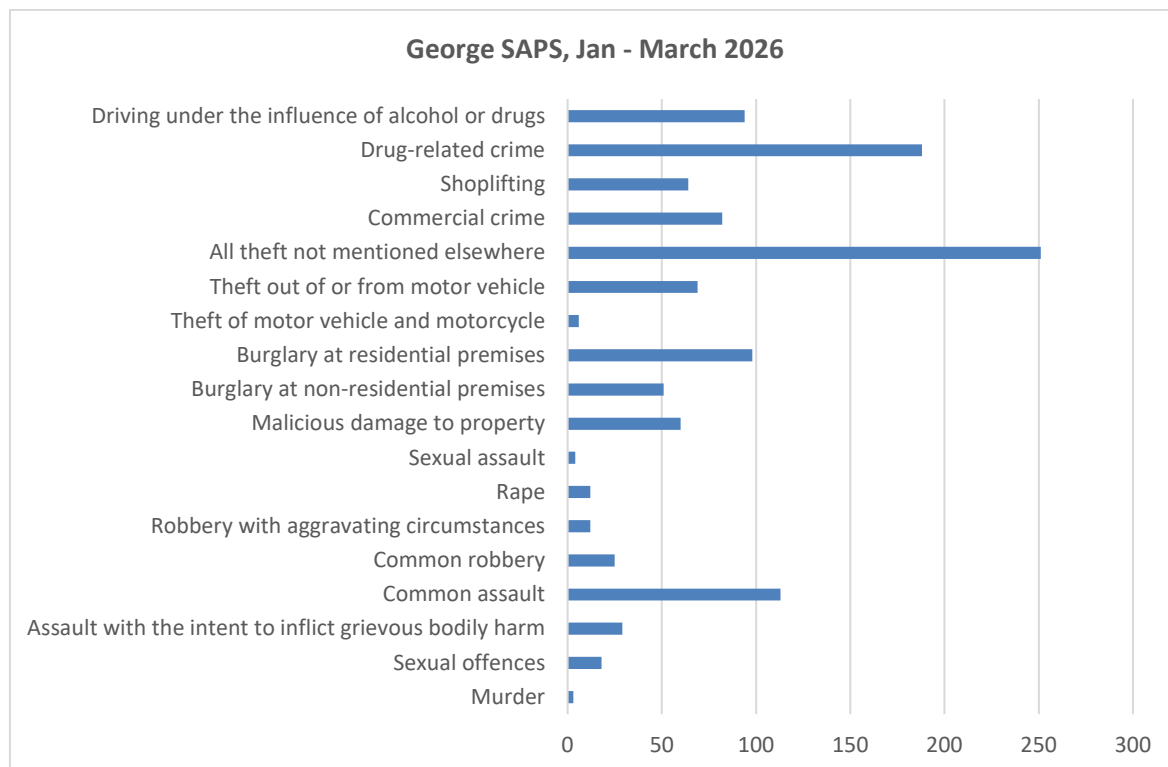
Construction activities and workers may increase criminal activities in the surrounding area.

Scope and consequence of impact

The presence of construction workers and vehicles often increases the risk of criminals gaining unauthorised access to the construction site, which can lead to increased criminal activity in the vicinity. This may involve petty theft on-site, theft of building materials, the sale of sensitive security information, or burglaries and thefts at nearby properties. According to George SAPS, there were 200 contact crime cases from January to March 2026, consisting mainly of 142 cases of Common assault and Assault with intent to inflict grievous bodily harm, and 142 cases of Common robbery and Robbery with aggravating circumstances. There were also 98 burglaries at residential locations and 51 at non-residential sites, alongside 60 cases of Malicious damage and 69 thefts from or out of motor vehicles. Drug-related crimes represented 188 cases, including 94 cases of driving under the influence. Other serious crimes - such as various thefts not detailed elsewhere, Commercial crime and shoplifting - totalled 397 cases in this quarter (SAPS, 2026).

No-Go Alternative

Without the proposed reconfiguration, no increase in criminal activities will be linked to the site, but it will remain sensitive to other activities.



Cumulative Impact

Construction activities tend to attract criminals seeking easy targets. While each new development may raise the risk of crime, effective security measures can confine incidents to the site with minimal broader effects.

Mitigation measures

The total development footprint is too large to fence in, but on-site crime could be mitigated through effective security measures and access controls. Effective collaboration between the Developer and contractors is essential to safeguard the area around the proposed construction site. Implementing on-site security measures—such as perimeter fencing, controlled access points, security guards, and regular patrols—would help minimise potential risks.

Impact Rating

The impact will be **direct**, with a **low negative** residual significance and a similar cumulative impact.

8.2.5 Creating local economic income and employment during construction

Nature of impact

The economies of the Western Cape, Garden Route District and George Municipality will benefit from temporary employment, procurement of goods and services, and spending of workers' wages and salaries.

Scope and consequence of impact

As noted in **Section 7.10**, the economic impact of construction spending is measured using an income-and-output multiplier. This multiplier illustrates the temporary job opportunities created and the influence on the household incomes of workers directly or indirectly engaged in construction. The impacts are classified as direct, indirect, and induced, with induced impacts arising from spending on salaries and wages within the local economy.

The construction of the main structures for the farmworker village, farmsteads, manager residences, and dwellings on conservation parcels, as well as the establishment of small farms, is expected to take around 12 years. Using a conservative estimate, the total capital expenditure in nominal terms over the development cycle until completion



is R4 899,8 million, or an average of R408,3 million per annum. The highest capital spend, R858,2 million, is expected in 2033. Most capital expenditure in the first three years relates to infrastructure.

An estimated R4 899,8 million in nominal capital investment could generate R12 323,9 million in new business sales, referred to as the production (or output) that creates the demand for business activity during construction. This translates to an average of R821,6 million per annum in nominal terms over 15 years. The increase in production output could add R3 898,2 million (net of import leakage) to the **GGP** of the Western Cape, with the George Municipal area a direct and significant beneficiary. This translates to an average of R259,9 million per annum in nominal terms over 15 years. Capital spending on the project over the construction period could sustain about 17 106 (rounded) employment opportunities (direct, indirect, and induced). This translates to sustaining an average of 1 140 jobs per annum over 15 years. Employee spending on salaries and wages associated with the construction elements of the Reconfiguration Proposal could increase economic income by R1 866,1 million over 15 years, translating to R124,4 million per annum on average in nominal terms (escalated values).

Note that employment creation does not necessarily imply **NEW** jobs, but rather sustainable employment for employees of contracted service providers who are not operating at full capacity. If the company doesn't have spare capacity, it would create **NEW** employment. The recruitment process should also promote gender equality by employing women wherever possible.

No-Go Alternative

Without the proposed reconfiguration, local income and jobs will not see the potential boost. Still, other nearby projects will support the local economy regardless of this proposal.

Cumulative Impact

Additional development projects in the area could enhance local economic growth and generate more jobs.

Mitigation measures

No mitigation applies as it represents a positive direct and indirect impact.

Impact Rating

Our assessment suggests that the **direct** and **indirect** impacts will be **medium positive**, also from a cumulative perspective.

8.3 Operational Phase

The operational phase raises concerns about the sense of place, traffic, and surrounding land values. On the positive side, the reconfiguration will generate more employment and income, improve agricultural land use, offer new opportunities for agricultural businesses, and create additional housing and amenities for farmworkers. George Municipality will also gain revenue from property rates and utility charges.

8.3.1 Sense of place

Nature of impact

The proposed reconfiguration will impact the sense of place for surrounding land users.

Scope and consequence of impact

Sense of place typically describes how individuals perceive and relate to locations such as streets, neighbourhoods, cities, or regions. This perception can affect their well-being, interactions, descriptions of the place, and the value they assign to it. A sustainable community functions like a living system where human, natural, and economic components are interconnected and mutually supportive (Roseland, 1998). Community members usually recognise and uphold people's sense of well-being, which encompasses belonging, connection to the place, self-esteem, safety, and harmony with nature.



Jenna Lavin's 2026 **Archaeology Impact Assessment** (AIA) included a Heritage Survey of all structures within the project site. The report noted that the area has experienced extensive cattle grazing and cultivation, now mainly covered in grass. It is predominantly flat, lightly populated, and features small worker "villages" with informal structures and access paths. The survey identified several significant resources, including burial grounds, certain contextual structures, and ruins. The Hoogekraal Farm werf precinct is a crucial heritage site, yet it is not included in the proposed reconfiguration. Overall, the archaeological sensitivity of the development zone is LOW, except for small areas marked as VERY HIGH.

Rüde (2026) indicates that Hoogeland occupies a transitional landscape of cultivated farmland, fynbos hills and open plains, a setting in which value lies not in any single feature but in the continuity of the whole. The development proposal responds to that continuity. Further context is provided by considering the site's environmental, architectural and landscape appropriateness.

Environmental Appropriateness, achieved through environmental restraint, is built into the land-use structure, not appended to it. As indicated previously, the Eco Properties (within the more natural fynbos areas of the site) are limited to a 2 000 m² developable area per five-hectare farm, inclusive of all buildings and hard surfaces, meaning that over 96% of each such farm is retained as natural landscape. Buildings and roads will follow existing contours and drainage patterns to minimise earthworks; wetlands, watercourses, mature trees and fynbos clusters are to be retained and designed around; and riverine, dam and wetland edges must be protected, rehabilitated and planted exclusively with indigenous and preferably endemic species. Rainwater harvesting, greywater reuse, rooftop solar, passive design and locally sourced materials are required where feasible. Topsoil is to be stripped, stored and reinstated; alien species are excluded; threatened species are protected throughout all construction phases.

According to Rüde (2026), **Architectural Appropriateness** refers to a guideline that commits the development to a Contemporary Agricultural Vernacular: simple barn-and-farmhouse forms, modest footprints, low profiles, pitched, mono-pitched or skillion roofs, restrained detailing, and a shared palette of materials and colours across dwellings, outbuildings, and common structures. Outbuildings must follow the primary dwelling in material and proportion, and agricultural infrastructure remains subordinate to it. The result is an architecture that reads as a continuation of the Cape rural building tradition rather than as an insertion into it. Because the palette and massing rules apply equally to private and communal buildings, the estate will register in the wider landscape as a coherent agricultural settlement rather than a collection of individual statements — the same visual logic that makes existing Garden Route farmsteads sit comfortably in their setting.

In addition, Rüde (2026) refers to **Landscape Appropriateness**, noting that to the north the site adjoins an established agricultural landscape and is conceived as a seamless continuation rather than a break. On the Agri Properties, small crops, grazing paddocks and small-scale livestock farming will carry that working-farm character across the boundary and through the estate, so that Hoogeland reads as part of the productive landscape it borders. Within this framework, the wider landscape approach is one of design with nature: rehabilitation, conservation and responsiveness, with indigenous planting selected from a curated estate palette of Cape trees, shrubs, proteas, ericas, buchus and restios. Formal lawns and exotics are excluded from the natural portions of Eco Properties in favour of fynbos and meadow planting. Roads, driveways, trails, and equestrian paths are permeable, narrow, and contour-following, with bioswales and biofilters that slow and clean stormwater before it reaches watercourses. Open space, trails and retained vegetation are structured to maintain habitat connectivity across the property, so that ecological corridors survive the introduction of dwellings rather than being severed by them. Buffer zones between farms and sensitive areas prevent both overcrowding and habitat fragmentation.

No-Go Alternative

The current sense of place will be retained, but other nearby developments would have an independent impact.

Cumulative Impact

Additional construction activities in the immediate area will compound the impact of the Hoogeland Farmsteads on the rural sense of place.

Mitigation measures

The Heritage Impact Assessment concluded that the proposed project will not negatively impact significant archaeological resources, on condition that:



- The Hoogekraal Farm Werf precinct is excluded from the development activities.
- The structures graded IIIC are retained.
- No construction activities should impact the areas of high archaeological sensitivity. An archaeologist must monitor any construction activities within these areas.
- The current informal cemetery will be formalised by the erection of a fence, with access guaranteed throughout the project.
- A thorough survey of the sea-cut caves in the cliffs should be undertaken to determine their scientific value and to inform a Conservation Management Plan to ensure the appropriate management of these resources for the life of the project, should it be deemed necessary.

Impact Rating

Rüde (2026) concludes that Hoogeland proposes a low-intensity, tightly governed form of rural development in which the vast majority of the land remains natural or productive, and ecological function is protected by enforceable limits rather than aspiration. Therefore, the impact will be **direct**, with a **low positive** significance and cumulative impact.

8.3.2 Increased vehicular traffic

Nature of impact

Residents and additional agricultural activities will increase vehicular traffic along the access routes.

Scope and consequence of impact

The proposed plan entails 81 upscale residential plots and 110 formal housing units for low-income residents within the agri-residential village. These low-income households typically have very low vehicle ownership and employment rates. The **Traffic Impact Assessment** (EDS Structural, Civil and Transportation Engineers, 2026) for the proposed reconfiguration identifies two main access points: one south of the N2 for the 81 farm units, and a service entrance near the N2 that will also serve the 110 agri-village units. Access to the area will also be provided by two public roads: Morrison Road (MR 348), forming the western boundary south of the N2, and OP 6847, which passes through the farms north of the N2. Entry to the site will be via Main Road 348, connecting to the existing minor roads.

The Traffic Impact Assessment indicates that the new recreational facilities—such as a polo field, show-jumping arena, horse trails, and communal spaces—are expected to generate only occasional traffic surges, mainly on weekends when residential trip-making is at its lowest. Other proposed uses, including small-scale farming, are primarily for residents' private use and will not increase external traffic. The proposed reconfiguration is expected to generate an additional 59 vehicle trips during morning and afternoon peak hours. This increase is minimal from a traffic engineering standpoint. The analysis shows the intersections can handle this traffic volume comfortably without upgrades, using side-road stop control.

No-Go Alternative

Without the proposed reconfiguration, there will be no direct traffic impact linked to the site.

Cumulative Impact

Other developments in the immediate area would increase vehicle volumes along the access routes.

Mitigation measures

The Traffic Impact Assessment suggests installing dedicated right- and left-turn lanes at the development accesses on Morrison Road and at the service entrance to reduce congestion and enhance traffic safety.

Impact Rating

The Transport Impact Assessment did not score the impact's significance.



8.3.3 Provision of housing and amenities to farmworkers

Nature of impact

A residential village for farmworkers with tenure rights will include 110 units and various amenities.

Scope and consequence of impact

The proposed Hoogeland Farming Village is a group housing project comprising 110 residential units (17 units/ha), available only to beneficiaries with established tenure rights in the application area. The property lies between the N2 National Road and the railway line. The proposal is to create a sustainable village with recreational facilities, communal food gardens and a community hall. The existing Hoogekraal Primary School on Portion 10 of Farm No 238 will be retained and accommodated on (new) Erf 82. Beneficiaries will receive a constructed house with ownership via sectional title. The Farming Village will be developed first, and beneficiaries will be relocated there before the Hoogeland Coastal Farmsteads are developed and occupied.

The proposed Hoogeland Farming Village aims to consolidate informal housing clusters on the Hoogeland properties into a single, serviced, and dignified residential community. This initiative promotes an inclusive rural economy aligned with SPLUMA principles of spatial justice, resilience, and efficiency. It will provide essential infrastructure, including water, sanitation, energy, waste management, and social facilities such as a crèche, community hall, training centre, and school (Marika Vreken, 2026). Relocating ESTA-holders to this formalised village will enable organised skills development, enterprise support, improved access to services, improved livelihoods, secure tenure, and reduced social vulnerability.

No-Go Alternative

Without the proposed reconfiguration, the farm workers will retain tenure on the farm properties but will have no prospect of improving their living conditions.

Cumulative Impact

Housing and amenities provided by other developments in the area may improve the living conditions of other farmworkers.

Mitigation measures

No mitigation applies, as this represents a positive impact.

Impact Rating

The impact would be **direct** and **highly positive** for the 110 beneficiaries, but **low positive** in the bigger picture (including cumulative effects).

8.3.4 Increased agricultural production and new enterprises

Nature of impact

The proposed reconfiguration will contribute to sustainable agricultural production through an outgrower model.

Scope and consequence of impact

The Reconfiguration Proposal for the Hoogeland footprint suggests splitting the 529 ha area into 57 small-scale farms, each at least 5 ha, together with the 24 conservation parcels. This results in 81 subdivided freehold properties. It preserves agricultural activity, allowing owners to develop a farming enterprise on 4,5 ha of each farm.

The Agricultural Viability Analysis (**Section 6**) indicates a trend towards planting more profitable crops, such as avocados and macadamia, to replace cattle grazing and feed production. Although about 40% of the Hoogekraal footprint can support these high-value crops, limited irrigation capacity restricts the viable farming area to 25 ha for avocados or 23 ha for macadamia. Both crops yield negative NPVs and modest IRRs, but perform better on a smaller scale than traditional dryland pastures and livestock options. The analysis indicates that, over 25 years, the net benefits of the Reconfiguration Proposal exceed those of conventional pasture and livestock farming or crop cultivation under current irrigation limits. Given the water restrictions, the proposed reconfiguration is expected to generate greater socio-economic advantages than pasture and livestock.



The Reconfiguration Proposal assumes that avocado or macadamia farming will remain within irrigation water limits, with the remaining land used for livestock pastures. It notes that small farms probably won't generate sufficient profit to justify investment. To address this, proposals suggest forming a co-operative or outgrower group to pool owners' efforts, thereby achieving the economies of scale necessary for a profitable and sustainable farming enterprise. The Homeowners Association could lead this effort, promoting unity and coordination among owners, or a group of owners could take the initiative to develop production and agro-processing opportunities, including a small off-site facility near the Hoogeland.

No-Go Alternative

The status quo will likely cause the gradual cessation of farming activities, which are currently neither productive nor financially sustainable.

Cumulative Impact

Losing several portions of productive agricultural land could negatively affect the area's ability to meet the local Municipality's growing food needs.

Mitigation measures

No mitigation applies, as this represents positive impacts.

Impact Rating

Based on the Agricultural Viability Analysis, the **direct** impact on agricultural production will be **low and positive**, with a similar cumulative impact given the water restrictions.

8.3.5 Impact on surrounding property values

Nature of impact

The proposed reconfiguration may affect the perceived value of properties in the surrounding area.

Scope and consequence of impact

Factors such as supply and demand, interest rates, local economic growth or contraction, population growth, and changes in disposable income-to-debt ratios shape a property's value. Relative property values also depend on supply and demand. As these factors and their benefits change, so do the relative prices reflected in land values. Future land value in an area also depends on spatial planning policies, land availability for various uses, the location's importance, and the perceived desirability of the surrounding area as a good investment with growth potential.

The proposed reconfiguration could increase the perceived agricultural value of surrounding properties, depending on water constraints and other factors that may limit production and, consequently, the feasibility of such an enterprise. The Hoogeland proposal will not directly affect the value of surrounding farms, but it may draw attention to the potential of high-value crops, although this would be limited by soil suitability and water availability. However, Hoogeland is premised on an existing subdivision approval, which further affects future value. It is unlikely that any land use other than agriculture would be permitted on adjacent farms, which could curtail value.

No-Go Alternative

Local property values would adjust and rebalance independently of the proposed project.

Cumulative Impact

Additional nearby developments might worsen negative effects on land users by affecting the sense of place and traffic patterns. Conversely, these developments could boost the perceived value of agricultural properties through heightened interest and increased agricultural activity.

Mitigation measures

A positive impact would not require mitigation measures, but any reduction in the impact on the sense of place and traffic will enhance the perceived value of surrounding properties.



Impact Rating

The residual impact will be **indirect** and **low positive** if a viable farming enterprise can be established. Given that other similar developments are unlikely, the cumulative impact would remain low positive.

8.3.6 Local economic income and employment impact during operations

Nature of impact

The project will sustain existing employment and create new opportunities.

Scope and consequences of impact

As outlined in **Section 7.10**, maintaining agricultural activities and low-impact amenities on the conservation parcels involves continual operational costs throughout the project's lifecycle. The operational impact was evaluated over a 25-year period (2030 to 2054) for dryland farming and livestock, as well as for crops such as avocados and macadamia, using a standard approach that excluded the Reconfiguration Proposal.

The assessment suggests that an operational investment of approximately R1 992,1 million could generate around R5 673,4 million in new business sales, averaging R226,9 million per annum over 25 years in nominal terms. This increase in production could add R2 543,7 million (excluding import leakage) to the Western Cape's GGP, averaging R101,7 million per annum over 25 years. The project could create about 6 462 jobs (direct, indirect, and induced positions) during its operational phase, averaging 258 jobs annually over 25 years. These employment opportunities may include livestock or crop management, landscaping, and garden services. Salaries paid to these employees could boost economic income by R1 080,2 million over 25 years (R43,2 million per year).

No-Go Alternative

Without the proposed development, the local economy will not be supported, and no jobs will be created.

Cumulative Impact

Several new projects could create critical mass or economies of scale for companies producing new goods and services, expanding employment opportunities for residents.

Mitigation measures

No mitigation applies as it represents a positive impact, but local procurement should be prioritised and should promote gender equality, with women employed wherever possible.

Impact Rating

Our assessment indicates a **direct** and **indirect low positive** impact, with a similar cumulative effect.

8.3.7 Revenue from property rates accruing to local authorities

Nature of impact

The George Municipality will receive monetary benefits via property rates.

Scope and consequence of impact

The George Municipality will apply Agricultural property rates to undeveloped areas, including conservation parcels. Once construction begins on dwellings and other structures, residential property rates will be based on the improved value of the 0,5 ha hard-surface footprint. The following assumptions were used to calculate property rates for dwellings and agricultural land.

- Property rate tariffs as per the George Municipality for agriculture (2025/2026). Agricultural property rates are determined based on the following bare land value:
 - R100 000/ha for dryland pasture and livestock
 - R650 000/ha for macadamia farming



- R450 000/ha for avocado farming
- Residential property rates of R1 650 000/ha is applied to the 0,5-ha representing the hard surfaces (including the dwelling(s))
- Property rates are applied per annum and indicated at nominal prices reflecting a 4% annual increase.

The following table illustrates the rates accruing to the George Municipality over 25 years based on the proposed reconfiguration. A rate forecast with an average annual escalation of 4% from the first year is applied. Over the first 25 years of operations, an estimated R154 million could accrue to the George Municipality in nominal terms from the residential components, plus another R29,4 million from the agricultural property rates for the small-scale farms and conservation areas (**Table 40**). In contrast, the property rate income for dryland pasture and livestock (at R100 000/ha) would yield only R0,7 million on 257 ha over 25 years in current terms.

Fiscal and monetary revenue benefits (R'million)	R182,7
Property rates (small-scale farming units and conservation residential dwellings)	R154,0
Property rates (agriculture associated with small-scale farms and conservation)	R29,4
Property rates (agriculture associated with dryland pasture and livestock, avocado or macadamia) (no reconfiguration)	(R0,7)

Note: The negative property rates demonstrate the offset of existing agriculture to the rates applicable to the development proposal

No-Go Alternative

Without the suggested reconfiguration, the George Municipality would not receive the expected monetary and fiscal gains from the farming and conservation units.

Cumulative Impact

Additional development projects in the region could expand George Municipality's revenue base.

Mitigation measures

No mitigation applies as it represents a positive impact.

Impact Rating

The reconfiguration of the Hoogeland development would have a **direct** and **indirect, highly positive** impact on local income compared to conventional farming on the Hoogeland footprint itself. A similar cumulative effect would apply, again relative to conventional farming on the same footprint.



8.4 Summary of impacts & recommendations

8.4.1 Summary of impacts

This report identifies and discusses several potential positive and negative socio-economic consequences, and it is important to determine whether and how the negative impacts could be mitigated. Cumulative impacts usually relate to other developments or activities in the immediate area that could amplify the positive or negative effects of the proposed reconfiguration of the Hoogekraal Farm during construction and operation. In this instance, cumulative impacts are considered only for similar projects in the immediate area that would require subdivision of existing agricultural land. Rezoning agricultural land for residential or mixed-use purposes in the surrounding area is unlikely to be approved, but may be considered for hospitality and tourism-related uses in isolated cases.

The following table summarises the socio-economic impacts associated with the proposed reconfiguration and their corresponding significance after implementing mitigation measures (i.e., the residual impact). Note, the table shows only impacts not rated by other specialists.

Nature of the Impact	Rating after mitigation (Residual impact)	Cumulative
Construction		
Traffic flows along access roads	Refer to Transport Impact Assessment	
Nuisance factors (dust and noise)	Low (-)	Low (-)
Influx of job-seekers	Low (-)	Low (-)
Increase in local crime	Low (-)	Low (-)
Economic income and employment opportunities	Medium (+)	Medium (+)
Operations		
Increased traffic flows along access roads	Refer to Transport Impact Assessment	
Sense of place	Low (+)	Low (+)
Provision of housing and amenities to farmworkers	Low (+)	Low (+)
Agricultural production and new enterprises	Low (+)	Low (+)
Surrounding property values	Low (+)	Low (+)
Local income and employment opportunities	Low (+)	Low (+)
Revenue for public authorities (relative to conventional farming)	High (+)	High (+)

Potential positive impacts – Preferred Alternative

- **Economic income & employment:** An estimated initial capital investment of R4 899,8 million could generate R12 323,9 million in new business sales, averaging R821,6 million annually in nominal terms over 15 years. This increased production output could contribute R3 898,2 million (net of import leakage) to the Western Cape's GGP, averaging R259,9 million per year in nominal terms over 15 years. It could sustain approximately 17 106 direct, indirect, and induced jobs, or about 1 140 jobs annually. Additionally, employee salaries and wages paid during the construction phase of the Reconfiguration Proposal could boost economic income by R1 866,1 million, averaging R124,4 million per year (escalated values) over 15 years.

An operational investment of approximately R1 992,1 million could generate around R5 673,4 million in new business sales, averaging R226,9 million annually over 25 years in nominal terms. This increase in production could add R2 543,7 million (excluding import leakage) to the Western Cape's GGP, averaging R101,7 million per year over 25 years. The project could create about 6 462 jobs (direct, indirect, and induced positions) during its operational phase, averaging 258 jobs annually over 25 years. These employment opportunities may include livestock or crop management, landscaping and garden services. Salaries paid to these employees could boost economic income by R1 080,2 million over 25 years (R43,2 million per year).



- **Provision of housing and amenities for farmworkers:** The proposed Hoogeland Farming Village is a group housing project comprising 110 residential units (17 units/ha), available only to beneficiaries with established tenure rights in the application area. The village will have recreational facilities, communal food gardens and a community hall, and the existing Hoogekraal Primary School will be retained.
- **Agricultural production and new enterprises:** Although about 40% of the Hoogekraal footprint can support alternative crops such as avocados and macadamias, limited irrigation capacity restricts the viable farming area to 25 ha for avocados or 23 ha for macadamias. Both crops yield negative NPVs and modest IRRs, but perform better on a smaller scale than traditional dryland pastures and livestock options.
- **Surrounding property values:** The proposed reconfiguration properties could increase the perceived value of nearby properties as they represent a general upgrade of the area, but the rezoning of other agricultural land in the area for similar purposes is unlikely. It would also draw attention to the potential of high-value crops, although this would be limited by soil suitability and water availability. However, it should be noted that Hoogeland is premised on an existing subdivision approval, which further impacts future value. It is not anticipated that any land use other than agriculture would be permitted on adjacent farms, which could curtail value.
- **Revenue accruing to the local authorities:** Over the first 25 years of operations, an estimated R91,1 million could accrue to the George Municipality in nominal terms from the residential components, plus another R29,4 million from the agricultural property rates for the small-scale farms and conservation areas. In contrast, the property rate income for dryland pasture and livestock would yield only R0,7 million on 257 ha over 25 years in current terms.
- **Sense of place (operations):** The proposed reconfiguration represents a low-intensity, tightly governed form of rural development where the majority of the land remains natural or productive, and the ecological function is protected.

Potential negative impacts – Preferred Alternative

- **Dust and noise (construction):** Site preparation and the introduction of services will create dust and noise that would affect nearby receptors. This impact could be significant in an urban setting where the receptors are close to the development site. However, Hoogeland is in a rural area with significant distances between homesteads, resulting in nuisance factors affecting only a few sensitive receptors.
- **The influx of job seekers (construction):** This typically relates to individuals from outside the Municipal area who flock to the construction site in search of casual employment. Such individuals would compete with residents for employment, housing, and other social services and could affect the social fabric of local communities. However, given the location of the Hoogeland site and the relatively high unemployment in George, job seekers will mainly originate from nearby communities.
- **Increase in crime levels (construction):** On-site crime could include on-site petty theft, theft of building materials, the sale of security information, or burglary and theft at nearby properties. The total development footprint is too large to fence in, but on-site crime could be mitigated through effective security measures and access controls.

8.4.2 Mitigation measures

Potential negative impacts can be mitigated by adopting the measures recommended by various specialists, which the Developer should consider and implement. Monitoring and evaluating socio-economic impacts, along with ongoing assessment of the outcomes, would provide further insights into the social and economic fabric and the effects on surrounding land users. The following mitigation measures related to the socio-economic context are proposed and should be incorporated into an Implementation Plan as part of the Construction Environmental Management Plan (CEMP) and/or the Operational Environmental Management Plan (OEMP).



Pre-construction & Construction (CEMP)	
<ul style="list-style-type: none">- Establish a communication protocol to inform residents and surrounding landowners of activities, timelines and intended impacts (pre-construction and construction) and utilise signage to ensure effective management of traffic across the farming footprint.- The developer of the farm worker village should use local labour from the George area as a mechanism to support the local economy.- Owners who engage in low-level commercial or lifestyle farming activities should consider and be encouraged to use the farm workers who are resettled from part of the Hoogkraal Farm to the new farmworker village.	
Construction phase	
Nuisance factors (dust and noise)	Implement recommendations from relevant specialists to mitigate negative impacts related to nuisance factors.
Influx of job seekers	Contractors should hire George (local) residents whenever possible (construction) and manage any potential influx of job-seekers, and in this way prevent loitering across the expanse of the farming footprint.
Increase in local crime	Owners and contractors should agree on mechanisms to secure construction sites to prevent theft, given the expense of the small-scale farming units and the likely spread of construction activity over a wide area.
Operational phase	
Sense of place	Implement recommendations from relevant specialists to mitigate negative impacts related to visual, traffic, and nuisance factors on the sense of place.

8.4.3 Impact statement

Several socio-economic impacts of the proposed reconfiguration were identified. The positive impacts include providing housing and amenities for 110 farmworkers with tenure rights, increasing agricultural production of high-value crops such as avocados and macadamias (pending water availability). The project would benefit the George Municipality by maintaining employment among existing contractors and triggering successive rounds of spending, thereby generating income for the local economy. An estimated R3,3 billion in capital investment could contribute R2,6 billion (net of import leakage) to the GGP of the Western Cape during construction, with the George economy being a significant beneficiary. The project could sustain approximately 11 430 direct, indirect, and induced employment opportunities.

An estimated R2 billion in operational income could generate R2,5 billion (net of import leakage) in nominal terms over 25 years for the GGP of the Western Cape economy. It could also create 6 462 direct, indirect, and induced employment opportunities over 25 years, with salaries that could boost the economic income by R1 080,2 million over 25 years, or roughly R43,2 million per year.

Potential (minor) negative impacts include increased traffic, loss of sense of place, nuisance factors, and an influx of job seekers during construction. If the general farming footprint is well managed and the recommended mitigation measures are implemented, the significance of these impacts would be low to moderate.

Our assessment indicates that the socio-economic benefits of the proposed Reconfiguration outweigh any potential socio-economic drawbacks as mentioned above. As a result, no fatal flaws from a socio-economic perspective have been identified or are expected for the proposed reconfiguration of the Hoogeland Farmstead development.



8.5 Social investment and monitoring initiatives

8.5.1 Social investment and community engagement

Social investment initiatives have become a standard component of development proposals submitted to relevant government departments at the local, provincial, and national levels. Developers are required and expected to specify how the reconfiguration project will contribute to the welfare of surrounding communities through social investment initiatives.

Communities' development priorities need to align with project developers' social investment goals. Multi-Purpose Business Solutions has developed a framework to guide developers in identifying initiatives that could be part of a social investment programme. **Figure 30** shows a matrix with four quadrants based on the type of intended investment and the Developer's "capital" contribution that can be considered for the social investment. The text highlighted in bold reflects the Developer's commitment to providing housing for farm workers and to adding a sports field within the community precinct.

	Abstract capital	Physical capital
Active Investment	<ul style="list-style-type: none">• Grants• Bursaries• In-house training• Education• Development of small, medium and micro businesses• Youth training initiatives• Environmental initiatives (nursery and training initiatives)• Enterprise development opportunities	<ul style="list-style-type: none">• Upgrading of community health facilities (e.g. clinics)• New, upgrading and maintenance of sports fields• Construction of new skills development/training facilities• Provision of housing• Provision or upgrading of infrastructure (with advantage for the community)• Development or conversion of existing buildings to multi-purpose centres• Community gardening project and farming projects
Passive Investment	<ul style="list-style-type: none">• Establishment of community trust funds for the environment and development• Provision of guarantees• Advancing preferential terms	<ul style="list-style-type: none">• Build a facility and transfer ownership to a community trust for application to the community• Maintenance of community facility

Figure 27: An illustrative matrix of social investment options for developers.

Source: Multi-purpose Business Solutions©

Notes:

Active and passive investments of abstract capital involve committing resources such as time and funds to various initiatives. Active investments include direct contributions to programs like bursaries and in-house training. Meanwhile, passive investments involve directing funds into a community trust or similar entity that disburses them to third-party community projects.

Active and passive investments in physical capital involve different approaches. Active participation entails directly investing in community needs by creating or upgrading facilities such as health care centres, schools, and recreational and sports amenities. In contrast, passive investment involves establishing a community facility and then handing it over to a trust or similar entity, whose sole role is to manage and maintain it for the community.

The term "social investment" has a broad meaning here. It distinguishes between (1) physical and abstract capital, which refers to actual funds invested in assets versus "in-kind" investments in people, and (2) active and passive investments, indicating the level of the Developer's direct involvement in the community or through third parties, such as entities or other vehicles. Developers can select any single initiative or combination of the social investment initiatives shown in **Figure 30**. To maximise impact, clearly specify the type and scope of the social investment, as well as whether a passive or active approach will be used.



8.5.2 Monitoring framework

A crucial part of assessing a project's success from a socio-economic perspective is continuously observing, reviewing, and evaluating processes to ensure they fulfil socio-economic commitments. Regular monitoring and evaluation are vital to achieving milestones and meeting the project's socio-economic objectives. The following activities are designed to maintain consistent and effective monitoring practices.

1. Regular field visits to the project and stakeholders benefiting from the project
2. A review after the first six months of implementation to assess the overall progress and achievement of the objectives and milestones related to the specified targets of employment, skills development, small business development and capacity building.

To monitor performance in relation to the fulfilment of socio-economic development obligations, the contractor must record and report on progress against the agreed socio-economic commitments. Typical reporting details should include:

- Actual total expenditure on Total Procurement;
- Actual total expenditure on Procurement of Materials;
- Actual total expenditure on Sub-contracting;
- Actual total employment categorised according to standard Occupational Categories; and
- Actual total payroll.

The successful implementation and development of the proposed project will ultimately be evaluated based on its contributions during construction and operations to social development and the economic goals of employment creation, skills development and training, small business development, and capacity building in the local George area. The following Key Performance Areas (KPA's) are outcomes derived from the scope of social engagement activities.

- Procurement from, or sub-contracting to, local enterprises;
- Procurement from, or sub-contracting to enterprises from outside the local area;
- Procurement of local materials/resources;
- Procurement of materials from outside the Municipality;
- Recruitment process that promotes gender equality



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ANNEXURE A: CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS

The following methodology has been applied to the prediction and assessment of impacts. Potential impacts have been rated in terms of the direct, indirect, and cumulative nature of the impact:

- **Direct** impacts – are impacts that are caused directly by the activity and generally occur at the same time and the place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable;
- **Indirect** impacts – of an activity are indirect or induced changes that may occur because of the activity. These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place because of the activity;
- **Cumulative** impacts result from the incremental impact of the proposed activity on a common resource when added to the impacts of past, present, or reasonably foreseeable future activities. Cumulative impacts can occur from the collective impacts of individual minor actions over a period and can include both direct and indirect impacts.

The significance of each potential impact, with and without the implementation of the proposed mitigation measures, will be assessed based on the following variables (evaluation components):

- **Spatial extent** – The size of the area that will be affected by the impact;
- **Intensity (or Magnitude)** – The anticipated severity of the impact;
- **Duration** – The timeframe during which the impact will be experienced;
- **Probability** – The probability of the impact occurring;
- **Reversibility** – The “reversibility” of the environmental impacts of the proposed development after project cessation or decommissioning; and
- **Irreplaceability** – The “irreplaceability” of natural characteristics in the area that may be impacted by the proposed development.

Using the criteria above, the impacts will further be assessed using quantifiable values as described below:

Criteria	Description	Quantitative Rating
Duration	Temporary (less than a year)	1
	Short term (1 to 6 years)	2
	Medium term (6 to 15 years)	3
	Long term (the impact will cease after the operational life of the activity)	4
	Permanent (mitigation will not occur in such a way or in such a time span than the impact can be considered transient)	5
Spatial extent	Site specific	1
	Local (less than 2 km from the site);	2
	Regional (within 30 km of the site)	3
	National (beyond Provincial boundaries and within National boundaries)	4
	International / Transboundary (Beyond National boundaries)	5
Intensity Applicable to Negative Impacts (at indicated spatial extent)	None (Biophysical and/or social functions and/or processes will remain unaltered)	0
	Very Low (Biophysical and/or social functions and/or processes might be negligibly altered)	2
	Low (Biophysical and/or social functions and/or processes might be slightly altered)	4



Criteria	Description	Quantitative Rating
	Medium (Biophysical and/or social functions and/or processes might be notably altered)	6
	High (Biophysical and/or social functions and/or processes might be considerably altered)	8
	Very High (Biophysical and/or social functions and/or processes might be severely altered)	10
Intensity Applicable to Positive Impacts (at indicated spatial extent)	None (Biophysical and/or social functions and/or processes will remain unaltered)	0
	Very Low (Biophysical and/or social functions and/or processes might be negligibly enhanced)	2
	Low (Biophysical and/or social functions and/or processes might be slightly enhanced)	4
	Medium (Biophysical and/or social functions and/or processes might be notably enhanced)	6
	High (Biophysical and/or social functions and/or processes might be considerably enhanced)	8
	Very High (Biophysical and/or social functions and/or processes might be substantially enhanced)	10
Probability	Improbable (5% to no chance of occurring)	1
	Probable (5% - 25% chance of occurring)	2
	Medium Probability (25% - 75% chance of occurring)	3
	Highly probable (75% - 95% chance of occurring)	4
	Definite (greater than 95% chance of occurring)	5
Reversibility	No impact	0
	Impact will be reversible	1
	High potential that impact might be reversed	2
	Moderate potential that impact might be reversed	3
	Low potential that impact might be reversed	4
	Impact cannot be reversed	5
Irreplaceability	None	0
	Very low potential for loss of irreplaceable resources	1
	Low potential for loss of irreplaceable resources	2
	Moderate potential for loss of irreplaceable resources	3
	High potential for loss of irreplaceable resources.	4
	Definite loss of irreplaceable resources	5
CUMULATIVE impact	High: The activity is one of several similar pasts, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.	
	Medium: The activity is one of a few similar pasts, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socioeconomic resources of local, regional or national concern.	
	Low: The activity is localised and might have a negligible cumulative impact.	
	None: No cumulative impact on the environment.	



Once the evaluation components have been ranked for each impact, the significance of the potential impact is assessed (or calculated) using the following formula:

$$\text{SP (significance points)} = (\text{intensity} + \text{duration} + \text{spatial extent} + \text{irreplaceable} + \text{reversibility}) \times$$

The maximum value is 150 SP (significance points). The unmitigated and mitigated scenarios for each environmental impact should be rated as per the table below :

Significance Points	Environmental Significance	Description
125 – 150	Very high (VH)	An impact of high or very-high significance which could influence a decision about whether to proceed with the proposed project, regardless of available mitigation options.
100 – 124	High (H)	Cumulative Impacts: The activity is one of several similar pasts, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional, or national concern.
75 – 99	Moderate-high (MH)	If left unmanaged, an impact of moderate-high significance could influence a decision about whether to proceed with the proposed project. Mitigation options should be re-evaluated.
40 – 74	Moderate (M)	If left unmanaged, an impact of moderate significance could influence a decision about whether to proceed with the proposed project. Cumulative Impacts: The activity is one of a few similar pasts, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional, or national concern.
<40	Low (L)	An impact of low significance is likely to contribute to positive decisions about whether to proceed with the proposed project. It will have little real effect and is unlikely to influence project design or alternative motivation. Cumulative Impacts: The activity is localised and might have a negligible cumulative impact.
+	Positive impact (+)	A positive impact is likely to result in a positive consequence/ effect and is likely to contribute to positive decisions about whether to proceed with the proposed project.



ANNEXURE B: APPENDIX 6 CHECKLIST

Compliance with Appendix 6 of the National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations, 2014

Requirements of Appendix 6 of the 2014 EIA Regulations	Included in the report in:
(1) A specialist report prepared in terms of these Regulations must contain-(a) details of- (i) the specialist who prepared the report; and (ii) the expertise of that specialist to compile a specialist report including a <i>curriculum vitae</i> ;	Section 1.1, Annexure C
(b) a declaration that the specialist is independent in a form as may be specified by the competent authority;	Annexure C
(c) an indication of the scope of, and the purpose for which the report was prepared;	Section 1
(cA) an indication of the quality and age of base data used for the specialist report;	Section 1.5
(cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	Section 2.1
(d) the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	
(e) a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Section 1.3
(f) details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	Section 2
(g) an identification of any areas to be avoided, including buffers;	Not applicable
(h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Section 2
(i) a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 1.4 & 1.5
(j) a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	Section 8
(k) any mitigation measures for inclusion in the EMPr;	Section 8.4
(l) any conditions for inclusion in the environmental authorisation;	Section 8.4
(m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;	Section 8.5
n) a reasoned opinion- (i) whether the proposed activity or portions thereof should be authorised; and (iA) regarding the acceptability of the proposed activity or activities; and (ii) if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	Section 8.4.3
(o) a description of any consultation process that was undertaken during the course of preparing the specialist report;	Section 1.3
(p) a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	Responses to comments will be provided as part of the EIA process
(q) any other information requested by the competent authority.	Not applicable
(2) Where a government notice gazetted by the Minister provides for any proposal or minimum information requirement to be applied to a specialist reports, the requirements as indicated in such notice will apply.	Report prepared in accordance with the Economic and Social Specialist input Guidelines issued by the Department of Environmental Affairs and Development Planning.



ANNEXURE C: DECLARATION OF INDEPENDENCE



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, 0002 Tel: +27 12 399 9000, Fax: +27 86 625 1042

SPECIALIST DECLARATION FORM

Specialist Declaration form for assessments undertaken for application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

REPORT TITLE

Socio-Economic Impact Assessment for the proposed Hoogeland Coastal Farmsteads, George

Kindly note the following:

1. This form must always be used for assessment that are in support of applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting, where this Department is the Competent Authority.
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.dffe.gov.za/documents/forms>.
3. An electronic copy of the signed declaration form must be appended to all Draft and Final Reports submitted to the department for consideration.
4. The specialist must be aware of and comply with 'the Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the act, when applying for environmental authorisation - GN 320/2020', where applicable.

1. SPECIALIST INFORMATION

Title of Specialist Assessment	Socio-Economic Baseline Report
Specialist Company Name	Multi-Purpose Business Solutions CC
Specialist Name	Dr Jonathan Zorah Bloom
Specialist Identity Number	6706265061081
Specialist Qualifications:	BCom, HonsBCom, MCom, PhD
Professional affiliation/registration:	Not applicable
Physical address:	1479 Milano Place, Val de Vie Estate, Paarl
Postal address:	1479 Val de Vie Estate, Paarl, 7646
Telephone	021-8800774
Cell phone	083 299 8523
E-mail	jzbloom@mweb.co.za



2. DECLARATION BY THE SPECIALIST

I, **Jonathan Zorah Bloom**, declare that –

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. “the Protocols”) and in Government Notice No. 1150 of 30 October 2020.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing –
 - any decision to be taken with respect to the application by the competent authority; and;
 - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the NEMA Act.

Signature of the Specialist

Multi-Purpose Business Solutions cc

Name of Company

Date



ANNEXURE D: ABBREVIATED CURRICULUM VITAE OF SPECIALIST

DR. JONATHAN ZORAH BLOOM

ID NUMBER: 670626 5061 081
CURRENT STATUS: Managing Member, Multi-Purpose Business Solutions cc
NATIONALITY: South African Citizen
DATE OF BIRTH: 26 June 1967
LINGUISTIC ABILITIES: Proficient in English and Afrikaans
ADDRESS (Office): 1479 Milano Place, Val de Vie Estate, Paarl, 7646
Telephone: +27-21-880 0774
Mobile: +27-83-299 8523
E-mail: jbloom@mpbs.co.za

EDUCATION AND QUALIFICATIONS

1985: Matriculation at Paarl Boys' High School, Paarl
1989: BComm, Stellenbosch University
1990: HonsBComm (*cum laude*), Stellenbosch University
1992: MComm (*cum laude*), Stellenbosch University
2001: PhD (Corporate Finance), Stellenbosch University

EMPLOYMENT HISTORY

1995 to present: Managing Member of Multi-Purpose Business Solutions, a niche business advisory and economic development consulting firm with a specific focus on the public and government sector.

1 January 2008 to 31 July 2013: Part-time Professor of Corporate Finance, specialising in Real Estate Investment and Financing, Stellenbosch University.

2003 to April 2019: Director of Blue Cube Systems (Pty) Ltd and Blue Cube Intellectual Property Company (Pty) Ltd, private sector companies in the ICT industry.

1 July 2001 to 31 December 2007: Professor of Corporate Financial Management, specialising in Real Estate Investment and Financing, Stellenbosch University, with a special interest in business development.

1 July 2000 to 30 June 2001: Executive Manager of Chartered Alliance (Pty) Ltd, with assigned responsibility for the Business Services Unit within the Lateral Corporate Finance division of Chartered Alliance.

1 July 1999 to 30 June 2000: Executive Director of Crusader Systems (Pty) Ltd, charged with establishing a presence for the Business Solutions Group in the financial services industry.

1 January 1991 to 30 June 1999: Lecturer in the Department of Business Management, Stellenbosch University.

RESEARCH AWARDS

- Y-rating from the National Research Foundation (NRF) (2003).
- Rector's award for Excellence in Research (2003), Stellenbosch University.



BUSINESS AND ADVISORY EXPERTISE

- Public transport (IPTN) business development and implementation
- Project Management
- Public-Private-Partnership facilitation and procurement
- Commercialisation Initiatives
- Real Estate Development Services
- Financial Appraisals and Feasibility Studies
- Social and Economic Impact Assessments
- Customer Surveys
- Local Economic Development Planning with project development focus

SELECTION OF PROJECT INVOLVEMENTS RELATED TO SOCIO-ECONOMIC IMPACT ANALYSES

- Socio-Economic Impact Assessment for the proposed Rickety Bridge Basse Provence Project, Franschhoek, for Rickety Bridge Properties.
- Socio-Economic Impact Assessment for the proposed development on Erven 10 & 28, Wellington, for Guillaume Nel Environmental Consultants
- Socio-Economic Impact Assessment for the proposed St Peters Roche development, Erf 8709, Paarl, for Guillaume Nel Environmental Consultants
- Socio-Economic Impact Assessment for the proposed extension of airspace for the Coastal Park Landfill Site, Cape Town, for Resource Management Services.
- Socio-Economic Impact Assessment for the proposed Vredenheim Design District Development, Stellenbosch, for Rouxcor.
- Draft Socio-Economic Impact Assessment for the proposed Brandwacht-Aan-Berg Residential Development, Stellenbosch, for Guillaume Nel Environmental Consultants.
- Socio-Economic Impact Assessment for the proposed Mixed-use Development on Erf 7379, Pacaltsdorp, George, for Tshani Consulting CC.
- Socio-Economic Baseline Report for the proposed 150 MW LPG-Fueled Power Generating Facility, Saldanha Bay, for Legacy Environmental Management Consulting.
- Socio-Economic Baseline Report for the proposed 100 MW LPG-Fueled Power Generating Facility, Saldanha Bay, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed 1000 MW Liquefied Natural Gas (LNG) to Power Plant; LNG Storage and Regassification Facility, Overhead Electricity Transmission Line, and Associated Infrastructure across various Farm Portions, Saldanha, Western Cape, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed Sterrekus Solar Energy Facility & Overhead Power Lines, Blaauwberg, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed Mixed Township Development on Portion 1, 8 and 21 of Grootfontein Farm No. 394IR in the City of Tshwane, for GKM Environmental.
- Socio-Economic Impact Assessment for the proposed Carletonville Solar Photovoltaic Plant on Farm 105 Twyfelvlakte, Merafong City, Gauteng, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Carpe Diem South Solar Photovoltaic Plant on Farm Doornfontein 118/27, Merafong City, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Carpe Diem North Solar Photovoltaic Plant on Farm Varkenslaagte 119/5, Merafong City, for Legacy Environmental Management Consulting.



- Socio-Economic Impact Assessment for the proposed 50 MW Eland Solar PV Plant and associated Overhead Line, eMakhazeni Municipality, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed Klipheuwel Organic Waste Beneficiation and Biogas Facility on Farm Corona RE/480, Paarl, for Resource Management Services.
- Socio-Economic Impact Assessment for the proposed Ebenezer Multi-Purpose Centre and Sports Fields, on a Portion of Farm 727/22, Warburgh Road, Joostenbergvlakte, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Cape Winelands Airport, Fisantekraal, for Capital Expenditure Projects (Pty) Ltd.
- Socio-economic Impact Assessment for the proposed Bellpark Mixed-use development, Bellville, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Gydo Renewable Energy Project, Witzenberg Municipality, for SPV Renfields.
- Economic Scoping Assessment for the proposed Wesco Waste Management Facility (WMF) on the Farm Brakkefontein 32, Cape Town, for SLR Consulting (South Africa) (Pty) Ltd.
- Socio-economic Impact Assessment for the proposed Western Cape Wind Energy Facility, located in the Overberg REDZ, Western Cape Province, for Terramanzi Group.
- Socio-Economic Impact Assessment for the Klipfontein Solar Farm in the West Coast District for Resource Management Services.
- Socio-Economic Impact Assessment for the Stellenbosch Bridge development in Klipmuts, Stellenbosch, for Stellenbosch Bridge Properties (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed Lucullus Gardens Development, Joostenbergvlakte for Urban Land Joostenbergvlak (Pty) Ltd.
- Socio-economic Impact Statement for the additional housing on the Uitgezocht development in Paarl. Terramanzi Group commissioned the project.
- Benefit-Cost Value Assessment and socio-economic implications associated with the Picardi Residential Development, Paarl, for Arun Projects (Pty) Ltd.
- Socio-Economic Impact Assessment for the Darwin Road housing development, Joostenbergvlakte, for Lukhozi Consulting Engineers.
- Socio-Economic Impact Assessment for the Longlands Manor development in Vloottenburg, Stellenbosch for Legacy Environmental Consulting.
- Socio-Economic Impact Assessment for the proposed expansion of the Afro Fishing facility in the Port of Mossel Bay for Afro Fishing (Pty) Ltd.
- Financial viability, cost-benefit and market analysis for a proposed Mediclinic in the George Area. The assignment adopted a strategic approach to packaging a project that had transport-related issues, location considerations and required spatial alignment (2018-2019).
- Economic impact assessment and financial modelling for the development of Waterfront in the Port of Mossel Bay for Transnet National Ports Authority (TNPA)
- Socio-Economic Impact Assessment for Substantive Amendment Application for the Levendal Development in Southern Paarl for Val de Vie Investments (Pty) Ltd.
- Socio-Economic Impact Assessment for the River Farm development in Paarl for Val de Vie Developments (Pty) Ltd.
- Socio-Economic Impact Statement for the proposed Paarl Valleij Estate in Northern Paarl for Paarl Valleij Developments (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed Gourits Abalone Farm, in association with PHS Consulting.
- Socio-economic Impact Assessment for the proposed Vloottenburg Village development on Vredenheim Farm, Stellenbosch, in association with Withers Environmental Consultants.



- Economic and financial analysis, strategy formulation input for the preparation of an Urban Development Strategy for Stellenbosch Municipal area. The assignment entailed the development of a value surplus or deficit model to assess the impact of development decisions on the socio-economic fabric of the Stellenbosch economy, communities and the Municipality from an infrastructure and operational income and expense perspective. Rode and Associates commissioned the assignment.
- The development and application of a value assessment model for the Klapmuts Special Development Area (SDA) (Stellenbosch Municipality) to assess the investment, economic and funds flow impact for a development scenario. Assignment also included a property valuation analysis and the preparation of a community investment structure supported by a SPV. Beal Africa commissioned the assignment.
- Financial Economic analysis and preparation of an Investment Decision-making Platform as an input for the George Settlement Restructuring Strategy. RoyalHaskoning DHV commissioned the assignment.
- Socio-economic impact assessment for the development of a proposed Tungsten Mining Project in Piketberg in terms of the NEMA regulations and Mineral Petroleum and Resources Act.
- Socio-Economic Impact Assessment for the Mamre Wind Energy Facility in the City of Cape Town Metropolitan Area for Mulilo Mamre Wind Energy (Pty) Ltd.
- Social and Labour Plan for the application of a Mining Right for a proposed Tungsten Project in Piketberg in terms of the Mineral Petroleum and Resources Act.
- Economic impact assessment of the construction phase for the redevelopment of the Somerset Precinct in the Cape Town area for Department of Public Works, Western Cape in association with Rode and Associates.
- Socio-economic impact assessment for the development of two mariculture sites off the coast of the Eastern Cape for the Department of Environmental Affairs and Development Planning in association with Cape Environmental Practitioners, George.
- Economic Impact Assessment and Social Impact Assessment for the Parklands development in Saldanha Bay on the West Coast for Parklands Township Developers (Pty) Ltd.
- Socio-Economic Impact Assessment for development on a portion of the farm Constantia Uitsig and expansion of the tourism and hospitality facilities on the Farm.
- Socio-Economic Impact Assessment for the development of a residential estate in Melkbosstrand, Cape Town, for Nuplan Africa.
- Economic Impact Assessment and Social Impact Assessment with a social development focus for the Bella Riva development in the Durbanville region of the Cape Town Metropolitan Area of the Western Cape.
- Socio-Economic Impact Assessment for the development of two Wind Energy Facilities (Goereesoe and Kluitjieskraal) near Swellendam for Inca Energy (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed development of the Clover Wind and Solar Energy facility near Darling, Swartland Municipal area.
- Socio-Economic Impact Assessment for the proposed development of the Storm Photovoltaic Plant, Saldanha Bay, for Midnight Storm Investments 184 (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed development of Organic Recycling Processing Facility on Portion 2 of the Farm Olyphantsfontein No. 935, Malmesbury, for Soil and More Reliance.
- Socio-Economic Impact Assessment for the proposed development of the Dysselsdorp RE-Power PV Plant, near Oudtshoorn, Western Cape, for Dysselsdorp RE-Power (Pty) Ltd.
- Socio-Economic Baseline Assessment for the proposed Schaap Kraal Philippi Horticultural Area (PHA), Cape Town, for MSP Developments (Pty) Ltd.
- Social Impact Assessment with a social development focus for the Bosbokkamp Residential development in Stilbaai, Western Cape for Asla Devco (Pty) Ltd.
- Economic Impact Assessment and Social Impact Assessment for an upmarket residential estate in Paarl for Rhebokskloof Properties (Pty) Ltd.
- Socio-Economic Assessment for the proposed development of a sports facility for the Paarl Boys' High School.



The School commissioned the assignment.

ANNEXURE X:

*Draft Environmental Basic Assessment Report
(BAR)*



HilLand Environmental

Environmental Assessment Practitioners

PRE-APPLICATION DRAFT
BASIC ASSESSMENT REPORT (BAR)
FOR
THE PROPOSED HOOGELAND COASTAL FARMSTEADS



Compiled by	HilLand Environmental
HilLand reference	GEO26/1369/05
Date	2 September 2026
DEADP pre-application reference	TBC

BASIC ASSESSMENT REPORT

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

APRIL 2024

PRE-APPLICATION DRAFT (v1) **BASIC ASSESSMENT REPORT**

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

APRIL 2024

(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)

Project Description and Executive Summary

Attwood Property Developments (Pty) Ltd owns several portions of the Farm Hoogekraal No 238, and 2 portions of the Farm Buffelsdrift No 227, George, which together with some of the neighbouring farms will be developed into a more consolidated farming and nature estate.

The application area consists of 32 portions of the Farm Hoogekraal No 238, and 2 portions of the Farm Buffelsdrift No 227, George.

The farms are located to the north and south of the N2 National Road, west of the Maalgate River and east of Morrison Road (Main Road 348 to Glentana). The area to the south of the N2 will form the project area.

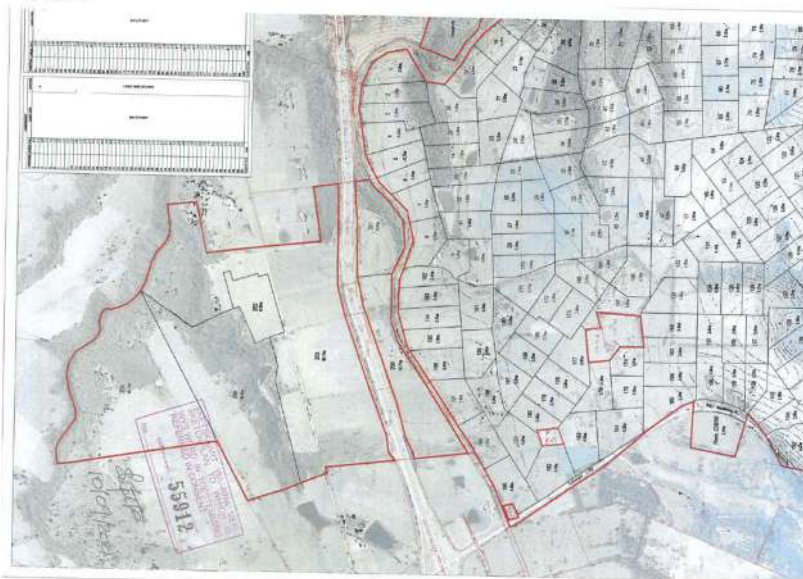
Background to the Application Area

The area was previously part of a land development application, known as "Lagoon Bay Lifestyle Estate", consisting of two 18-hole golf courses; 895 single residential houses; 320 single and fractional title lodges; 150 single and fractional title apartments; a hotel, wellness centre, spa and clubhouse precinct; a commercial area; conference centre and private nature reserve. The land development application included applications for structure plan amendment, rezoning and subdivision. An EA was issued, however due to various legal proceedings the planning application was never concluded.

During September 2021, the National Department of Agriculture approved the consolidation and subdivision of the application area in terms of the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970), to create 205 farms with sizes between 2 ha and 68 ha.

PARAGRAPH 2: CONSENT GRANTED

After consolidation the subdivision of the above-mentioned agricultural land into two-hundred and five (205) portions of which 205 the portions (two-hundred and five) ranges between 2,0 hectares and 68,0 hectares respectively and one (1) portion is measuring 10,21 hectares represented by the figures marked Ptn 1 to 205 and Remainder as shown on the sketch plan which is attached to this Consent.



This approval is still valid, application for extension has been lodged and the application to amended as proposed into 82 agricultural portions of approximately 5ha each will be made.

Several families of historic farm workers currently reside on the farm portions that are included in the application area. These families were formerly employed as bona fide farm workers on the farms that form part of the application area and acquired permanent tenure rights to reside on the farms, in terms of the Extension of Security of Tenure Act 62 of 1997. There are 110 families, and after several workshops with these families, they have confirmed that they wish to remain on the Hoogekraal Farms and do not wish to relocate to the George or Mossel Bay urban settlements.

Attwood Property Developments(Pty)Ltd acquired the rights to lodge land development applications for the development of a rural agricultural farming community and the ESTA families with tenure rights have agreed to relocate to a new farming village in this area. The village will include agricultural and recreational areas for the families.

The Hoogeland Coastal Farmsteads are proposed as a 530-hectare rural development located just outside Glentana along the Garden Route, bordered by the Maalgate River and the Indian Ocean. The existing farms will be consolidated and re-subdivided as indicated in the layout plan below. The development philosophy is described as:

"This unique setting offers an exceptional balance between rural living, agricultural productivity, and environmental preservation. Designed as a low-impact, high-quality rural environment, Hoogeland celebrates the harmony between cultivated farmland, natural ecosystems, and coastal landscapes — creating a living environment that is both functional and inspirational."

The farms currently straddle the N2 National Road and consist of 34 cadastral units with varying property sizes from 0,7984 ha to 42 ha. A full list is attached (see annexure)

The development proposal is to reorganise the farm boundaries to develop an agricultural settlement, consisting of small farms of ±5 ha and larger, together with communal equestrian facilities such as a polo field, stables, paddocks, dressage rings and riding trails.

The farms north of the N2 National Road remain agricultural and are not part of the NEMA EIA application. No environmental authorisation north of the N2 is required.

For the area south of the N2, there are various activities which will trigger NEMA, full listed provided below.

Although the whole area is currently zoned as Agriculture Zone I, the proposed agricultural farms south of the N2 National Road will consist of 82 smaller farms, of which 31 farms will retain an agricultural zone I, 32 farms will be split zone and 19 farms will be rezoned out of Agriculture and will be rezoned to Open Space III in order to have a conservation zoning.

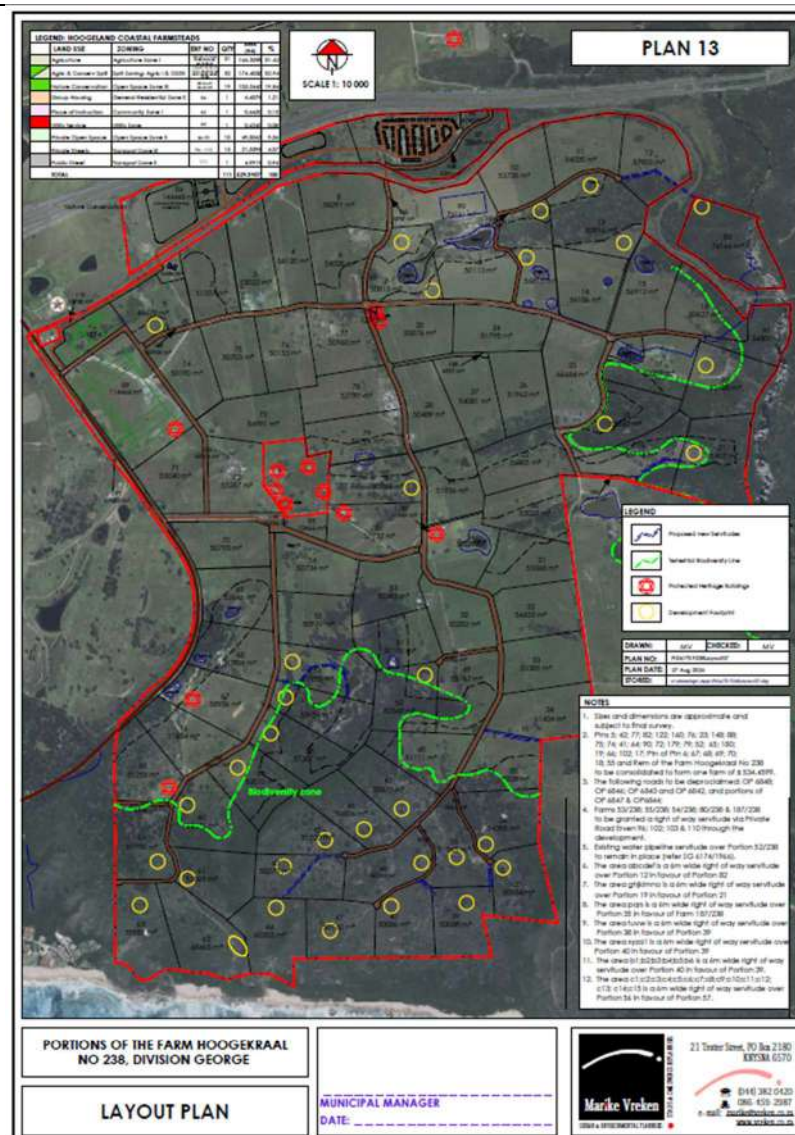
This designation is based on the historic use and natural features of the area. The areas currently used for agriculture will remain agriculture, while the farms currently in a natural or marginal state will be zoned to a conservation area with the aim of restoration and eco-living.

The application deals with a proposal to realign farm boundaries to create a better coordinated farm layout with communal horse and hiking trails and farm roads.

The proposal will consist of 82 farm portions and "agri- / residential" village for the 110 beneficiaries.

The land-uses will include:

- Agriculture Zone I (Farms of ± 5 ha), with equestrian
- General Residential Zone I (Group Housing for the farm worker residential village)
- Open Space II (Private Open Space) for horse riding club, communal equestrian facilities & polo field
- Open Space Zone III (Nature Conservation Area), for the environmentally sensitive farms
- Community Zone (Place of instruction) to formalise the existing school
- Utility Zone (for utility services)
- Transport Zone III (Private Roads)



Approximately 110 families who obtained confirmed permanent tenure rights on the farms (in terms of the Extension of Security of Tenure Act 62 of 1997), remain scattered in small nodes across the application area. These families agreed to be resettled together in a new rural village in the application area, as they refuse to be relocated to the urban settlements of George or Mossel Bay. The existing Hoogekraal Primary School will be retained, on its own cadastral property.



- **Agri Properties** – lifestyle or small-scale working farms.
- **Agri/Eco split zone** – split zoning between conservation and agriculture farms
- **Eco Properties** – dwellings located within sensitive natural landscapes, emphasizing minimal environmental impact, with a maximum 2,000 m² developable area per farm.
- **Rural farm village** – a village for the farmworkers with valid ESTA tenure rights

Agri Properties

- Primary function: lifestyle farming or equestrian agriculture.
- Buildings: main dwelling, barn and minimal outbuildings.
- Landscaping: orchards, vegetable gardens, grazing paddocks.
- Emphasis: practicality, sustainable agricultural living, durability, and agricultural character.

- Primary function: low-impact, nature-integrated living.
- Developable area: Maximum 2,000 m² per farm, including all buildings and hard surfaces, ensuring minimal intrusion into natural areas.
- Buildings: smaller footprints, lightweight structures, minimal visual intrusion.
- Landscaping: indigenous plants, fynbos gardens, minimal earthworks.
- Emphasis: environmental sensitivity, controlled density, and sustainable living.
- Remaining area must be preserved as natural landscape, with trails or low-impact amenities designed to minimize ecological disturbance.

- Primary function: lifestyle farming or equestrian agriculture with nature-integrated living
- Buildings: main dwelling, barn and minimal outbuildings in the agricultural portion
- Landscaping: orchards, vegetable gardens, grazing paddocks in agricultural portion
- Emphasis: practicality, sustainable agricultural living, durability, and agricultural character with environmental sensitivity integrated.
- Remaining area must be preserved as natural landscape, with trails or low-impact amenities designed to minimize ecological disturbance.

- Polo field and equestrian facilities designed to complement the development's rural aesthetic.
- Support structures (stables, arenas, clubhouses) must use the same material and colour palette as private properties.
- Trail networks connect properties, the polo field, and equestrian facilities while respecting topography and vegetation.

- Community spaces must enhance social interaction without compromising landscape integrity.
- Existing graveyard areas will remain and be respected.

Rural farm village -

- Village concept for the units – either a single or a duette to look less RDP and more character. Beneficiaries will have ownership rights.
- Communal agricultural facilities and recreational facilities are included



Initial conceptual designs for existing farm workers accommodation that will be “replicated” in the new farmworker’s village.

Services to the agri-workers village will be provided in the form of potable water (treated on site) and an onsite package plant for sewage treatment. Treated effluent will be used for irrigation and may be stored in an off-channel storage dam for this purpose. Electricity will be supplied by Eskom and solar.

Individual farms will be supplied with agricultural water allocated from the existing lawful uses as Verified and Validated through BOCMA in terms of the NWA. Individual homes will collect and make use of rainwater harvesting in addition to the agricultural water allocation.

Individual farms will either continue to make use of the Eskom supply to the area or will make use of own Solar PV.

Individual farms will continue to treat sewage on site (in private mini-package plants, septic tank and soakaways or conservancy tanks) – as to be agreed with the local authority.

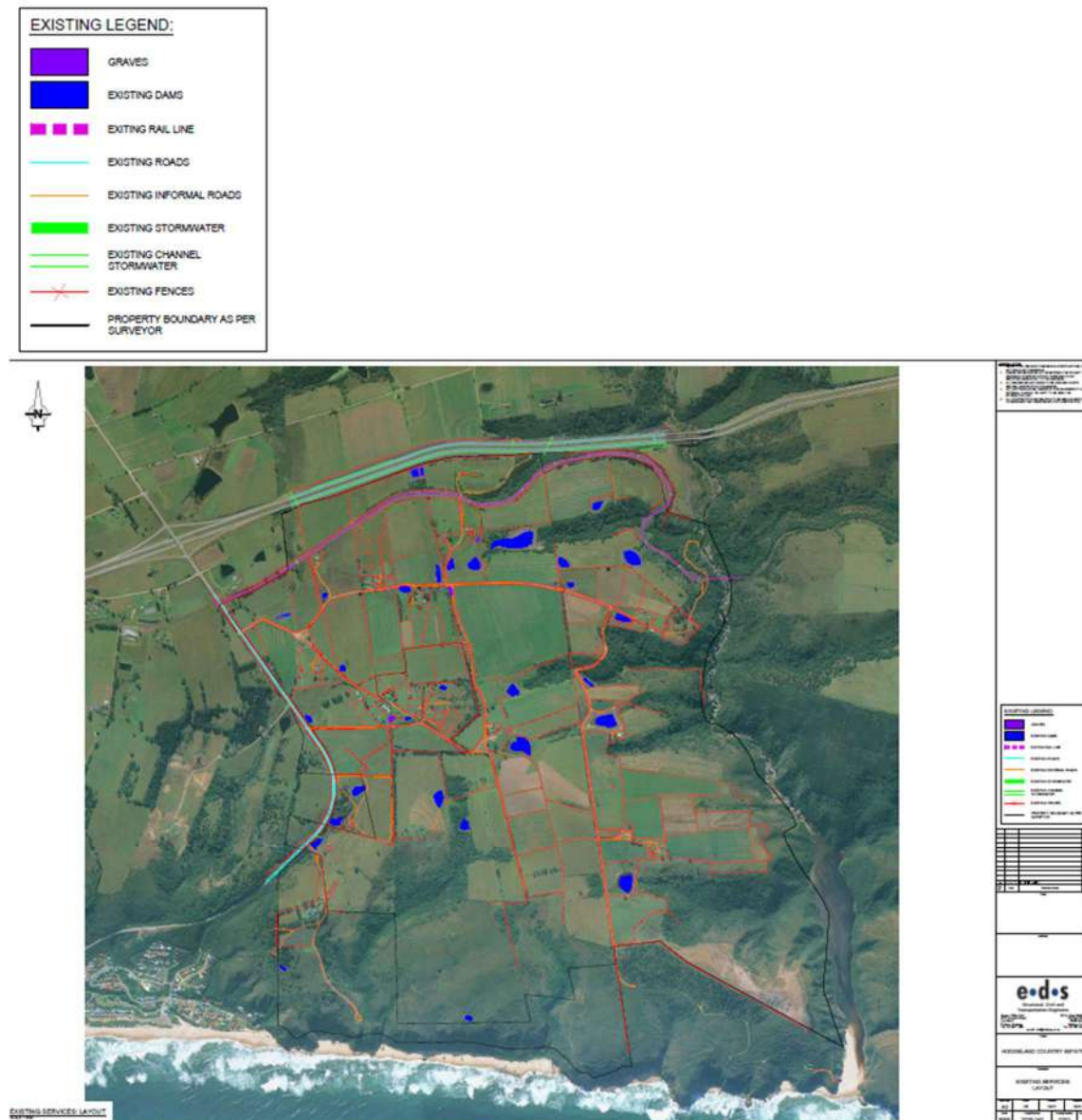
Farm roads will largely remain unchanged in layout, they will be gravel farm roads with a grass swale for drainage. New and existing roads will be assessed in this process, drainage line crossings will remain and any new drainage line crossings will be assessed and authorised in terms of this process and the associated WULA.

The typical drift plan and sections below will be used where existing roads or new roads require water crossing (subsurface seepage and surface flow).

The following extracts from the Engineering Reports provide more detail (see EDS reports, 2026)

Internal roads –

There are several District Roads that bisect the application area. There are all Minor Roads (ondergeskikte Pad), with a proclaimed road reserve width of 10 m wide. The proposal is to de-proclaim these roads and to register right of way servitudes over newly constructed roads in favour of those farms that require the use of the roads for access. All internal roads will become private roads, to be maintained by the HOA and providing access to all farms in the area.



Existing roads and dam on the properties – extract from Services report (EDS, 2026)

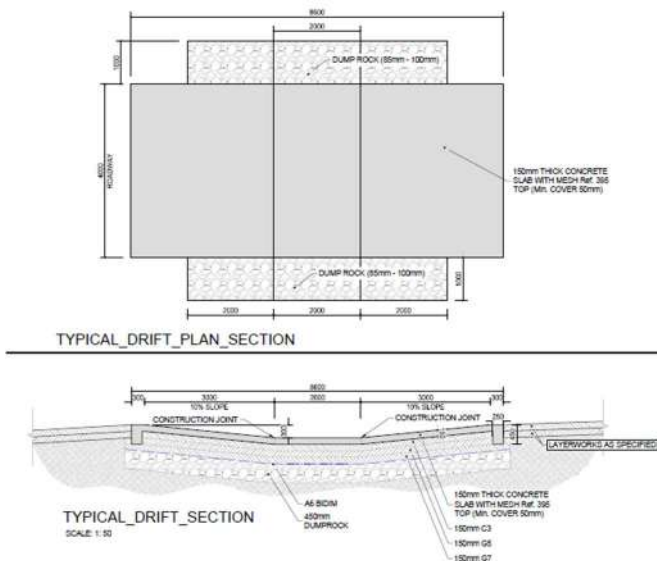
- The proclaimed roads are:
- OP06843
 - OP06844
 - OP06847
 - OP06848
 - OP06845
 - OP06842

Preliminary discussions with the Provincial Roads Authority confirmed that as long as no landowner's right to access is affected, and right of way servitudes are registered, there is in principle, no objection to the proposed de-proclamation of these roads.

The roads layout drawing shows the existing roads in the vicinity of the application site as well as the main access points and proposed internal private roads to service each of the farms.

Farm roads will largely remain unchanged in layout, they will be gravel farm roads with a grass swale for drainage. New and existing roads will be assessed in this process, drainage line crossings will remain and any new drainage line crossings will be assessed and authorised in terms of this process and the associated WULA.

The typical drift plan and sections below will be used where existing roads or new roads require water crossing (subsurface seepage and surface flow).

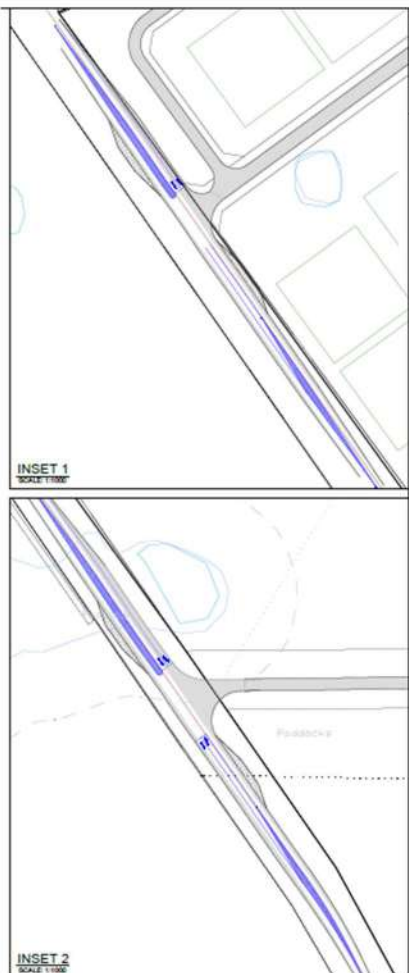


For external access –

It is recommended that a dedicated right turn lanes with lengths of 30 m excluding taper lengths be provided at both accesses from Morrison Road to reduce friction along the road and to improve traffic safety at the access.

According to the Traffic Impact Assessment the proposed application will result in an additional 59 trips being generated. The improvements required will be for the account of the developer.





Stormwater Management -

The stormwater on site is currently discharged into the Indian Ocean. The northern catchments are discharged via culvert structures beneath the Transnet railway line to the north from where it is conveyed via an earth channel to the Maalgate River and ultimately into the ocean.

Catchments located in the eastern and south-eastern portion of the site discharge directly via normal surface runoff and drainage patterns into the Maalgate River and ultimately into the ocean.

Catchments located in the southern and western portions of the site discharge directly via normal surface runoff and drainage patterns into the ocean.

The proposed development will continue to utilise the existing topography drainage (surface flow and drainage patterns) resulting in catchment delineations remaining the same post development.

Low water crossings will be constructed / improved on the roads to allow for stormwater to continue with overland flow to existing defined drainage lines.

Although there may be a slight increase in stormwater runoff (less than 10%) due to the proposed sub-division and rezoning, the functioning of the stormwater system will remain as is.

To alleviate the slight increase the following measures will be implemented:

- Development footprint of hardened surfaces will be limited to 2000 m² per 5 ha farm. This is only 4% of each farm.
- Rainwater harvesting will be implemented at all new dwellings.
- Increased farming activities and irrigation will result in more water being abstracted from the existing dams on site. There will therefore be additional attenuation capacity in the dams on site further decreasing the total runoff from the site.
- Low water crossings on new roads will be constructed to ensure that the stormwater system will continue to operate in a sustainable manner.

Water –

The existing farms have an existing lawful entitlement of 2054 kL (m³) / day, the total water demand amounts to 783 kL / day. It can therefore be seen that there is adequate water supply for the intended use.

The following minimum demands are estimated for the development:

Description	Zoning	Water demand (kL/unit)	Amount	AADD (kL/day)	Peak flow (ℓ/s)
5 ha farm portion	Agricultural	7.0	81	567	n/a
Residential Village*	General Res Zone I	0.6	110	66	2.29
Total			185	783	n/a

* Obtained from Table J.2 from the "Red Book"

Proposed water abstraction, treatment and distribution

Existing water abstraction facilities from the Maalgate River is available on site in line with the Existing Lawful Use water rights on site. It is proposed that these facilities be refurbished and utilised to abstract water from the Maalgate river to an existing central dam. Water will be pumped from the holding dam to a central water treatment, filtration and distribution point that will be located in the northern portion of the site just to the south of the existing railway line.

It is proposed that a buffer tank be installed at this location from where water will be undergo a filtration process as a first treatment process. Water to be supplied to the residential village will subsequently purified to potable water standards and supplied to the residential village via a proposed pump station.

Filtered water will be supplied from this location to each of the 5 ha farms via a newly constructed pump station. The bulk reticulation to each of the farms will follow the proposed roads and farm connections will be provided to each farm.

It is proposed that a minimum allocation of 7 kL per day will be provided to each farm. It will be a requirement to provide a storage tank of at least 10 kL for the storage of water. Each farm will be responsible for its own treatment of filtered water to potable standards for the water supplying the house.

Rainwater harvesting on each farm will be required by the individual farm owners.

Water for irrigation purposes can be distributed directly from each farm's storage tank to the required areas.

Sewage –

Currently all dwellings on the farms are serviced by septic tanks and individual soakaways. It is anticipated that there are currently in excess of 100 dwellings on the farms. These are anticipated to be decommissioned as old structures are demolished and new homes are constructed.

Sewage for the rural farmworkers village –

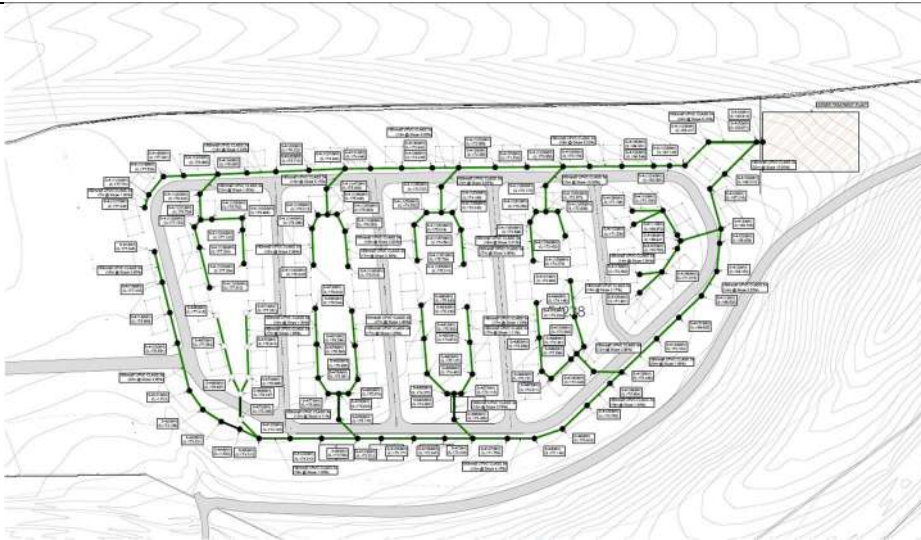
It is proposed that a sewer treatment package plant be constructed to receive and treat sewage emanating from the Residential Village. Sewage will be treated to General Limits to allow for the re-use of the Treated Sewage Effluent for irrigation.

Treated Sewage Effluent will be discharged into a newly constructed reservoir / dam from where it will be distributed for irrigation of general areas under the management of the Home Owner's Association.

The sewer package plant will be located to the east of the proposed Residential Village (lower lying area) to allow a gravity fed sewer reticulation system to convey sewage to the package plant.

The Home Owners Association will be responsible for the operations and maintenance of the sewage package plant.

Regular quality monitoring will be conducted to ensure that Treated Sewage Effluent conforms to the required quality standards.



Sewage treatment for 5 ha farms -

It is proposed that each 5 ha farm will be responsible for its own sewage treatment on site. It is proposed that the treatment be done via a septic tank and bio-filtration by means of an artificial wetland for additional treatment / mini package plant to be installed by the owner at the time of submitting building plans. Municipal requirements in relation to the site treatment of sewage on agricultural land will apply.

The following minimum sewage yields are estimated for the development:

Description	Zoning	Sewage Yield (kL/unit)	Amount	AADD (kL/day)	Peak flow (ℓ/s)
5 ha farm portion	Agricultural	0.8	81	n/a	n/a
Residential Village*	General Res Zone I	0.35	110	38.5	2.29
Total			185	783	n/a

* Obtained from Table J.2 from the "Red Book"

Summary of listed NEMA activities triggered or potentially triggered

Based on the proposed Hoogeland Coastal Farmsteads development, the activities triggered or potentially triggered in terms of the NEMA EIA Regulations relate mainly to the transformation and development of land, associated infrastructure, and activities within environmentally sensitive areas.

The proposal includes the consolidation, rezoning and subdivision of agricultural land south of the N2 into agricultural and conservation farm portions, eco-properties, a rural farmworker village, private roads, utilities, equestrian facilities, dams, trails, and associated service infrastructure.

These components may trigger listed activities associated with the clearance or transformation of agricultural land / indigenous vegetation, construction of infrastructure within or near watercourses and wetlands, development within biodiversity-sensitive areas, expansion or construction of roads and services, development of residential or mixed-use areas outside an urban area, and activities within coastal and/or sensitive environmental zones.

The activities are potentially relevant because the site includes Critical Biodiversity Areas, remnants of Critically Endangered Garden Route Granite Fynbos, watercourses, wetlands, strategic water source areas, coastal landscape features, and heritage-sensitive areas.

The proposed use of treated effluent for irrigation, water storage, stormwater infrastructure will also require alignment with the National Water Act process.

On this basis, the application is likely to require a Basic Assessment process, with final confirmation dependent on the detailed listed-activity screening against the 2014 EIA Regulations, as amended, and the final site layout, infrastructure design, vegetation clearance areas, watercourse buffers and development footprint and final interpretation of the activities.

Clearing of indigenous vegetation (as per the NEMA definition) on the properties will remain under the 20ha NEMA Listing Notice 1 activity 27 threshold – implying a Basic Assessment Process.

No Listing Notice 2 activities are expected to be triggered.
Listed activities triggered will be as follows:

Listing Notice 1

- Activity 12 and 48 - activities within watercourses or within 32m of watercourses or the upgrade of existing infrastructure within such areas.
- Activity 19 – movement of more than 10m³ within a watercourse
- Activity 27 – clearance of more than 1ha of indigenous vegetation (excluding for linear activities)
- Activity 28 – change of landuse from agriculture to other

Listing Notice 3

- Activity 4 & 18– development of roads wider than 4m within indigenous vegetation or the widening of existing roads into indigenous vegetation
- Activity 12 – clearance of indigenous vegetation in an endangered or critically endangered ecosystem.
- Activity 14 & 23 – development of infrastructure or structures more than 10m² within a watercourse or within 32m of a watercourse within CBA's or ESA's

In summary, the applicable NEMA listed activities are associated with:

- **clearance of indigenous vegetation for new homesteads within areas supporting indigenous vegetation;**
- **clearance or disturbance of vegetation associated with a critically endangered ecosystem;**
- **construction, upgrading or works within watercourses and within 32 m of watercourses required for roads and services and existing roads upgrades;**
- **infilling, excavation, removal or movement of material within watercourses required for roads and existing road upgrades;**
- **development of roads 4 m or wider within indigenous vegetation; and**
- **the establishment of rural residential / mixed-use development and associated infrastructure outside an urban area within an area used for agricultural purposes in or after 1998 for the proposed change to conservation with limited residential from agriculture.**

Summary of the Planning Application – Vreken, 2026

The application relates to the proposed **consolidation, rezoning and subdivision** of portions of the **Farm Hoogekraal No. 238** and portions of the **Farm Buffelsdrift No. 227**, George, for the development known as **Hoogeland Coastal Farmsteads**. The application area is located north and south of the **N2 National Road**, west of the **Maalgate River**, north of the ocean and east of **Morrison Road**.

The proposal seeks to reorganise the existing farm portions into a low-impact rural agricultural estate comprising small agricultural farmsteads, conservation areas, private open spaces, equestrian facilities, internal private roads, utility infrastructure, and a new rural farming village. The applicant intends to establish a rural development that balances agricultural use, environmental conservation, rural residential opportunities, and the accommodation of existing lawful occupiers with tenure rights.

A key component of the application is the relocation and formal accommodation of approximately **110 families** who have established permanent tenure rights on the farms in terms of the **Extension of Security of Tenure Act, 1997**. These families have indicated that they wish to remain within the Hoogekraal area rather than relocate to George or Mossel Bay. The proposal therefore includes a **group housing / farming village** consisting of **110 sectional title residential units**, together with communal facilities, food gardens and associated services.

The application includes multiple land use actions under the **George Municipality Land Use Planning By-law**, including subdivisions, consolidations, rezoning to **Subdivisional Area**, subdivision into agricultural, residential, utility, community, open space, conservation and transport erven, consent use for existing cemeteries, and the removal of certain restrictive title deed conditions. The proposed development also requires other related approvals, including environmental authorisation, heritage approval, Section 53 approval under LUPA, deproclamation of certain proclaimed roads, and approval under the Subdivision of Agricultural Land Act.

The development concept is guided by principles of **rural character protection, secure tenure, agricultural use, environmental stewardship, low-impact development and sustainable infrastructure**. Environmentally sensitive areas are proposed to be protected through **Nature Conservation Area** zonings, while private open spaces will accommodate communal amenities such as equestrian facilities, dams, trails, cemetery areas and recreational areas. Wastewater from the farming village is proposed to be treated via an on-site package plant, with treated effluent intended for irrigation reuse.

Access to the development will be taken from **Morrison Road / Main Road 348**, with private internal roads to be constructed and maintained by a Homeowners Association. Certain existing proclaimed roads are proposed to be deproclaimed and retained as private roads, while access rights for neighbouring properties are to be protected through servitudes.

In summary, the application is for a comprehensive rural restructuring and development of the Hoogekraal and Buffelsdrift farm portions into a managed agricultural farmstead estate with conservation areas, equestrian and open space amenities,

formal accommodation for existing tenure-right holders, and supporting infrastructure, while seeking to preserve the rural and environmental character of the area.

WULA application – running simultaneously with the NEMA and Planning processes, Groenewalds, 2026

A WULA application will be running together with the NEMA process in order to ensure that the application is compliant with the NWA.

The farms have undergone a Validation and Verification process in terms of the NWA for all existing lawful water uses.

The proposed changes will result in various s 21 activities in terms of the NWA being triggered which will need to be licenced.

The WULA process will undergo public participation which will be synchronised with the NEMA pre-application public participation.

This will cover activities including the storage of water, irrigation with treated effluent and the impeding and diverting of water for road crossings.

Heritage application – running simultaneously, Jenna Lavin, Artefactual Heritage Consulting, 2026

A NID was submitted to HWC followed by the HIA requested by HWC.

Summary: Heritage Impact Assessment – Hoogekraal Farm Estate

1. Project Overview

- **Location:** Near Glentana, George, Western Cape.
- **Development Proposal:** Subdivision of 450 ha into 57 small-scale agricultural farms (min. 5 ha each) and 24 conservation parcels, totaling 81 freehold properties. Includes a residential village for farm workers (110 units), communal equestrian facilities, and eco-properties with strict environmental controls.
- **Zoning:** All farms zoned Agricultural Zone I; development must comply with municipal and national regulations.

2. Heritage Resources and Context

- **Historic Significance:** The area has a rich agricultural, colonial, and maritime history, with occupation dating back to the 18th century. The Hoogekraal Farm werf precinct is the key heritage resource, containing historic buildings and burial grounds.
- **Archaeology:** No significant Stone Age artefacts found in the immediate development area due to extensive agricultural disturbance, but the broader region is archaeologically sensitive, especially near the Maalgate River and coastal cliffs.
- **Built Environment:** Five structures (Sites 40, 17, 28, 35, 52) graded IIIC for local contextual value **must be retained**. The historic Hoogekraal Farm werf precinct (graded IIIB/IIIA) is excluded from development and will remain unchanged.
- **Burial Grounds:** Two burial grounds identified; one associated with the farm werf, another informal cemetery (Sites 8 and 11) to be formalized and protected.
- **Cultural Landscape:** The area is characterized by a rural, agrarian landscape with scattered historic structures, agricultural fields, and significant visual and social value.

3. Anticipated Impacts

- **Heritage Impact:** Minimal impact anticipated if mitigation measures are followed. The key heritage precinct is excluded from development. Retention of graded structures and protection of burial grounds are required.
- **Visual Impact:** Low, provided robust green buffers, architectural guidelines, and landscape integration are implemented, especially along the N2 highway and near sensitive heritage sites.
- **Archaeological Sensitivity:** Low overall, but high in specific areas (cliffs, cemeteries, werf precinct). Monitoring required during construction in sensitive zones.

4. Mitigation and Recommendations

- Exclude the Hoogekraal Farm werf precinct from all development activities.
- Retain and protect all structures graded IIIC; any alterations require permits from Heritage Western Cape (HWC).
- Formalize and fence the informal cemetery, ensuring ongoing access.
- Monitor construction in archaeologically sensitive areas; halt work and notify HWC if new heritage resources are discovered.
- Implement landscape and architectural guidelines to minimize visual intrusion and maintain rural character.
- Conduct a thorough survey of sea-cut caves in the cliffs to assess scientific value and inform a Conservation Management Plan if needed.

5. Socio-Economic and Community Considerations

- The development supports local economic growth, formalizes tenure for farm workers, and aligns with regional planning policies.
- The proposed configuration is more sustainable and beneficial than previous high-density or conventional farming proposals.

6. Conclusion

- The project is supported from a heritage perspective, provided all recommendations and mitigation measures are strictly implemented. No fatal heritage flaws identified.

Example Implementation:

- Owners must submit alteration plans for graded structures to HWC for approval.
- Erect fencing around the informal cemetery before construction begins.

- Appoint an archaeologist to monitor earthworks in mapped sensitive areas.
- Landscape architects should design and plant indigenous green buffers along the N2.

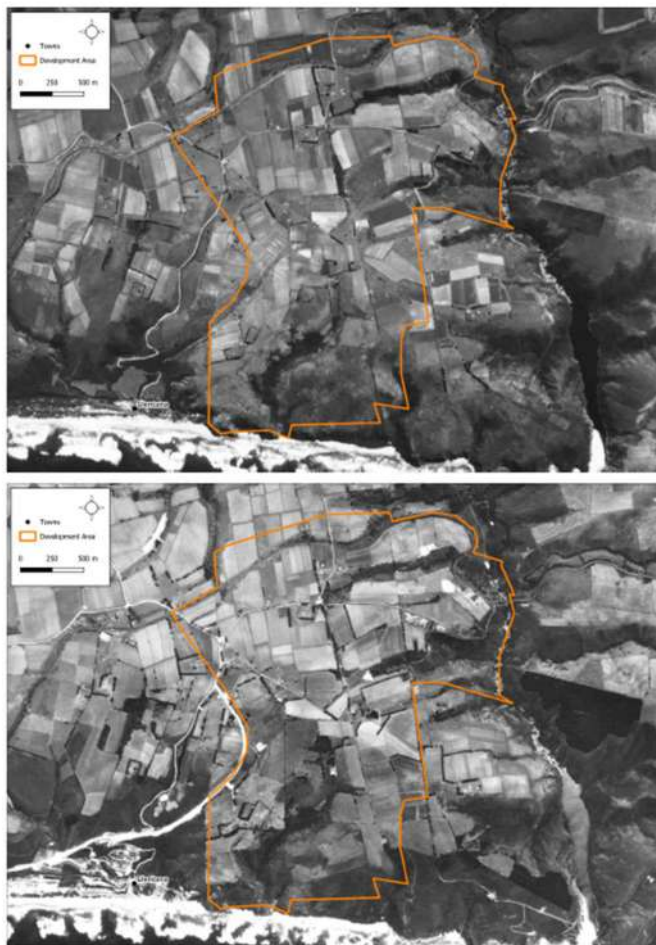


Figure 3.9 Historic Aerial Imagery from 1957 (Top) and Figure 4.2: Historic Aerial Imagery from 1974 (Bottom)



Figure 73: Identified heritage elements overlaying the proposed SDP



Summary of the Specialist Assessments undertaken

Agriculture – Gert Malan

1. Current and Historical Land Use:

The land is currently used for cattle grazing and has a history of grazing and planted pastures (Kikuyu, perdewkeek, buffelkweek). A land capability assessment found the site is not financially suitable for commercial-scale perennial or annual crop production due to soil limitations and limited irrigation water.

2. Proposed Development:

The plan is to market 5-hectare farms for continued agricultural use, primarily targeting lifestyle farming rather than commercial agriculture. Agricultural output on these plots is not dependent on financial feasibility.

3. Land Suitability Classes:

59% of the land: Not recommended for permanent crops; suitable for grazing, planted pastures, dryland bale production, and some vegetables. 28.3%: Conditionally recommended for permanent crops (avocado, macadamia, wine grapes). 12.1%: Recommended for high-potential permanent crops (avocado, macadamia, wine grapes). 0.4%: Highly recommended for high-potential permanent crops.

4. Proposed Agricultural Activities:

Grazing/Planted Pastures (59%): Horses (breeding, stabling), cattle (meat), sheep (meat), winter grains for baling (oats). Supplemental feeding may be needed for large stock. Permanent Crops (40% with supplemental irrigation): Protea and fynbos cut flowers, wine grapes (micro winery), blueberries, kiwi, avocado, macadamia, and vegetable gardening. Most vegetable production is expected to be for personal use.

5. Water and Infrastructure:

Each farm will receive a daily allocation of agricultural water from existing lawful uses through the Farmer Association. Rainwater harvesting will be mandatory on each farm. Road reserves will be used for horticultural crops or baled. Horse paddocks and small space farming (e.g., microgreens, mushrooms) are planned.

6. Socio-Economic Impact:

If approved, the development will create jobs for unskilled labour in agriculture and groundskeeping. Agricultural diversity is expected to increase as farm owners choose their own activities. Commercial farming of high-value crops on small plots (<2ha) is not feasible due to logistics, but lifestyle farming makes this possible.

Conclusion:

The development is best suited for lifestyle farming with diverse, small-scale agricultural activities, rather than large-scale commercial farming.

Socio-Economic baseline – Agricultural viability analysis and socio-economic cost benefit assessment – Dr Jonathan Bloom, 2026

This document assesses the socio-economic and agricultural viability of a proposed rural development and land reconfiguration project at Hoogeland Coastal Farmsteads.

Project Overview and Development Proposal

- The development involves reconfiguring the farms into small farms, conservation parcels, and a farm village for 110 beneficiaries with established tenure rights.

- It includes residential, agricultural, and conservation land uses, with a focus on small-scale farming and equestrian facilities.

Socio-Economic and Agricultural Impact

- The project aims to boost local economy, employment, and socio-economic benefits, especially in George with high unemployment.
- Conventional farming is economically unviable under water constraints; reconfiguration offers higher socio-economic returns and job creation.

Land Use and Surrounding Environment

- The site is bordered by natural areas, residential areas, and existing farms, with a mix of vacant land and grazing areas.
- The development respects rural character, with conservation zones and low-impact infrastructure.

Financial and Viability Analysis

- Three scenarios compare traditional dryland farming with high-value crops like avocado and macadamia.
- Reconfiguration shows positive net present value and significantly higher employment, with potential for cooperative farming models.

Water and Infrastructure Management

- Existing farms have a combined water allocation of 1.88 million m³/year, including household use.
- Potable water will be purified and redistributed at 2 kl/u/d; no water provision needed from George Municipality.

Land Use and Development Planning

- Proposed land uses include agricultural farms, conservation areas, group housing, and open spaces.
- Roads remain mostly as they currently occur on site, pipelines to follow the roads, existing servitudes remain in place; development aligns with spatial and environmental frameworks.

Economic Contributions and Growth

- George contributed 40.73% to the Garden Route economy in 2024, with a GVA of R65.77 billion.
- Key sectors include manufacturing, finance, real estate, and business services, which increased their share over time.

Sector and Employment Trends

- Manufacturing remains a major contributor; finance and services sectors grew significantly.
- Employment increased by 68% from 2001 to 2024, with strong growth in the tertiary sector and declining primary sector jobs.

Socio-Demographic Profile

- George's population was 240,415 in 2023, with steady growth at 1.4% annually.
- The area has high access to basic services, with over 90% coverage for water, electricity, sanitation, and waste removal.

Rural Development and Land Use Policies

- The Western Cape emphasizes protecting agricultural land, promoting sustainable rural development, and discouraging uncontrolled urban expansion.
- The George SDF supports safeguarding fertile farmland and managing land subdivision, with limited scope for new off-farm settlements.

Agricultural Viability and Natural Resources

- The primary sector supports livestock on dryland pastures; the area is shifting toward high-value crops like avocados and macadamias.
- George's climate and rainfall (720 mm annually) favour subtropical crops, reducing water stress and supporting sustainable farming practices.

Soil Types and Agricultural Suitability

- Soils mainly from gneissic granite and granodiorite form shallow duplex soils with sharp texture contrasts.
- Most duplex soils are low potential with high erosion risk; only 4.5% are high potential.

Land Use and Crop Potential

- 59.2% of land is unsuitable for crops; 28.3% conditionally suitable for permanent crops like avocado and macadamia.
- Only 12.1% is recommended for high-potential permanent crops; viability limited by soil and water constraints.

Water Rights and Irrigation Constraints

- Water rights from Maalgate River total 100,000 m³ annually; limited irrigation restricts crop expansion.
- About 25 ha of orchards are feasible for avocados, and 23 ha for macadamia, based on water availability.

Pasture and Livestock Viability

- 273 ha assessed for grazing; insufficient for profitable cattle farming under current conditions.
- Land fragmentation prevents viable commercial livestock units; shift towards high-value crops is strategic.

Crop Production and Financial Models

- Avocado yields reach 20 t/ha at maturity; net cash flow becomes positive after 10 years.
- Macadamia yields peak at 4 t/ha; financial viability is limited with negative NPVs over 25 years.

Replanting and Declining Production

- Both crops face yield decline after 17-22 years; re-establishment costs are significant.
- Replacement costs and declining yields impact long-term profitability, with negative NPVs in models.

Overall Land Reconfiguration and Economic Impact

- 41.8% of soils suitable for high-value crops; land reconfiguration aims to optimize economic returns.
- Transition from grazing to orchards aligns with regional trends; small-scale units remain feasible for diversification.

Reconfiguration and Land Use Changes

- The proposal subdivides 450 ha into 57 small farms and 24 conservation parcels, maintaining agricultural land use.
- Owners can develop a 4.8-ha farm footprint with dwellings and farming activities, including high-value crops like avocados or macadamias within irrigation limits.

Socio-Economic Cost-Benefit Methodology

- The analysis compares reconfiguration benefits against farming costs, focusing on quantifiable impacts over 25 years.
- It considers construction, farming, employment, property rates, and intangible benefits like ecosystem and landscape preservation.

Farming Scenarios and Viability

- Three scenarios compare reconfiguration benefits to dryland pasture, avocado, and macadamia farming.
- The analysis shows positive net benefits, with the proposal outperforming traditional farming in economic returns and employment.

Infrastructure and Development Assumptions

- Infrastructure costs are allocated over three years, with 69% for farms and 29% for conservation areas.
- Small farms include hard surfaces, dwellings, and amenities, with costs projected using escalation indices.

Agricultural and Conservation Land Assumptions

- Farming costs for crops range from R140,000 to R182,000 per hectare, with water constraints limiting high-value crop expansion.
- Conservation parcels include low-impact trails and amenities, with costs around R376,000 per parcel, maintained annually.

Economic Impact and Employment

- Construction could generate R8.2 billion in output and sustain 11,430 jobs over 15 years.
- Operational spending over 25 years could produce R5.7 billion in output and support 6,462 jobs annually.

Cost-Benefit Results and Metrics

- The proposal yields a net socio-economic benefit of R330 million over 25 years.
- It shows a 16.33% socio-economic return, with positive NPVs and employment benefits, outperforming traditional farming options.

Economic and Employment Impact of Reconfiguration

- The proposal could sustain 5.35 jobs per R1 million of capital spent and 3.24 jobs per R1 million operational spend.
- Conventional farming on 273 ha shows negative NPV and low IRR, making it economically unviable.

Financial and Socio-economic Benefits

- The reconfiguration yields a net socio-economic benefit of R338 million over 25 years.
- It offers a positive NPV of R344 million, with a benefit-to-cost ratio of 16.72%, within a good return range.

Comparative Analysis of Farming Scenarios

- Reconfiguration outperforms dryland pasture, avocado, and macadamia farming in net benefits.
- Conventional farming shows negative NPVs, indicating lower economic viability under water constraints.

Employment and Social Benefits

- The proposal could create 361 jobs annually, mainly through small-scale farms and conservation properties.
- Dwellings and farming activities significantly increase employment, with avocado being most labour-intensive.

Environmental and Social Impact Assessment

- Impacts include employment creation, local income, and conservation benefits.
- Negative impacts involve traffic, noise, dust, and potential influx of job seekers during construction.

Conclusion

- The reconfiguration offers higher socio-economic returns and employment than conventional farming.
- It supports sustainable land use, with a focus on smallholdings and conservation, under water constraints.

Aquatic Site Sensitivity and Baseline Report – Upstream Consulting, 2026

This document is a baseline aquatic sensitivity and ecological assessment report for the Hoogekraal Project's land rationalization and development on Hoogekraal Farms.

Site Sensitivity and Ecological Importance

- The study area contains high and low aquatic sensitivity zones, driven by water source areas, biodiversity, and watercourses.
- Despite degradation from agriculture, remaining aquatic systems perform vital functions like flow regulation and habitat connectivity.

Environmental Legislation and Conservation Frameworks

- The project must comply with laws including NEMA, the Water Act, and the Western Cape Biodiversity Act, which protect water resources and ecosystems.
- Critical biodiversity areas and strategic water source areas highlight the importance of conserving remaining habitats and ecological corridors.

Physical Environment and Hydrological Features

- The area is on a coastal plateau with sandy soils, moderate rainfall (700-900 mm annually), and a gentle slope supporting wetlands and seasonal streams.
- Hydrological systems are seasonal and episodic, influenced by soil permeability, topography, and rainfall, feeding into the Maalgate River system.

Vegetation and Biodiversity Significance

- The landscape is dominated by Critically Endangered Garden Route Granite Fynbos, with patches of Afrotemperate Thicket.
- Vegetation is highly fragmented, with wetlands and drainage lines acting as ecological gradients and refugia for moisture-dependent species.

Water Source Areas and Catchment Role

- The western part of the site is within the Outeniqua Strategic Water Source Area, vital for regional water yield and ecological support.
- The site functions as a hydrological and biological link, feeding into the Maalgate River and coastal ecosystems.

Impact and Management Recommendations

- Key impacts include hydrological alteration, invasive species, dam construction, and habitat loss.
- Precautionary measures include buffer zones, invasive control, restricting livestock access, and habitat protection to prevent further degradation.

Role of Terrestrial CBAs in Ecosystem Integrity

- Extensive terrestrial CBAs support freshwater ecosystems by regulating hydrology, soil stability, and connectivity.
- Intact vegetation within these areas reduces erosion, enhances infiltration, and buffers aquatic systems.

Impact of Historical Land Use

- Agriculture since at least 1957 has transformed much of the landscape, fragmenting habitats.
- Long-term land use has led to soil compaction, altered drainage, and reduced ecosystem resilience.

Types and Conditions of Aquatic Systems

- Aquatic features include hillslope seep wetlands, valley bottom wetlands, and non-perennial streams.
- Most systems are degraded, with signs of incision, invasive species, and altered flow regimes, especially in the north.

Ecological State and Conservation Importance

- The majority of aquatic systems are in a largely to critically modified state.
- Despite degradation, systems remain hydrologically connected and influence downstream water quality.

Main Human Impacts

- Livestock grazing, dam construction, invasive species, and infrastructure have caused erosion, vegetation loss, and flow disruption.
- These impacts have led to habitat loss, geomorphic instability, and reduced ecological function.

Management and Buffer Recommendations

- Protecting watercourses with buffers of 35-42 meters is advised to limit disturbance.
- Controlling invasive species and restricting livestock access can improve ecological health.

Plant species, Animal Species and Terrestrial Biodiversity baseline study and sensitivity verification – BioCensus, 2026

The report is a terrestrial plant species, animal species and terrestrial biodiversity baseline study and site sensitivity verification for the project area Farm Hoogekraal No. 238 near Glentana.

The key findings are:

- **The site has confirmed very high terrestrial biodiversity sensitivity** in all areas that remain in a natural state, including secondary vegetation. This is due to the presence of Critical Biodiversity Areas, a Strategic Water Source Area, natural forest, and listed threatened ecosystems.
- **The site falls within Garden Route Granite Fynbos**, which is listed as a **Critically Endangered ecosystem**. Remaining natural fynbos patches are therefore of high conservation importance, particularly given extensive historical transformation in the wider landscape.
- **The site contains a mosaic of cultivated land, secondary vegetation, fynbos, thicket, forest and ecotone habitats**. The flatter upland areas have largely been historically cultivated, while valley bottoms retain forest, with transitions through thicket to fynbos on upper slopes.

- **Critical Biodiversity Areas occur on the site**, including:
 - CBA1 areas in the southern parts of the site, forming part of an important coastal ecological corridor.
 - CBA2 areas associated with valley vegetation extending inland from the Maalgate River system.
- **The site is located within the Outeniqua Strategic Water Source Area**, further supporting a very high terrestrial biodiversity sensitivity rating for natural habitats.
- **Plant Species Theme sensitivity is confirmed as Medium**, but the report notes that it is likely to be **High** in natural habitat areas once detailed surveys are completed. Several threatened plant species could occur on site, especially within fynbos and transitional thicket/fynbos habitats.
- **Several plant Species of Conservation Concern have a high or moderate likelihood of occurring on site**, including endangered and vulnerable taxa. The report highlights that comparable nearby habitat west of Herold's Bay supports multiple listed plant species, increasing the likelihood of occurrence on the study site.
- **Animal Species Theme sensitivity is confirmed as Medium**. Forest and thicket are identified as the most important habitats for animal Species of Conservation Concern, although cultivated and fallow lands may also provide foraging habitat for certain bird species.
- **Notable animal Species of Conservation Concern include** Denham's Bustard, Knysna Warbler, Black Harrier, Martial Eagle, Crowned Eagle and Sensitive species 13. The report identifies Knysna Warbler and Sensitive species 13 as having a high probability of occurrence in forest/thicket habitat.
- **Alien invasive species are present and contribute to habitat degradation**, especially within fynbos and ecotone areas. Declared invasive species recorded include several *Acacia* species, Black Wattle, Blackwood, *Agave americana*, *Phytolacca dioica* and *Pyracantha angustifolia*.
- **The report identifies sensitive biodiversity receptors that should inform project layout**. Sensitive areas should be treated as exclusion zones where appropriate, with buffers included around sensitive habitats depending on the nature of the proposed activities.
- **Further detailed field surveys are required**, particularly once a draft layout or project proposal is available. These surveys should focus on natural areas, proposed infrastructure footprints, threatened plant species, animal SCC habitat, forest/thicket areas and secondary vegetation.
- **Recommended mitigation includes avoidance of very high sensitivity areas**, minimisation of disturbance, buffer implementation, alien invasive species management, rehabilitation of disturbed areas, erosion control, and long-term ecological monitoring.
- **Camera traps are recommended** to confirm the presence of key animal SCC, specifically Knysna Warbler and Sensitive species 13, within suitable thicket/forest habitats.

Overall, the report concludes that while parts of the site have been historically transformed by agriculture, remaining natural and secondary habitats are ecologically important and require careful avoidance, further assessment and management during project planning.

Visual – SQ1

This document is a visual impact assessment and landscape architecture report for the proposed Hoogekraal Farm Estate development near Glentana, George

Visual Impact Assessment Approach

- The study follows DEA&DP guidelines to evaluate visual, aesthetic, and scenic impacts.
- It considers landscape character, scenic resources, and public engagement for balanced assessment.

Project Location and Design

- Located on a coastal plateau near Glentana, with views of the Indian Ocean and Outeniqua Mountains.
- The development proposes a low-impact farm estate with 105 farms, including eco and agri-properties, emphasizing rural authenticity and sustainability.

Policy and Planning Frameworks

- The project aligns with provincial, district, and municipal spatial frameworks.
- It emphasizes protecting scenic routes, natural topography, and rural character, avoiding urban sprawl and visual degradation.

Landscape and Visual Principles

- Development responds to natural contours, preserves natural features, and minimizes earthworks.
- Buildings are designed to integrate with the landscape, maintaining scenic vistas and respecting topographical sensitivities.

Key Design Philosophy

- Focuses on harmony with the land, rural authenticity, and environmental stewardship.
- Architecture reflects contemporary agricultural vernacular with sustainable, low-impact features.

Architectural and Landscape Design Principles

- Buildings should reflect a simple, agricultural vernacular inspired by barns, farmhouses, and sheds, avoiding ornamentation.
- Proportions and massing must ensure low profiles, modest footprints, and appropriate roof heights to blend into the rural setting.

Sustainability and Environmental Stewardship

- All buildings are encouraged to incorporate solar energy systems and water-efficient features like rainwater harvesting and greywater recycling.
- Use locally sourced, renewable, or recycled materials to minimize environmental impact and support regional craftsmanship.

Development Density and Land Use Controls

- Limit building footprints to 2,000 m² per farm to preserve natural landscape and prevent overdevelopment.
- Barns and infrastructure should remain subordinate to main dwellings, maintaining landscape harmony and avoiding dominance.

Landscape and Biodiversity Integration

- Promote indigenous planting, especially fynbos and meadows, avoiding formal lawns and exotic species.
- Maintain habitat corridors and natural vegetation to support wildlife connectivity and ecological integrity.

Community and Shared Facilities Design

- Shared amenities like polo fields and trails should foster social interaction while respecting natural and architectural character.
- Common structures must match private properties in materials, colors, and roof styles, emphasizing visual cohesion.

Heritage and Cultural Landscape Preservation

- The site has rich historical layers including early settlement, timber industry, railway heritage, and archaeological resources.
- Key heritage features include historic farmsteads, ruins, burial grounds, and significant coastal caves with Middle Stone Age deposits.

Visual Environment and Impact Management

- The landscape is sensitive due to its transitional coastal-plateau setting, with visual absorption capacity varying across zones.
- Development along the N2 highway requires a dense green buffer to mitigate visual intrusion and preserve scenic qualities.

Visual Impact Mitigation Strategies

- Implement native, non-invasive landscaping along the highway to create a dense buffer and screen development.
- Use earthy, non-reflective materials, natural textures, and subdued colors for buildings to reduce glare and visual dominance.

Development Context and Site Characteristics

- The area spans flat agricultural plains with steep cliffs to the south, featuring dense coastal vegetation and archaeological caves.
- The site's history includes indigenous Khoi occupation, colonial settlement, timber exploitation, and railway development.

Heritage Resources and Archaeological Significance

- The region contains low palaeontological sensitivity but high archaeological potential, especially near coastal caves and river zones.
- Several historic ruins and gravesites are present; some are of local significance and require careful management during development.

Land Use and Infrastructure Constraints

- The site is within Agricultural Zone I, requiring compliance with zoning laws, building standards, and approval from authorities.
- Existing rights of way, water servitudes, and natural features influence site planning and development layout.

Overall Development Approach

- The development emphasizes low-impact, sustainable rural living with a focus on ecological preservation and cultural heritage.
- Strict adherence to design guidelines ensures buildings and landscapes integrate seamlessly into the natural and historic context.

Landscape Preservation and Ecological Integrity

- Remaining areas must be preserved as natural landscapes with minimal disturbance.
- Trails and amenities should blend with topography and native vegetation.

Development and Architectural Standards

- Buildings are modest in scale; Eco Properties limited to 2,000 m².
- Use of local, renewable materials; roofs encouraged to have solar panels.

Sustainable Practices and Environmental Management

- Promote rooftop solar, water harvesting, greywater reuse, and native plantings.
- Protect riverine, wetland, and dam edges with indigenous species; monitor during construction.

Landscape and Planting Principles

- Use native species for gardens and communal areas; avoid formal lawns outside Eco Properties.
- Minimize earthworks; support natural contours and permeable trails.

Community and Regulatory Oversight

- All development requires approval from the Design Review Committee and authorities.
- Regular monitoring and community education on sustainability are encouraged.

ARCHITECTURAL, ENVIRONMENTAL AND LANDSCAPE APPROPRIATENESS — HOOGELAND AGRICULTURAL HOLDINGS, GLENTANA, GARDEN ROUTE – Warno Rude, 2026

Hoogeland is a 644-hectare rural holding on the Garden Route coastal platform, bounded by the Maalgate River and the Indian Ocean. It occupies a transitional landscape of cultivated farmland, fynbos hills and open plains — a setting whose value lies not in any single feature but in the continuity of the whole. The development proposal responds to that continuity. It comprises 105 farms averaging five hectares, all retaining Agricultural Zoning rights, together with a polo field and equestrian facilities as shared amenities. Density is therefore extremely low by any measure, and the land remains, in use and in appearance, a working rural landscape. This letter motivates the appropriateness of that proposal on architectural, environmental and landscape grounds, with reference to the Hoogeland Design Guideline, which is binding on all owners through the Design Review Committee and will be enforced by the Master Property Association.

Environmental appropriateness

Environmental restraint is built into the land-use structure, not appended to it. Eco Properties (within the more natural fynbos areas of site) are limited to a 2,000 m² developable area per five-hectare farm — inclusive of all buildings and hard surfaces — meaning that over 96% of each such farm is retained as natural landscape. Buildings and roads must follow existing contours and drainage patterns to minimise earthworks; wetlands, watercourses, mature trees and fynbos clusters are to be retained and designed around; and riverine, dam and wetland edges must be protected, rehabilitated and planted exclusively with indigenous and preferably endemic species, under the Environmental Management Plan. Rainwater harvesting, greywater reuse, rooftop solar, passive design and locally sourced materials are required where feasible. Topsoil is to be stripped, stored and reinstated; alien species are excluded; threatened species are protected through all construction phases. The proposal therefore delivers a net improvement over unconstrained Agri Zoned use on the Eco Properties, under which far greater areas could lawfully be cultivated, cleared or built upon without any of these controls.

Architectural appropriateness

The Guideline commits the development to a Contemporary Agricultural Vernacular: simple barn-and-farmhouse forms, modest footprints, low profiles, pitched, mono or skillion roofs, restrained detailing and a shared palette of materials and colours across dwellings, outbuildings and common structures. Outbuildings must follow the primary dwelling in material and proportion, and agricultural infrastructure remains subordinate to it. The result is an architecture that reads as a continuation of the Cape rural building tradition rather than as an insertion into it. Because the palette and massing rules apply equally to private and communal buildings, the estate will register in the wider landscape as a coherent agricultural settlement rather than a collection of individual statements — the same visual logic that makes existing Garden Route farmsteads sit comfortably in their setting.

Landscape appropriateness

To the north, the site adjoins an established agricultural landscape, and the development is conceived as a seamless continuation of it rather than a break from it. On the Agri Properties, small crops, grazing paddocks and small-scale livestock farming will carry that working-farm character across the boundary and through the estate, so that Hoogeland reads as part of the productive landscape it borders. Within this framework the wider landscape approach is one of design with nature:

rehabilitation, conservation and responsiveness, with indigenous planting selected from a curated estate palette of Cape trees, shrubs, proteas, ericas, buchus and restios. Formal lawns and exotics are excluded from the natural portions of Eco Properties in favour of fynbos and meadow planting. Roads, driveways, trails and equestrian paths are permeable, narrow and contour-following, with bioswales and biofilters slowing and cleaning stormwater before it reaches watercourses. Open space, trails and retained vegetation are structured to maintain habitat connectivity across the property, so that ecological corridors survive the introduction of dwellings rather than being severed by them. Buffer zones between farms and between farms and sensitive areas prevent both overcrowding and habitat fragmentation.

Conclusion

Hoogeland proposes a low-intensity, tightly governed form of rural development in which the great majority of the land remains natural or productive, the built form is disciplined by a mandatory design language of demonstrable regional lineage, and ecological function is protected by enforceable limits rather than aspiration. It is, on all three grounds, an appropriate and defensible outcome for this site. We accordingly request that the application be supported.

Public participation programme

This pre-application Draft BAR is intended to provide background to the proposed project, information in relation to the statutory approval process being followed and to inform initial comments for I&AP's and authorities.

The document will be available together with the WULA application for a period of 60 days prior to the NEMA EIA formal application being submitted to DEADP.

Once the NEMA application is submitted to DEADP, the Draft BAR will be updated to include responses to all comments received, the SDP and specialist studies will be updated to address comments submitted.

The processes (NEMA and WULA) will be advertised in the local press and notifications will be sent to neighbours and a site notice will be placed, inviting all potential I&AP's to register and provide comments.

The public participation process will comply with section 41 of the EIA regulations, NEMA.

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, 1998 (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)
<p>The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za</p> <p>Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829</p> <p>Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000</p>	<p>The completed Form must be sent via electronic mail to: DEADPEIAAdmin.George@westerncape.gov.za</p> <p>Queries should be directed to the Directorate: Development Management (Region 3) at: E-mail: DEADPEIAAdmin.George@westerncape.gov.za Tel: (044) 814-2006</p> <p>Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530</p>

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:	<p>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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>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.</p>
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:	<p>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:</p> <ul style="list-style-type: none"> • 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): <ul style="list-style-type: none"> ◦ Watercourses / Rivers / Wetlands ◦ Flood lines (i.e., 1:100 year, 1:50 year and 1:10 year where applicable);

	<ul style="list-style-type: none"> Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): Ridges; Cultural and historical features/landscapes; Areas with indigenous vegetation (even if degraded or infested with alien species). <ul style="list-style-type: none"> Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. North arrow <p>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.</p>
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	

	Appendix A3:	Map with the GPS co-ordinates for linear activities	
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	
	Appendix E3:	Final Comment from the DWS	
	Appendix E4:	Comment from the DEA: Oceans and Coast	
	Appendix E5:	Comment from the DAFF	
	Appendix E6:	Comment from WCG: Transport and Public Works	
	Appendix E7:	Comment from WCG: DoA	
	Appendix E8:	Comment from WCG: DHS	
	Appendix E9:	Comment from WCG: DoH	
	Appendix E10:	Comment from DEA&DP: Pollution Management	
	Appendix E11:	Comment from DEA&DP: Waste Management	
	Appendix E12:	Comment from DEA&DP: Biodiversity	
	Appendix E13:	Comment from DEA&DP: Air Quality	
	Appendix E14:	Comment from DEA&DP: Coastal Management	

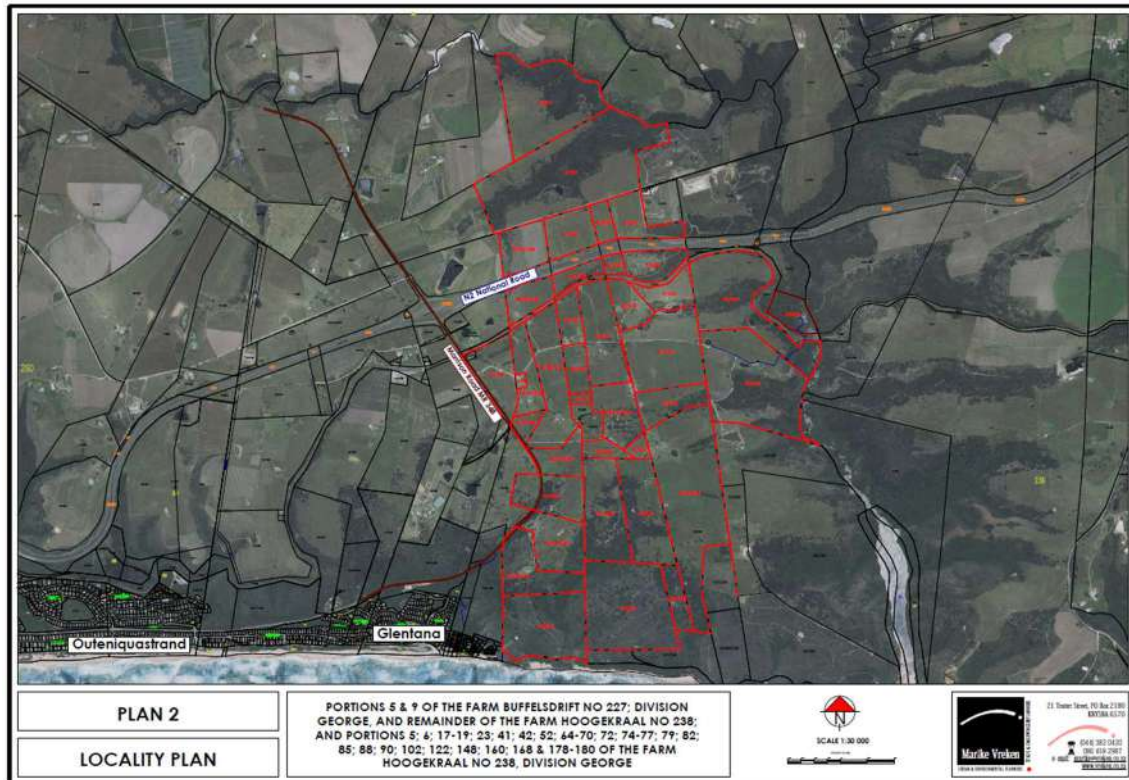
	Appendix E15:	Comment from the local authority	
	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management)	
	Appendix E17:	Comment from the District Municipality	
	Appendix E18:	Copy of an exemption notice	
	Appendix E19	Pre-approval for the reclamation of land	
	Appendix E20:	Proof of agreement/TOR of the specialist studies conducted.	
	Appendix E21:	Proof of land use rights	
	Appendix E22:	Proof of public participation agreement for linear activities	
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		
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:	Any other attachments must be included as subsequent appendices		

SECTION A: ADMINISTRATIVE DETAILS

	CAPE TOWN OFFICE: REGION 1		GEORGE OFFICE: REGION 3
Highlight the Departmental Region in which the intended application will fall	(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: Name of contact person for Applicant/Proponent (if other): Company/ Trading name/State Department/Organ of State: Company Registration Number: Postal address: Telephone: E-mail:	Attwood Property Developments(Pty)Ltd (name change from Lagoonbay Lifestyle Estate (Pty) Ltd) Gerrit van den Berg Attwood Property Developments(Pty)Ltd (name change from Lagoonbay Lifestyle Estate (Pty) Ltd) 2001/022460/07 95 Dorp Street, Stellenbosch, 7600 La Gratitude Herehuis Postnet Suite 205, Private Bag x20009 Garsfontein Pretoria Postal code: 0042 +27 (0)21 808 1000 +27(0) 84 470 3205 Gerrit van den Berg gerrit@atterbury.co.za Fax: ()		
Company of EAP: EAP name: Postal address: Telephone: E-mail: Qualifications: EAP registration no:	Hilland Environmental (Pty) Ltd Cathy Avierinos 2019/1053 P.O.Box 590, George Postal code: 6530 (044) 889 0229 Cell: 082 5586 589 cathy@hilland.co.za Fax: () BSc (Hons) 2019/1053		
Duplicate this section where there is more than one landowner Name of landowner: Name of contact person for landowner (if other): Postal address: Telephone: E-mail:	Various landowners – see list attached below (after the declarations) Postal code: () Cell: Fax: ()		
Name of Person in control of the land: Name of contact person for person in control of the land: Postal address: Telephone: E-mail:	Various landowners – see list attached (after the declarations) Beneficiary list for the farm workers and the ESTA tenure rights form part of the Rural Development and Land Reform process (beneficiary list withheld due to POPIA). Postal code: () Cell: Fax: ()		
Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall: Contact person: Postal address: Telephone: E-mail:	George Municipality MM Godfrey Louw PO Box 19, George Postal code: 6530 044 801 9111 Cell: mmreception@george.gov.za Fax: ()		

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

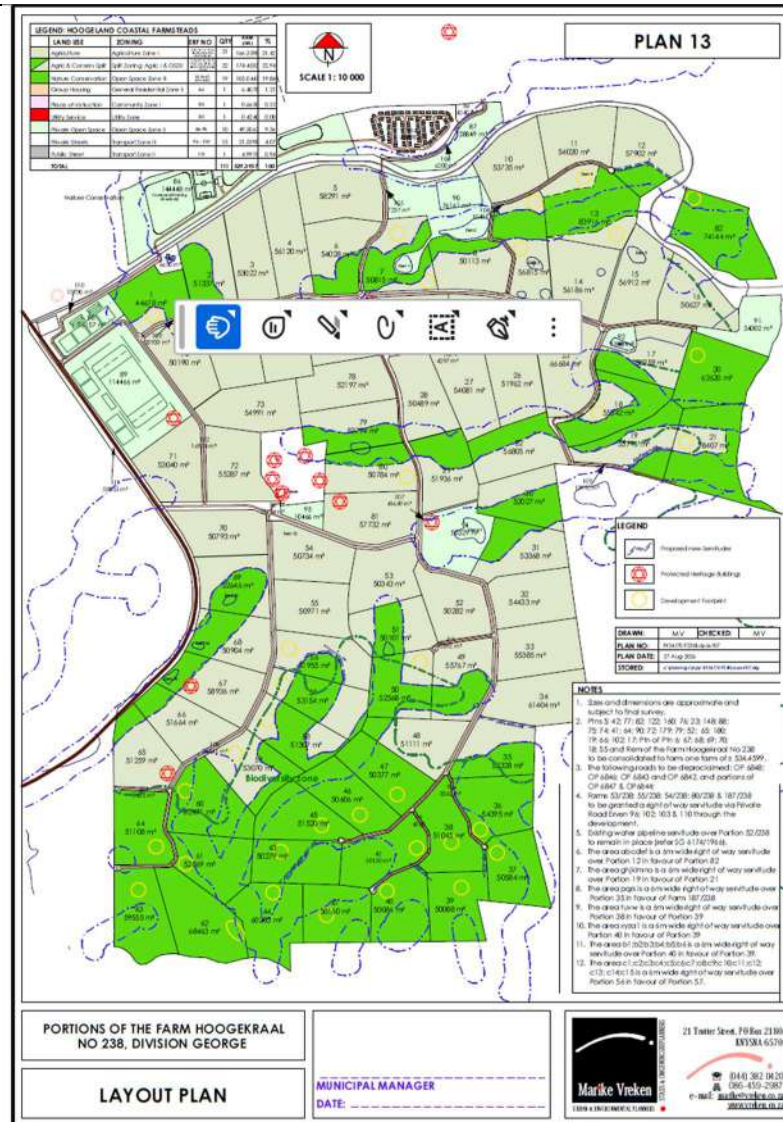
1.	Is the proposed development (please tick):	New		Expansion	Expansion and changes within an existing agricultural area
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				
Brownfield – redevelopment of an existing agricultural area for continued agricultural use farms with an agri-village for the existing farm dwellers in accordance with the ESTA and change of certain farms from agricultural zoning to a conservation zoning in order to promote restoration of the biodiversity value of the area.					



The above plan shows all the various farms that are affected. Farms which currently straddle the N2 will be divided along the N2, with the portions north of the N2 being re consolidated with other farm portions to the north of the N2. Similarly, farms which extend over Morrison Road (the road to Glentana), will be subdivided along the road and only the portion to the east of the road will be included.

Only the area to the south of the N2 forms part of the NEMA EIA application.

Landowners within the general area, that do not wish to be included in the proposed development, have been excluded and they will remain privately owned and operated with continued servitude access to their properties through the farmstead estate.



3. For Linear activities or developments

3.1. Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:

All roads (existing and new) are included in the general project description and not separated out as a linear activity. All pipelines are within the road reserve.

3.2. Development footprint of the proposed development for all alternatives.

m²

See plan below

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.

Existing farm roads will be retained but improved, new roads will be created and unnecessary roads will be closed and rehabilitated back to agricultural uses.

Internal roads –

There are several District Roads that bisect the application area. There are all Minor Roads (Ondergeskikte Pad), with a proclaimed road reserve width of 10 m wide. The proposal is to de-proclaim these roads and to register right of way servitudes over newly constructed roads in favour of those farms that require the use of the roads for access. All internal roads will become private roads, to be maintained by the HOA and providing access to all farms in the area.

The proclaimed roads are:

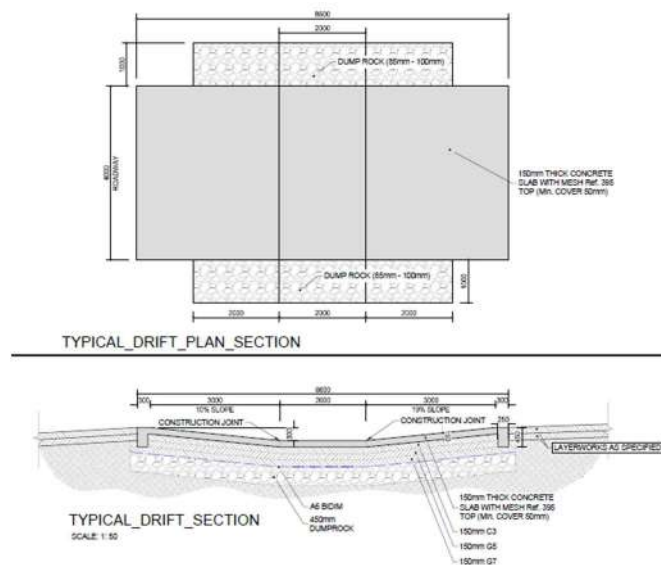
- OP06843
- OP06844
- OP06847
- OP06848
- OP06845
- OP06842

Preliminary discussions with the Provincial Roads Authority confirmed that as long as no landowner's right to access is affected, and right of way servitudes are registered, there is in principle, no objection to the proposed de-proclamation of these roads.

The roads layout drawing shows the existing roads in the vicinity of the application site as well as the main access points and proposed internal private roads to service each of the farms.

Farm roads will largely remain unchanged in layout, they will be gravel farm roads with a grass swale for drainage. New and existing roads will be assessed in this process, drainage line crossings will remain and any new drainage line crossings will be assessed and authorised in terms of this process and the associated WULA.

The typical drift plan and sections below will be used where existing roads or new roads require water crossing (subsurface seepage and surface flow).

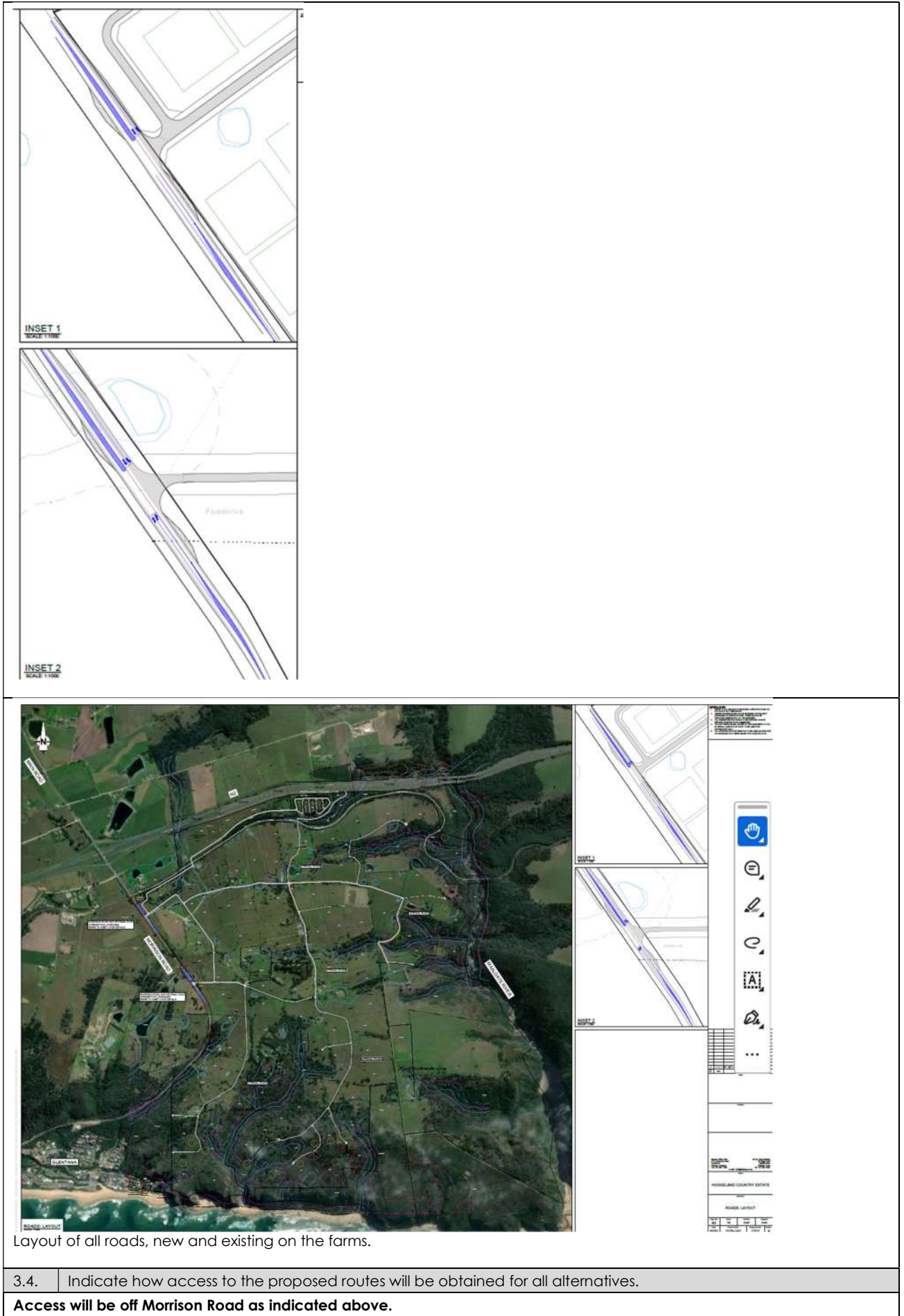


For external access –

It is recommended that a dedicated right turn lanes with lengths of 30 m excluding taper lengths be provided at both accesses from Morrison Road to reduce friction along the road and to improve traffic safety at the access.

According to the Traffic Impact Assessment the proposed application will result in an additional 59 trips being generated. The improvements required will be for the account of the developer.





<ul style="list-style-type: none"> 1 Public street erf 																				
4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.																			
Access off Morrison Road as indicated above and then following the internal road layout as per the SDP.																				
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:																			
Coordinates of the proposed site(s) for all alternatives: - see full list of SG codes for the farms (after the declarations)																				
4.7.	Latitude (S)					°					'					"				
	Longitude (E)					°					'					"				

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
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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.	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.	
Planning – the rezoning, consolidation and subdivision is applicable as per the details in the Planning report – see appendix L	
Legislation / policy / guideline / protocol	Applicability to the proposed activity or development
National Water Act, 1998 (Act No. 36 of 1998)	Applicable due to existing lawful water use, water abstraction, storage, treated effluent irrigation, stormwater management and crossings affecting watercourses. A WULA process is being undertaken in parallel.
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Applicable because section 38 heritage requirements are triggered and the site contains heritage resources, including historic structures, burial grounds, archaeological sensitivity and cultural landscape features.
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Applicable because the site contains listed Alien invasive species that are being controlled in terms of an Approved ACP..
National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008)	Potentially applicable because of the coastal setting and need to confirm whether any components fall within coastal management, coastal protection or coastal risk areas.

Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)	Applicable to agricultural land management, soil conservation, erosion control and invasive alien plant control.
Subdivision of Agricultural Land Act, 1970 (Act No. 70 of 1970)	Applicable because the proposal involves consolidation, subdivision and reconfiguration of agricultural land and requires alignment with existing or amended agricultural subdivision approval.
Extension of Security of Tenure Act, 1997 (Act No. 62 of 1997)	Applicable because existing farm worker families have confirmed tenure rights and the application includes formal accommodation for these beneficiaries in a rural farm village.
Spatial Planning and Land Use Management Act, 2013	Applicable as the national framework for spatial planning, land development decision-making and municipal land use approvals.
Western Cape Land Use Planning Act, 2014 and George Municipality Land Use Planning By-law	Applicable because the application requires consolidation, subdivision, rezoning, consent uses, removal of restrictive conditions, road-related approvals and related municipal planning approvals.
George Integrated Zoning Scheme / municipal zoning provisions	Applicable because proposed land uses must comply with zoning rights and development parameters for agricultural, conservation, residential, community, utility, open space and transport zones.
National Forests Act, 1998 (Act No. 84 of 1998)	Potentially applicable if protected trees or natural forest patches are affected by development or management activities.
National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998)	Applicable to rural land management, firebreaks, fire prevention and fire risk management within agricultural and conservation areas.
Western Cape Biodiversity Spatial Plan and Garden Route biodiversity / environmental planning frameworks	Applicable as planning informants because the site contains CBAs, ESAs, threatened ecosystems, ecological corridors and sensitive biodiversity features.
DEA&DP guidelines, Screening Tool protocols and specialist assessment protocols	Applicable because the BAR must respond to the Screening Tool outcomes and relevant specialist protocols for terrestrial biodiversity, plant species, animal species, aquatic biodiversity, agriculture, heritage, visual and socio-economic themes.

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.
<p>The following planning, environmental and development policy frameworks have been considered in the formulation and assessment of the proposed activity/development:</p> <p>Western Cape Provincial Spatial Development Framework The proposal responds to the provincial spatial planning principles by retaining the rural and agricultural character of the site, avoiding conventional urban expansion, and promoting a lower-density rural development form. The proposed layout also provides for conservation zoning over environmentally sensitive areas, continued agricultural use on suitable portions, and the protection of scenic and ecological resources. It reduces the number of previously approved agricultural subdivisions to a more appropriate number and size for the area.</p> <p>Garden Route District Spatial Development Framework The development takes account of the district-level emphasis on protecting rural landscapes, maintaining ecological corridors, safeguarding biodiversity, and managing development outside urban areas. The proposal responds by limiting the development footprint, retaining agricultural and conservation land uses, protecting sensitive natural areas, and locating infrastructure within an integrated rural layout rather than creating a separate urban settlement.</p> <p>George Municipal Spatial Development Framework The proposed development is located outside the urban edge and has therefore been planned as a rural/agricultural development rather than an urban township. It responds to municipal spatial policy by retaining the broader rural landscape, formalising the existing settlement needs of ESTA tenure-right holders, providing for agricultural and conservation portions, and ensuring that roads, services, open spaces and community facilities are planned as part of a coordinated land-use application. The Rural farmworkers village has been developed taking the existing ESTA beneficiaries into account without having to relocate them away from their current living arrangements and relocating them to an urban area where they will not feel comfortable.</p> <p>George Integrated Zoning Scheme and municipal land use planning framework The proposal responds to the applicable zoning and land-use planning framework through the proposed consolidation, subdivision and rezoning of the land into appropriate zoning categories, including Agriculture Zone I, Open Space Zone III for conservation areas, private open space, transport, utility, community and group housing uses. The development</p>

will be further controlled through the Site Development Plan, municipal approvals, design guidelines, homeowners' association requirements and applicable development parameters.

Western Cape Biodiversity Spatial Plan

The Western Cape Biodiversity Spatial Plan has been considered because the site includes mapped Critical Biodiversity Areas, Ecological Support Areas, threatened ecosystem remnants and ecological corridors. The proposal responds to these sensitivities by allocating sensitive natural areas out of agriculture to conservation zoning, limiting development footprints, applying development restrictions in sensitive areas, retaining ecological connectivity, and requiring rehabilitation, alien plant control and ongoing environmental management.

Garden Route Environmental Management Framework / regional environmental planning informants

The proposal takes account of regional environmental sensitivities, including biodiversity corridors, watercourses, coastal landscape features, rural scenic value and areas of ecological importance. The development responds through a low-impact rural design, retention of natural areas, limited hard surfaces, indigenous landscaping, conservation management measures and the incorporation of specialist recommendations into the layout and mitigation measures.

DEA&DP Guideline on Need and Desirability and Integrated Environmental Management principles

The proposal responds to need and desirability considerations by addressing the existing land-use history, current agricultural use, agricultural viability constraints, confirmed ESTA tenure obligations, socio-economic benefits and infrastructure feasibility. The proposed development represents a lower-impact rural alternative to the previously approved/considered higher-density development concepts and includes conservation, agricultural and rural settlement components within one coordinated framework.

Specialist assessment protocols and the national environmental screening tool

The national screening tool and relevant specialist assessment protocols have been considered in determining the required specialist input and environmental themes. The proposal responds through specialist studies and baseline assessments for biodiversity, plant species, animal species, aquatic biodiversity, agriculture, heritage, visual and socio-economic aspects. These findings have informed the layout, development restrictions, buffers, conservation areas, service design and mitigation measures.

Heritage and cultural landscape policy considerations

Heritage policy considerations have been addressed through the heritage process undertaken in terms of the National Heritage Resources Act. The proposal responds by excluding the Hoogekraal werf precinct from development, retaining and protecting graded structures, protecting burial grounds and cemetery areas, maintaining the rural cultural landscape character, and requiring appropriate heritage procedures where alterations or chance finds occur.

Water resource and catchment management policy considerations

Water resource planning considerations have been taken into account through the parallel Water Use Licence Application process and the assessment of watercourses, wetlands, stormwater and water supply. The proposal responds by relying on verified existing lawful water use, incorporating rainwater harvesting, treating and reusing effluent for irrigation, maintaining natural drainage patterns where possible, authorising road crossings and other water uses, and implementing stormwater and buffer measures to protect freshwater systems.

Agricultural and rural development policy considerations

The proposal responds to agricultural and rural development policy by retaining agricultural use on suitable portions, recognising that conventional large-scale agriculture is constrained by soil and water limitations, and allowing for smaller agri-properties, lifestyle farming, equestrian activities and diversified rural economic opportunities. The development also formalises accommodation for existing farm dwellers with tenure rights while maintaining the broader rural/agricultural character of the land.

Overall compliance and response

Overall, the proposed activity/development responds to the relevant policies by avoiding an urban-style development form, retaining agricultural and rural land use, protecting sensitive biodiversity and heritage resources, formalising existing social and tenure obligations, and incorporating specialist recommendations into the layout and management measures. The proposal therefore seeks to balance rural development, agricultural continuation, conservation, heritage protection, infrastructure feasibility and socio-economic benefit within the applicable policy context.

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.

The following guidelines and protocols have been considered relevant to the proposed activity/development and have influenced the formulation of the development proposal:

DEA&DP Guideline on Need and Desirability, 2013

The need and desirability guideline has informed the assessment of whether the proposed development is appropriate in its receiving environment, whether it responds to existing land-use rights and constraints, and whether it contributes to a more sustainable land-use outcome. The proposal has therefore been motivated as a low-density rural/agricultural development that responds to the existing agricultural character of the area, the previous development history, confirmed ESTA tenure obligations, agricultural viability constraints, biodiversity sensitivities and infrastructure feasibility. The proposal has also been formulated as a lower-impact alternative to the previously contemplated high-density Lagoon Bay development and the approved smallholding development.

DEA Integrated Environmental Management Guideline Series

The integrated environmental management principles have influenced the approach to project planning, alternatives consideration, specialist input and mitigation. The proposal has been assessed through an integrated process that considers land use planning, biodiversity, agriculture, aquatic systems, heritage, visual, socio-economic, engineering and water-use considerations. The layout and mitigation measures respond to this integrated assessment by avoiding and buffering sensitive areas, retaining agricultural use where appropriate, protecting conservation areas and incorporating environmental management requirements into the project design.

DEA&DP / Western Cape guideline requirements for Basic Assessment Reports

The BAR guideline/template requirements have informed the structure and content of the assessment, including the need to provide a full project description, listed activity screening, policy and planning context, alternatives, public participation, specialist findings, impact assessment, mitigation measures and an EMPr. These requirements have influenced the proposal by ensuring that the development is described and assessed in sufficient detail, including its roads, water supply, sewage treatment, stormwater management, conservation areas, farm village, agricultural portions and associated infrastructure.

DEA&DP Guideline for the Involvement of Specialists in EIA Processes

This guideline has influenced the appointment and scope of specialist studies required for the application. Specialist input has been used to verify sensitivities, assess potential impacts and recommend avoidance, mitigation and management measures. The proposal has been influenced by these findings through the protection of sensitive habitats, the exclusion or control of development in conservation areas, the retention of heritage resources, the inclusion of watercourse buffers, and the application of visual and landscape design controls.

DEA&DP Guideline for Environmental Management Programmes

The EMPr guideline has influenced the translation of assessment findings into practical management and monitoring measures. The proposed development will require an EMPr that sets out construction and operational controls, including erosion control, stormwater management, alien invasive plant control, rehabilitation, protection of watercourses and wetlands, protection of heritage resources, construction-phase environmental controls, monitoring requirements and responsibilities for the HOA / managing entity.

Western Cape Biodiversity Spatial Plan handbook / implementation guidance

The WCBSP guidance has influenced the interpretation of mapped Critical Biodiversity Areas, Ecological Support Areas and threatened ecosystem remnants on the site. The proposal responds by allocating sensitive areas to conservation zoning where appropriate, retaining ecological corridors, avoiding unnecessary disturbance of natural vegetation, limiting development footprints, and requiring rehabilitation and alien clearing in conservation and natural areas.

Freshwater ecosystem buffer and aquatic specialist guidance

Freshwater and aquatic assessment guidance has influenced the treatment of watercourses, wetlands, seep areas and drainage lines. The proposal responds through avoidance and buffering of aquatic features, retention of natural drainage patterns, assessment and authorisation of existing and new crossings, use of low-water crossings where appropriate, stormwater measures that minimise hydrological alteration, and the inclusion of freshwater protection measures in the WULA and EMPr.

Visual impact assessment and landscape character guidelines

Visual and landscape assessment guidance has influenced the design response to the rural, coastal and scenic character of the area. The proposal responds by restricting building footprints, using low-profile rural architectural forms, requiring subdued colours and non-reflective materials, retaining vegetation and green buffers, limiting visual intrusion from the N2 and Morrison Road, and integrating buildings, roads and equestrian facilities into the existing topography and rural landscape.

Heritage Western Cape requirements and heritage assessment guidelines

Heritage requirements have influenced the need for a Notice of Intent to Develop and Heritage Impact Assessment. The proposal responds by excluding the Hoogekraal werf precinct from development, protecting identified burial grounds and cemeteries, retaining graded structures, requiring heritage procedures for any alterations, and including chance-find procedures for archaeological or palaeontological material during construction.

Agricultural assessment protocol and agricultural potential guidance

Agricultural assessment guidance has influenced the assessment of soil capability, agricultural potential, water availability and viability of continued agricultural use. The proposal responds by retaining agricultural zoning and use on suitable areas, recognising the limitations of large-scale conventional farming, allowing diversified lifestyle and small-scale farming, and allocating portions with higher environmental sensitivity to conservation or controlled development rather than intensive agricultural transformation.

Stormwater management and sustainable drainage principles

Stormwater and engineering guidance has influenced the approach to roads, drainage and runoff management. The proposal responds by retaining existing drainage patterns as far as possible, using grass swales, limiting hard surfaces, requiring rainwater harvesting, maintaining catchment functioning, using low-water crossings where necessary, and ensuring that stormwater is managed to avoid erosion, sedimentation and downstream impacts.

Water use licence application guidance and One Environmental System principles

The WULA guidance and One Environmental System principles have influenced the coordination of the NEMA and NWA processes. The proposal responds by running the WULA process in parallel with the environmental assessment, addressing water abstraction, storage, treated effluent irrigation, stormwater infrastructure and watercourse crossings, and ensuring that water-use authorisations, comments and public participation are aligned with the BAR process.

Public participation guidelines

Public participation guidance has influenced the approach to stakeholder notification, consultation with organs of state, engagement with affected landowners and existing occupiers, and the recording of comments and responses. The proposal responds by recognising the tenure rights and preferences of existing ESTA families, incorporating the farm village into the layout, and ensuring that comments from authorities, specialists, landowners and interested and affected parties are considered in refining the proposal and mitigation measures.

Overall influence on the development proposal

Collectively, the relevant guidelines have influenced the proposal by requiring a more sensitive, lower-impact and better-integrated development layout. They have informed the exclusion and protection of sensitive heritage, biodiversity and aquatic areas; the retention of agricultural and rural character; the limitation of development footprints; the use of conservation zoning and buffers; the incorporation of sustainable water, sewage and stormwater measures; and the inclusion of specialist mitigation and management measures in the BAR, WULA and EMPr.

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

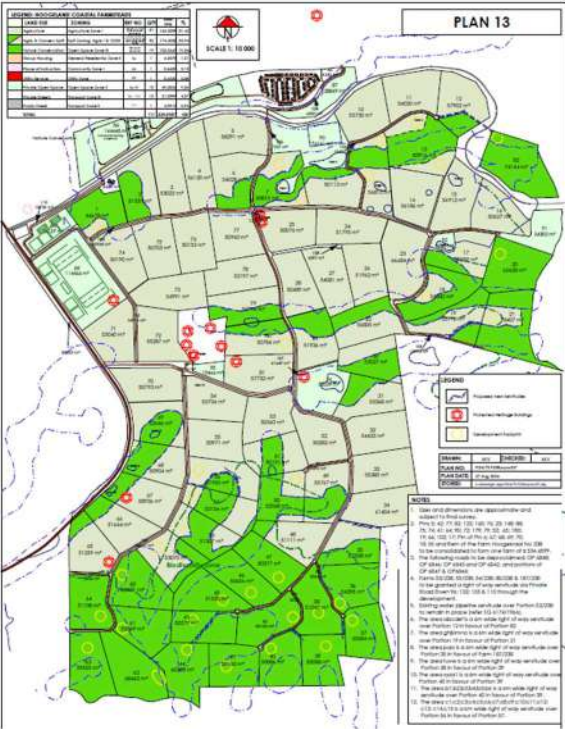
National Environmental Screening Tool and associated specialist assessment protocols

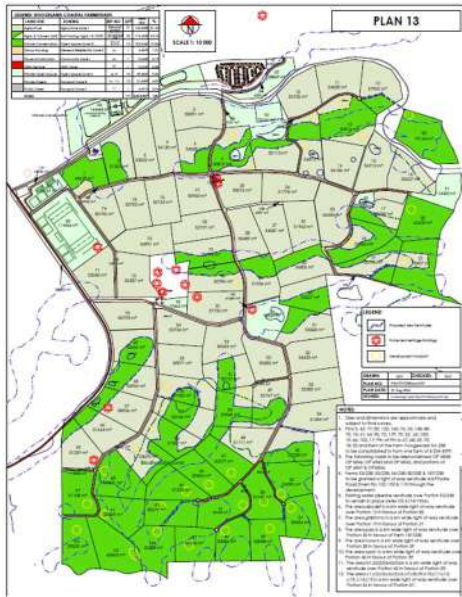
The national Screening Tool and specialist protocols have guided the identification of environmental themes requiring assessment, including terrestrial biodiversity, plant species, animal species, aquatic biodiversity, agriculture, heritage, visual and socio-economic aspects. The findings of the screening and specialist inputs have influenced the development proposal by identifying areas of high and very high sensitivity, informing the location of conservation areas, limiting development footprints in sensitive areas, requiring buffers around watercourses and wetlands, and ensuring that specialist recommendations are incorporated into the BAR and EMPr.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant Basic Assessment Activities as set out in Listing Notice 1	Describe the portion of the <u>proposed development</u> to which the applicable listed activity relates.
12	<p>The development of—</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</p> <p>where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</p> <p>excluding—</p> <p>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(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;</p> <p>(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;</p> <p>(dd) where such development occurs within an urban area;</p> <p>(ee) where such development occurs within existing roads, road reserves or railway line reserves;</p> <p>(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.</p>	<p>Roads and services occur within 32m of a watercourse.</p> <p>This will include repairs and upgrades to existing roads that currently cross watercourses or drainage lines, extension of existing culverts under the railway line to accommodate drainage under farm roads next to the railway, in addition to new roads that will cross into the aquatic buffer as determined by the fresh water assessment.</p> <p>The exclusion within existing rail and road servitudes will apply in certain areas.</p> <p>The layout plan includes blue dotted lines that demarcate the aquatic buffers as determined by the specialist and show all existing and new roads within these areas.</p>

	
<p>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;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>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</p>	<p>Movement of material within a watercourse will be necessary for the upgrade of existing roads that cross watercourses and to facilitate drainage under new roads that cross watercourses.</p>
<p>27 - The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>Clearance of an area of more than 1ha and less than 20ha of indigenous vegetation for:</p> <ul style="list-style-type: none"> • 24 x 2000m² footprints in historically cultivated lands now infested with alien vegetation and secondary indigenous vegetation and in coastal fynbos. • 4,8ha = clearance of indigenous vegetation cumulatively in an area not currently managed for agricultural activities (lawfully transformed)
<p>28- Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:</p> <p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p>	<p>Development as proposed on land used for agriculture exceeding 1ha outside an urban area where the land will no longer be used for agriculture.</p> <ul style="list-style-type: none"> • 24 x 2000m² footprints for future residences in historically cultivated lands.= 4,8ha change from agriculture to non-agricultural activities. • 58 footprints for future residences in current agricultural use areas where the use will remain agricultural (this does not take the existing homesteads and residences on the farms into account and assumes that all existing buildings with the exception of the heritage buildings will be replaced). • Polofields proposed – recreational agricultural use • Agri village on current agricultural land – this entails the movement of existing agricultural worker families to the proposed agri village on the property.

	<p>The exclusion relating to existing residential homes on agricultural land applies in some instances.</p>  <p>Current crop census and watercourses</p>		
<p>48. The expansion of—</p> <ol style="list-style-type: none"> infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more; <p>where such expansion occurs—</p> <ol style="list-style-type: none"> within a watercourse; in front of a development setback; or if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; <p>excluding—</p> <ol style="list-style-type: none"> the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; 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; where such expansion occurs within an urban area; or where such expansion occurs within existing roads, road reserves or railway line reserves. 	<p>Expansion of existing roads within 32m of a watercourse – existing roads will require upgrades which cumulatively may exceed 100m² at any crossing point or within 32m of a watercourse.</p> 		
<table border="1"> <tr> <td>Activity No(s):</td><td>Provide the relevant Basic Assessment Activities as set out in Listing Notice 3</td></tr> </table> <p>4- The development of a road wider than 4 metres with a reserve less than 13,5 metres.</p> <ol style="list-style-type: none"> Western Cape <ol style="list-style-type: none"> Areas zoned for use as public open space or equivalent zoning; Areas outside urban areas; <ol style="list-style-type: none"> Areas containing indigenous vegetation; 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 Inside urban areas: <ol style="list-style-type: none"> Areas zoned for conservation use; or Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority. 	Activity No(s):	Provide the relevant Basic Assessment Activities as set out in Listing Notice 3	<p>Describe the portion of the proposed development to which the applicable listed activity relates.</p> <p>Farm roads and tracks will vary between 4 – 6.5m in width – certain roads / tracks will be in areas supporting indigenous vegetation.</p>
Activity No(s):	Provide the relevant Basic Assessment Activities as set out in Listing Notice 3		

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.

i. 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.



Areas which are mapped to still support critically endangered Garden Route Granite Fynbos ecosystem

There will be clearance of more than 300m² of vegetation within areas mapped to support critically endangered ecosystem remnants.

Specialist assessment of the required clearing is being undertaken.

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

(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.

i. 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.



Infrastructure exceeding 10m² is planned within mapped CBA's and ESA's within 32m of a watercourse – this includes existing roads that require upgrade and new roads and infrastructure.

18. The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.

i. Western Cape

i. Areas zoned for use as public open space or equivalent zoning;

ii. **All areas outside urban areas:**

(aa) **Areas containing indigenous vegetation;**

The widening of existing farm roads by 4m or more in areas of indigenous vegetation may be required

<p>(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</p> <p>iii. Inside urban areas:</p> <p>(aa) Areas zoned for conservation use; or</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.</p>		
<p>23. The expansion of—</p> <p>(iii) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or</p> <p>(iv) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>where such expansion occurs—</p> <p>(d) within a watercourse;</p> <p>(e) in front of a development setback; or</p> <p>(f) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p> <p>i. Western Cape</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) World Heritage Sites;</p> <p>(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;</p> <p>(ee) Sites or areas listed in terms of an international convention;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(gg) Core areas in biosphere reserves; or</p> <p>(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.</p>		 <p>Expansion of infrastructure (farm roads) is likely to exceed 10m² within a CBA or ESA within 32m of a watercourse</p>
Activity No(s):	Provide the relevant Scoping and EIR Activities as set out in Listing Notice 2	Describe the portion of the proposed development to which the applicable listed activity relates.
<p>Note:</p> <ul style="list-style-type: none">Only those activities listed which will be applied for shall be considered for authorisation. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. Environmental Authorisation must be obtained prior to commencement with each applicable listed activity. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.The Minister responsible for mineral resources is the Competent Authority to deal with all applications where the listed or specified activity is directly related to-(a) prospecting or exploration of a mineral or petroleum resource; or(b) extraction and primary processing of a mineral or petroleum resource.		

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.

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.
<p>The preferred alternative is the proposed Hoogeland Coastal Farmsteads development, involving the consolidation, rezoning and subdivision of portions of Farm Hoogekraal No. 238 and Farm Buffelsdrift No. 227, George, into a low-intensity rural agricultural and conservation estate south of the N2. The proposal restructures the existing farm portions into approximately 81 farm portions, including agricultural farmsteads, conservation areas, split-zoned farms, private open spaces, equestrian facilities, internal private roads and utility infrastructure.</p> <p>The development retains the rural and agricultural character of the area by promoting small-scale and lifestyle farming on agricultural portions, while placing environmentally sensitive areas under conservation zoning. Eco-properties are subject to strict footprint controls, with development limited to a maximum of 2 000 m² per farm to minimise disturbance to natural vegetation and sensitive landscapes. Conservation areas are intended to support biodiversity protection, rehabilitation, ecological connectivity and low-impact recreational use.</p> <p>A key social component of the preferred alternative is the creation of a rural farmworker village comprising approximately 110 group housing units for existing farmworker families with confirmed tenure rights under ESTA. The village will include communal agricultural and recreational facilities and will allow these families to remain within the Hoogekraal area rather than being relocated to urban settlements.</p> <p>The proposal also includes shared facilities such as a polo field, stables, paddocks, dressage areas, riding trails, hiking routes and communal open spaces. Existing farm roads will largely be retained and improved, current proclaimed roads within the area are proposed to be deproclaimed and replaced by private roads maintained by a homeowners association, with servitude access protected where required.</p> <p>Services will be provided through a combination of existing lawful water use allocations, rainwater harvesting, on-site water treatment, solar and Eskom electricity supply, and on-site sewage treatment. The farmworker village will be serviced by a package sewage treatment plant, with treated effluent reused for irrigation, while individual farms will manage sewage treatment on site subject to municipal requirements.</p> <p>Overall, the preferred alternative represents a managed rural restructuring of the application area that seeks to balance continued agricultural use, secure accommodation for existing tenure-right holders, conservation of sensitive areas, low-impact rural living, and sustainable service provision.</p>	
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.
<p>The proposed development is in line with the existing land use rights of the property because it is fundamentally a rural/agricultural restructuring of land that is already used and zoned for agricultural purposes, rather than the introduction of a completely unrelated urban land use.</p> <p>The application area is currently zoned Agriculture Zone I and has historically been used for agricultural purposes, including grazing, planted pastures, farm dwellings, farm roads, farm worker accommodation, existing farm infrastructure, water storage and associated rural activities. The preferred alternative retains this underlying rural and agricultural character by reorganising the existing farm portions into smaller agricultural farmsteads and zoning the biodiversity priority areas as conservation areas, shared communal areas will be zoned as private open spaces to supporting communal infrastructure.</p> <p>The proposal therefore does not represent a departure from the broad land use character of the property, but rather a formalisation and rationalisation of existing and compatible rural land uses. The agricultural portions will remain in agricultural use, with lifestyle farming, small-scale agriculture, grazing, orchards, vegetable gardens, equestrian activities and associated farm dwellings and outbuildings. These uses are consistent with the existing agricultural zoning rights and the historic use of the land.</p> <p>The proposed subdivision and consolidation seek to create a more coordinated cadastral and land use arrangement within the existing farming landscape. Farms that are currently divided by the N2 or Morrison Road will be rationalised along these existing physical barriers, and internal farm roads will largely follow existing access routes. Existing lawful access rights and servitudes will be retained or replaced with appropriate right-of-way servitudes where necessary, ensuring that neighbouring landowners' access rights are not prejudiced.</p> <p>Where parts of the property are proposed to be rezoned from Agriculture Zone I to Open Space Zone III / conservation use, this is compatible with the existing land character because these areas correspond mainly with natural, marginal or environmentally sensitive portions of the farms. The conservation zoning therefore reflects the environmental attributes of the land and provides a more appropriate long-term management framework than unconstrained agricultural use. In this respect, the proposal reduces potential disturbance in sensitive areas and supports restoration, biodiversity protection and ecological connectivity.</p> <p>The existing farm school is also proposed to be retained and formalised under an appropriate community / place of instruction zoning, while the existing farm worker occupation of the property is addressed through the establishment of a rural farmworker village for families with confirmed ESTA tenure rights. This component formalises an existing social and residential reality on the farms, allowing the affected families to remain within the Hoogekraal farming area while being provided with organised services, communal agricultural areas and secure accommodation.</p>	

The proposed private open space, equestrian facilities, riding trails, hiking routes and communal areas are all ancillary to the rural estate concept and support the continued agricultural and rural lifestyle use of the property. Similarly, utility infrastructure, private roads, stormwater management, water treatment and sewage treatment facilities are required to service the lawful rural land uses and are integrated into the existing farm layout as far as possible.

Overall, the preferred alternative is aligned with the existing land use rights because it retains the agricultural basis of the property, formalises existing rural settlement and farmworker occupation, protects sensitive natural areas through conservation zoning, and provides supporting infrastructure for a low-intensity rural development. The proposal therefore represents an orderly and controlled refinement of existing agricultural land use rights rather than a fundamental change to an incompatible land use.

Full details are provided in sections of this report above.

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.
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Potential conflicts between the current preferred alternative and existing approvals for the site have been resolved through the refinement of the development proposal and by ensuring that the current layout remains within, and is less intensive than, the broad development parameters previously accepted for the property.

A key consideration is the approval previously issued by the Department of Agriculture for the creation of smaller agricultural portions of approximately 2 ha. That approval allowed for a significantly more fragmented agricultural subdivision pattern than the one now proposed. The current preferred alternative does not rely on the full subdivision potential of that approval, but instead proposes a reduced and more consolidated layout comprising only 82 portions. In this respect, the current proposal represents a downscaling of the subdivision intensity previously accepted by the agricultural authority.

The reduction from a potential pattern of numerous 2 ha agricultural units to 82 portions assists in resolving potential conflict by limiting cadastral fragmentation, reducing the extent of duplicated infrastructure, and allowing for larger portions of land to be retained under agricultural, conservation or open space management. This approach is more consistent with the environmental sensitivities of the site and provides a more manageable long-term land use framework.

The current proposal also rationalises the land use layout by aligning proposed portions with existing physical and cadastral constraints, including the N2, Morrison Road, existing access routes, environmentally sensitive areas, drainage features and areas suitable for continued agricultural use. This reduces the risk that approved but unimplemented subdivision rights would result in an inefficient or environmentally insensitive development pattern.

Any potential overlap between historic approvals and the current proposal is therefore addressed by treating the current application as a revised and preferred development framework for the property. Where existing approvals remain relevant, they are acknowledged as part of the planning history of the site; however, the current proposal supersedes the more intensive subdivision concept by presenting a lower-intensity alternative that better integrates agricultural use, conservation management, farmworker accommodation and supporting rural infrastructure.

In addition, the proposed zoning and subdivision structure clarifies the intended future use of each portion, thereby avoiding uncertainty between older approval rights and the proposed land use arrangement. Agricultural components remain within an agricultural land use framework, conservation-sensitive areas are placed under appropriate conservation or open space zoning, and existing social commitments — including farmworker accommodation and tenure-related obligations — are incorporated into the layout.

Accordingly, the current preferred alternative resolves potential conflict with existing approvals by proposing fewer portions than were previously permitted, retaining the rural and agricultural character of the land, reducing the degree of land fragmentation, and providing a more environmentally responsive and administratively coherent development framework for the site.

Urban landuse conflicts within the rural agricultural area associated with the historic urban development approval (golf estate) proposal are completely removed through the proposed zoning framework (agriculture and conservation zonings), reducing the potential for future applications of an urban nature.

4.	Explain how the proposed development will be in line with the following?
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4.1	The Provincial Spatial Development Framework.
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The preferred alternative is considered to be consistent with the Provincial Spatial Development Framework as it retains the rural and agricultural character of the application area and avoids the introduction of a conventional urban development form outside the urban edge. The proposal is for the restructuring of an existing agricultural landscape into a low-intensity rural agricultural estate comprising agricultural farmsteads, conservation areas, private open spaces, equestrian facilities, internal private roads, utility infrastructure and a rural farmworker village.

The development does not seek to replace the agricultural character of the land with an urban township-type development. Instead, it provides for continued agricultural use on suitable portions of the site, while placing environmentally sensitive areas under conservation or open space management. This approach supports provincial spatial planning principles that seek to protect agricultural resources, retain rural landscape character, avoid inappropriate urban expansion, and ensure that development in rural areas is appropriate to the receiving environment.

The proposed development also supports provincial biodiversity and climate-resilience objectives by providing a differentiated land use response based on site sensitivity. Areas of natural vegetation, watercourses, wetland-related

features, ecological linkages and other environmentally sensitive portions are proposed to be managed for conservation, rehabilitation and low-impact use. Development footprints will be controlled, particularly on eco-properties where disturbance will be limited to a maximum developable footprint of 2 000 m² per farm. This assists in limiting cumulative disturbance while allowing compatible rural use of the land.

Overall, the preferred alternative gives effect to the Provincial Spatial Development Framework by maintaining an agricultural and rural development pattern, limiting land transformation, protecting sensitive environmental features and supporting a sustainable rural settlement model that is more appropriate to the site than the previously approved high-intensity resort-style development concept

4.2 The Integrated Development Plan of the local municipality.

The proposed development is aligned with the municipal IDP as it supports rural economic activity, agricultural diversification, local employment creation, social stability and improved living conditions for existing rural residents. The proposal provides for a managed rural development that combines small-scale agricultural use, conservation management, rural residential opportunities, equestrian and recreational facilities, and formalised accommodation for existing farmworker families.

A central component of the proposal is the establishment of a rural farmworker village for approximately 110 families with confirmed tenure rights in terms of the Extension of Security of Tenure Act, 1997. These families currently reside within the broader application area and have indicated that they wish to remain within the Hoogekraal farming area rather than being relocated to George or Mossel Bay. The proposed village therefore addresses an existing social and tenure-related reality on the farms and supports municipal objectives relating to tenure security, social sustainability and access to organised services.

The development also supports municipal infrastructure and service planning objectives by providing for planned internal access, stormwater management, on-site water treatment, sewage treatment, treated effluent reuse, private road maintenance and managed estate governance. The proposal is intended to rely largely on existing lawful water use allocations, rainwater harvesting, on-site treatment systems, solar energy opportunities and a package sewage treatment plant for the farmworker village. This reduces unmanaged pressure on municipal urban infrastructure and supports a more self-contained rural servicing model.

In this regard, the preferred alternative contributes to IDP objectives by promoting orderly rural development, supporting local socio-economic benefits, securing accommodation for existing tenure-right holders, and providing infrastructure and services in a planned and managed manner

4.3 The Spatial Development Framework of the local municipality.

The proposed Hoogeland Coastal Farmsteads development is considered to be broadly aligned with the objectives of the George Municipal SDF, particularly in relation to the protection of rural character, the sustainable use of agricultural land, the safeguarding of environmentally sensitive areas, and the orderly management of land use change outside the urban edge. The proposal does not constitute a conventional urban township expansion, but rather a reconfiguration of existing agricultural land into smaller agricultural holdings, conservation areas, private open spaces, communal facilities and a rural farmworker village associated with existing lawful occupiers.

The SDF recognises the need to protect productive agricultural landscapes and agricultural use and avoid uncontrolled urban sprawl into rural areas. In this regard, the proposal retains a significant agricultural land-use component, with approximately half of the application area remaining under agricultural use and with continued opportunities for small-scale farming, grazing, equestrian agriculture, orchards, food gardens and lifestyle farming. The subdivision pattern is intended to support continued rural/agricultural use rather than displace it with higher-density urban development.

The proposal also supports the SDF's environmental management objectives by identifying environmentally sensitive portions of the site for conservation zoning and low-impact eco-property use. Areas with higher biodiversity sensitivity, watercourses, wetland features, natural vegetation and landscape value are proposed to be protected through Open Space Zone III / Nature Conservation Area zoning, development footprint restrictions, buffers, rehabilitation measures and ongoing management by the relevant property association. This approach is consistent with spatial planning principles that require development to be directed away from sensitive natural systems and that ecological corridors and landscape connectivity be maintained.

From a settlement-planning perspective, the inclusion of a rural farmworker village is responsive to an existing social and land tenure reality on the property. The proposal seeks to formalise accommodation for approximately 110 families with established tenure rights in terms of ESTA, while retaining them within the rural setting where they have historically lived and worked. This supports the SDF objective of managing rural settlement in a planned and serviced manner, rather than allowing ongoing dispersed and informal occupation across the farm portions.

The development further aligns with the SDF by making use of existing access routes and infrastructure corridors as far as possible. Internal farm roads will largely follow existing routes, unnecessary roads are proposed to be closed and rehabilitated, and services such as water pipelines will be accommodated within road reserves. Access will be obtained from Morrison Road, with road safety upgrades implemented where required. Water supply will rely on existing lawful water uses, supplemented by rainwater harvesting, while wastewater will be managed through on-site treatment systems and reuse, thereby limiting dependence on municipal bulk infrastructure.

Importantly, the proposal incorporates design and landscape controls aimed at maintaining the rural, agricultural and scenic character of the area. Building footprints are restricted, eco-properties are limited to small developable areas, architectural guidelines require an agricultural vernacular, and indigenous landscaping and visual buffering are proposed. These measures respond directly to the SDF's emphasis on protecting the Garden Route's rural landscapes, scenic qualities and environmental assets.

On balance, the proposal gives effect to the SDF by promoting a low-intensity, rural land-use form that combines agriculture, conservation, rural housing for existing tenure-right holders, and sustainable infrastructure.

It therefore represents a planned and controlled rural restructuring of an existing agricultural area, rather than inappropriate urban encroachment, and can be regarded as consistent with the spatial planning direction of the Municipality, subject to the implementation of the specialist recommendations, environmental authorisation conditions, service approvals and land-use management controls.

4.4. The Environmental Management Framework applicable to the area.

The preferred alternative is consistent with the regional Environmental Management Framework because it responds to the environmental sensitivity of the site through avoidance, footprint control, conservation zoning, rehabilitation and low-impact rural development. The proposal avoids a high-density or urban-style development form and instead directs development towards transformed or historically agricultural areas, while retaining and managing more sensitive natural areas.

The regional EMF generally supports development outcomes that protect biodiversity, watercourses, wetlands, ecological corridors, scenic landscapes and the rural character of the Garden Route. The preferred alternative gives effect to these principles by placing sensitive portions of the site under Open Space Zone III / conservation management, retaining ecological linkages, managing natural vegetation, limiting hard-surfaced development, and requiring buffers and appropriate mitigation around aquatic features and sensitive habitats.

The proposal also reduces cumulative environmental pressure when compared with previous development concepts for the site. The former Lagoon Bay Lifestyle Estate proposal included substantially more intensive components, including golf courses, hotel, commercial, conference and high-density residential uses. By contrast, the current preferred alternative provides for a lower-intensity rural agricultural estate with agricultural farmsteads, conservation portions, private open spaces, equestrian and recreational amenities, a rural village for existing tenure-right holders and managed service infrastructure.

Roads, services and infrastructure will be aligned with existing routes and disturbed corridors as far as possible, while stormwater, water use, sewage treatment and treated effluent reuse will be managed through the associated engineering design and water use authorisation processes. This ensures that the development is assessed and implemented in an integrated manner, consistent with the EMF objective of managing environmental risk and cumulative impact.

Overall, the preferred alternative is aligned with the regional EMF because it protects sensitive environmental features, limits development footprints, retains rural landscape character, protects agricultural resources, supports rehabilitation and conservation management, and provides a more environmentally responsive alternative to previously approved, more intensive development concepts.

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

Comments and findings from the biodiversity-related specialists have directly informed the proposed development layout, zoning approach and environmental management measures.

The terrestrial biodiversity, plant and animal species assessment confirmed that the site contains areas of very high biodiversity sensitivity, including remnants of Critically Endangered Garden Route Granite Fynbos, natural fynbos, forest and thicket habitats, Critical Biodiversity Areas, ecological corridors and habitat suitable for species of conservation concern. Similarly, the aquatic assessment identified wetlands, seep areas, non-perennial drainage lines, watercourse systems and Strategic Water Source Area sensitivities that require protection from disturbance.

As a result, the development proposal has not been approached as a uniform subdivision of agricultural land. Instead, the layout has been informed by the mapped environmental sensitivities, with areas of higher biodiversity and aquatic sensitivity being avoided as far as possible and incorporated into conservation-focused land-use categories. This is reflected in the proposed rezoning of sensitive portions out of Agriculture Zone I to Open Space Zone III / Nature Conservation Area, as well as the use of split zoning on certain farm portions where agricultural use is retained only on the less sensitive or historically transformed parts of the property, while the more sensitive natural areas are set aside for restoration.

The specialist findings have also influenced the distinction between "Agri Properties" and "Eco Properties". Agri Properties are concentrated in areas that have historically been cultivated, grazed or otherwise transformed and are therefore more suitable for continued agricultural or small-scale farming use. Eco Properties, by contrast, are located in more natural and sensitive landscapes and are subject to significantly reduced development footprints, with a maximum developable area of 2,000 m² per farm, including all buildings and hard surfaces. This ensures that the majority of each Eco Property remains as natural vegetation or rehabilitated open space.

The aquatic specialist input has influenced the treatment of watercourses, wetlands and drainage features. Buffers are proposed around aquatic systems, and roads, services and crossings are to be aligned as far as possible with existing disturbed routes and around wetland areas. Where crossings of drainage lines or seep areas are unavoidable, these are to be designed as low-impact crossings and authorised through the associated Water Use Licence Application process. Stormwater management has also been shaped by the specialist input, with the proposal retaining existing catchment drainage patterns, using grass swales, limiting hardened surfaces, encouraging infiltration and ensuring that runoff continues to move through the landscape in a controlled manner.

Biodiversity comments have further influenced the proposed management commitments for the development. These include alien invasive plant control, rehabilitation of disturbed areas, use of indigenous and preferably locally appropriate plant species, protection of remaining natural vegetation, maintenance of ecological corridors, restriction of livestock

access to sensitive aquatic features, control of earthworks, and the implementation of an Environmental Management Programme. The proposed Homeowners' Association / management body will therefore have an ongoing role in ensuring that biodiversity areas are not only avoided during construction, but actively managed over the long term.

The specialist input has also influenced the proposed infrastructure layout. New roads and service routes are intended to follow existing farm roads and disturbed corridors where possible, thereby reducing additional fragmentation of natural habitat. Unnecessary roads are proposed to be closed and rehabilitated, and services such as water pipelines are to be placed within road reserves to avoid creating additional linear disturbance through sensitive areas.

In summary, the biodiversity specialist comments have materially shaped the proposed development by identifying sensitive areas, informing the conservation zoning and split-zoning approach, limiting development footprints in natural areas, guiding the alignment of roads and services, requiring aquatic buffers and low-impact crossings, and introducing long-term biodiversity management and rehabilitation measures. The proposal has therefore evolved into a lower-impact rural development model that seeks to retain agricultural use on transformed land while protecting and restoring the most sensitive biodiversity and aquatic features of the site.

Authorities will have an opportunity to comment on the pre-application Draft BAR and Specialists reports in order to further refine the proposed layout in relation to biodiversity.

6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.
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The Western Cape Biodiversity Spatial Plan (WCBSP), together with its handbook guidelines, has influenced the proposed development by requiring the layout to respond to mapped biodiversity priorities rather than treating the site as a uniform agricultural property.

The Western Cape Biodiversity Spatial Plan (WCBSP) and the associated land-use guidelines have informed the proposed Hoogeland Coastal Farmsteads development by identifying those parts of the site that have biodiversity importance and by guiding how different land uses should be located, limited and managed. The WCBSP indicates that parts of the application area fall within biodiversity-priority areas, including Critical Biodiversity Areas (CBAs), Ecological Support Areas (ESAs), threatened ecosystem remnants, watercourse systems and ecological corridors. These designations do not automatically prohibit all development, but they require that development planning follow the mitigation hierarchy and ensure that biodiversity pattern, ecological process and landscape connectivity are maintained.

In response to the WCBSP mapping, the proposal has been structured around a differentiated land-use approach. Areas that are historically transformed, cultivated or used for grazing are retained primarily for agricultural use, while the more natural and sensitive portions of the site are proposed for conservation-oriented zoning and management. This is reflected in the split-zoning approach (Agriculture Zone I and Open Space Zone III) and the proposed Open Space Zone III / Nature Conservation Area portions.

The layout therefore distinguishes between land that can continue to support agricultural and rural farmstead use, and land that should be protected, rehabilitated or managed primarily for biodiversity purposes.

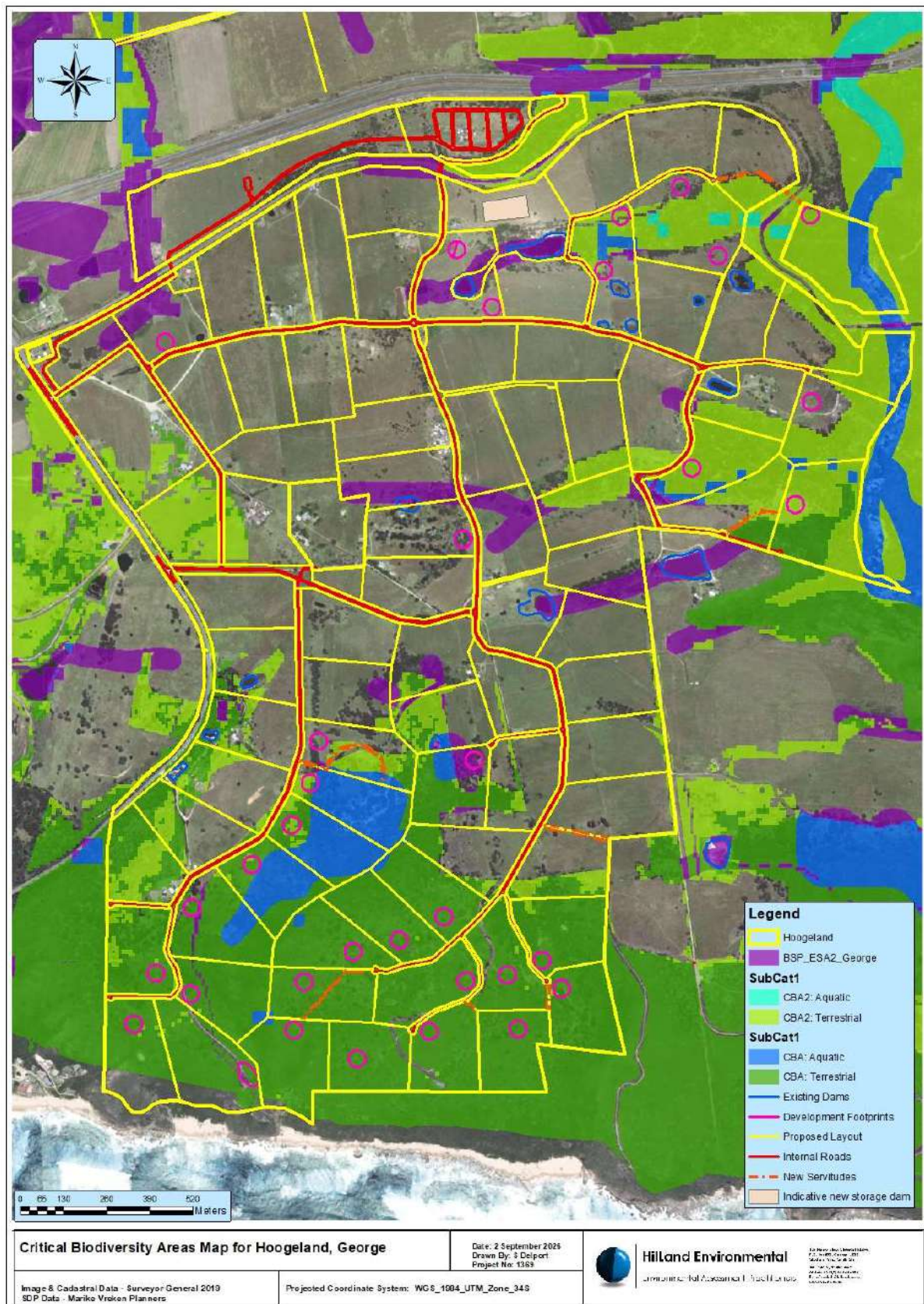
The WCBSP handbook emphasises that CBAs should be maintained in a natural or near-natural state and that land-use change should not result in the loss of irreplaceable biodiversity features or ecological functioning. This has influenced the proposal by directing development footprints away from the most sensitive areas, limiting disturbance within natural vegetation, and requiring that the remaining natural areas be retained as conservation areas or low-impact eco-properties. In the Eco Properties, the developable area is restricted to a maximum of 2,000 m² per farm, including all buildings and hard surfaces, so that the vast majority of each property remains natural or available for rehabilitation / restoration. Alien species management is already taking place over the property and an ACP in terms of NEMBA has been approved and will be implemented.

The handbook also recognises that ESAs are important for supporting ecological processes, ecological corridors, hydrological functioning and landscape-scale connectivity. This has influenced the proposed road, service and stormwater planning. Existing farm roads and disturbed corridors are used as far as possible, pipelines are proposed within road reserves, unnecessary roads are to be closed and rehabilitated, and new crossings of watercourses or seep areas are to be minimised and authorised through the relevant environmental and water-use processes. Stormwater management is also based on retaining existing catchment drainage patterns, using grass swales, promoting infiltration and avoiding unnecessary hardening of the landscape.

The WCBSP has also influenced the proposed management obligations for the development. The conservation and eco-property areas will require active alien invasive plant control, rehabilitation of disturbed areas, protection of indigenous vegetation, maintenance of ecological corridors, restriction of livestock access to sensitive aquatic features, and implementation of an Environmental Management Programme. These measures are consistent with the WCBSP handbook's emphasis on maintaining ecological condition and improving degraded biodiversity-priority areas where possible.

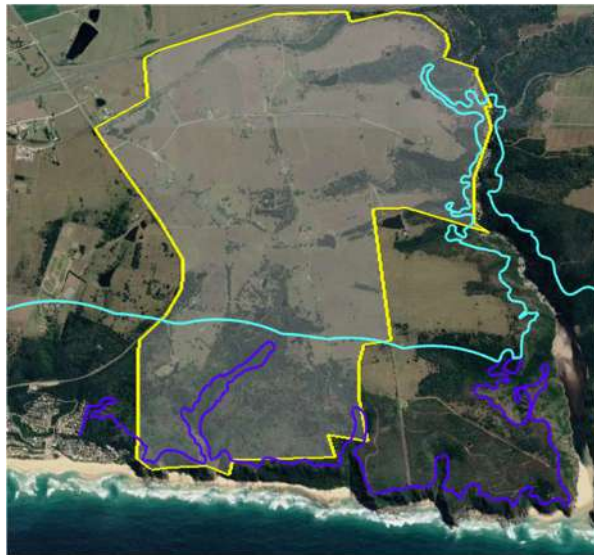
Importantly, the proposed development represents a lower-impact alternative to unconstrained agricultural use or a more urban-style development. While existing agricultural use is retained on transformed land, the WCBSP has resulted in the most sensitive areas being assigned a stronger conservation function, with development footprints limited and biodiversity management formalised through zoning, property rules and long-term management by the relevant property association. The proposal therefore seeks to give practical effect to the WCBSP by avoiding and minimising impacts on CBAs and ESAs, maintaining ecological connectivity, protecting remaining threatened vegetation and aquatic features, and promoting rehabilitation and stewardship across the site.

In summary, the WCBSP and its handbook guidelines have directly influenced the planning response by shaping the conservation zoning, split zoning, reduced development footprints, location of eco-properties, road and service alignments, aquatic buffer treatment, and long-term management commitments. The proposed development has therefore been designed to retain agricultural use where biodiversity sensitivity is lower, while protecting and restoring the ecological functioning of the higher-sensitivity areas identified through the WCBSP and confirmed through specialist assessment.



WCBSP – CBA and ESA mapping

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
	<p>The proposed Hoogeland Coastal Farmsteads development has been planned with due regard to the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA") and the relevant coastal management considerations applicable to land within the coastal environment. The ICMA seeks to ensure that development within coastal areas is undertaken in a manner that protects the ecological integrity, natural character, public value and resilience of the coastal zone, while allowing appropriate forms of land use that are compatible with the coastal setting.</p> <p>The application area is located within a sensitive coastal landscape between the N2, Morrison Road, the Maalgate River and the Indian Ocean.</p> <p>The proposal is for a low-density rural agricultural farmstead development, with conservation areas, eco-properties, private open space, agricultural holdings, equestrian facilities, a rural farmworker village and associated infrastructure. This land-use form is more consistent with the purpose of coastal management, as it retains the rural and landscape character of the coastal platform and avoids urban expansion into the coastal environment.</p> <p>The ICMA and associated coastal management zones are intended to manage development so that coastal ecosystems, dynamic coastal processes, coastal public property, coastal access, estuaries, rivers, wetlands, coastal vegetation, scenic resources and risk-prone areas are not compromised. The proposed development responds to this intention by directing higher levels of use toward historically transformed agricultural areas and by assigning more sensitive natural areas to conservation-oriented zoning. Approximately 182 ha is proposed for conservation, while approximately 264 ha remains under agricultural use, with the balance comprising roads, utilities, recreation and village-related land uses. This spatial arrangement supports the ICMA objective of locating development where it is least likely to affect coastal ecological functioning.</p> <p>The proposed Open Space Zone III / Nature Conservation Area portions are particularly important in demonstrating alignment with the purpose of the coastal management framework. These areas will protect natural vegetation, ecological corridors, watercourse systems, wetland and seep areas, coastal landscape features and areas of higher biodiversity sensitivity. The conservation zoning, together with the proposed development controls, ensures that the most sensitive parts of the coastal landscape are managed primarily for biodiversity protection, rehabilitation and low-impact use rather than for intensive built development.</p> <p>The Eco Properties also reflect the coastal management intent of limiting disturbance in sensitive coastal environments. These properties are located within more natural or environmentally sensitive landscapes and are subject to a maximum developable area of 2,000 m² per farm, including all buildings and hard surfaces. This means that the majority of each eco-property will remain in a natural or rehabilitated condition. This approach reduces vegetation clearance, limits soil disturbance, maintains landscape permeability and avoids unnecessary hardening of the coastal environment.</p> <p>The proposed development further aligns with the ICMA by retaining existing drainage patterns and protecting water-related ecological processes. The site drains toward the Maalgate River and the ocean, and includes wetlands, seeps, non-perennial drainage lines and watercourses. The stormwater approach is therefore based on the continued use of existing catchment drainage patterns, grass swales, low-water crossings and infiltration-based measures. Roads and services are to follow existing disturbed corridors as far as possible, while new or upgraded crossings of watercourses will be assessed and authorised through the NEMA and associated Water Use Licence processes. This is consistent with the ICMA's purpose of protecting coastal water quality, ecological functioning and downstream coastal systems.</p> <p>The development also avoids compromising coastal public property or coastal access. The proposal relates to the reconfiguration of privately owned agricultural land and does not propose interference with the seashore, or development that would alter coastal public property.</p> <p>From a visual and landscape perspective, the proposal is also consistent with the ICMA's broader coastal management objectives. The coastal zone is not only an ecological resource, but also a scenic and cultural landscape. The proposed architectural and landscape guidelines require modest building forms, agricultural vernacular architecture, subdued colours, low visual intrusion, indigenous planting, rehabilitation of disturbed areas and protection of natural buffers. These measures will assist in maintaining the rural coastal character of the area and preventing the visual degradation of the coastal platform. The proposed rural farmworker village is also consistent with the ICMA's principle of promoting equitable and sustainable use of coastal resources and land.</p> <p>Overall, the proposed development is consistent with the intention and purpose of the relevant ICMA coastal management zones because it applies a low-impact, rural and conservation-led development model within a sensitive coastal landscape. It retains agricultural use on transformed land, protects sensitive coastal and biodiversity features through conservation zoning, limits development footprints in natural areas, manages stormwater and watercourse crossings, avoids impacts on coastal public property, and incorporates long-term environmental management through the HOA, EMPr and specialist mitigation measures. Subject to implementation of the specialist recommendations, coastal authority comments, environmental authorisation conditions and water-use approvals, the proposal is considered compatible with the coastal management objectives of the ICMA.</p>



Coastal Management Line (CML) = dark blue; Coastal Protection Zone (CPZ) = light blue – the proposed development layout shows how the Conservation Zone aligns and expands on the CML and CPZ.

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 changes to the Screening Report – this is the pre-application phase.

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

N/A – the land is rural not urban

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

The proposed development has been designed to make efficient and sustainable use of the existing resources, infrastructure and disturbed footprint of the application area.

The proposal is not for a conventional greenfield urban expansion, but for the reconfiguration of an existing agricultural landscape where roads, farm tracks, water abstraction infrastructure, dams, dwellings, agricultural areas, school facilities and existing occupation already occur. By retaining, formalising and upgrading these components where appropriate, the development reduces the need for unnecessary new infrastructure, limits additional disturbance and makes better use of the site's existing capacity.

Existing agricultural land will continue to be used for agricultural purposes where the land has historically been cultivated, grazed or otherwise transformed. Approximately 264 ha will remain available for agriculture, including small-scale farming, grazing, planted pastures, orchards, food gardens and equestrian-related agricultural activities. This ensures that the productive potential of the land is not abandoned, but redirected into a more diversified and manageable rural agricultural model suited to the soil, water and economic limitations identified by the specialists.

The proposal also optimises the existing lawful water resources on the farms. The farms have existing lawful water uses that have been verified and validated through the Breede-Olifants Catchment Management Agency process, and the total water demand of the proposed development is substantially lower than the confirmed existing lawful entitlement. Existing abstraction infrastructure from the Maalgate River and existing central dam infrastructure are proposed to be refurbished and used for agricultural and domestic supply, supported by treatment, filtration and distribution infrastructure. This reduces reliance on municipal bulk water supply and allows the development to function within the water resources already associated with the agricultural properties.

Water use efficiency is further improved through rainwater harvesting on individual farms, on-site storage tanks, irrigation from farm storage, and the reuse of treated effluent for irrigation of communal areas. The rural farmworker village will be serviced by an on-site package sewage treatment plant, with treated effluent reused for irrigation and stored in an off-channel dam or reservoir where appropriate. This converts wastewater into a usable resource, reduces the need for discharge to the environment, and lessens pressure on municipal wastewater infrastructure.

The road network has similarly been planned to optimise existing access infrastructure. Existing farm roads and proclaimed minor roads already bisect the application area and will largely remain in their existing alignments, with improvements where required. Roads that are no longer necessary will be closed and rehabilitated, while required internal roads will become private roads maintained by the HOA. Pipelines and services will be located within road reserves as far as possible, thereby avoiding the creation of additional linear disturbance across agricultural or sensitive environmental areas.

External access will also make use of the existing Morrison Road access system, with targeted upgrades such as dedicated right-turn lanes where required by the Traffic Impact Assessment. This approach avoids the need for a new regional access structure and ensures that safety and efficiency improvements are focused on the existing transport network.

Stormwater management will also rely on the existing natural drainage patterns and topography of the site. The development will retain the existing catchment delineations and allow runoff to continue moving toward the Maalgate River and the ocean through existing overland flow paths, drainage lines and culvert systems. Gravel farm roads, grass swales, low-water crossings, limited hard surfaces and rainwater harvesting will reduce additional runoff and avoid unnecessary hard engineering interventions.

Existing social and community infrastructure is also incorporated into the proposal. The existing Hoogekraal Primary School will be retained and formalised on its own cadastral property, while the existing farmworker occupation will be consolidated into a planned rural farmworker village for approximately 110 ESTA beneficiaries. This represents a more efficient use of existing settlement patterns, as it formalises established occupation within the rural area where the farmworkers wish to reside with the community that is already established rather than relocating these families into the urban areas of Mossel Bay or George.

The use of solar photovoltaic systems, continued Eskom supply where available, on-site water treatment, on-site wastewater treatment, rainwater harvesting and private infrastructure management by the HOA further supports a resource-efficient development model. The proposal therefore reduces dependence on municipal bulk services, while ensuring that infrastructure is managed and maintained within the development.

Overall, the proposed development optimises existing resources and infrastructure by retaining productive agricultural land, using verified existing lawful water allocations, refurbishing existing water abstraction and storage systems, following existing road alignments, placing services within road reserves, retaining natural drainage systems, reusing treated effluent, formalising existing community facilities and consolidating existing farmworker occupation.

Biodiversity resources will be managed through appropriate zoning, use and management.

This approach supports a lower-impact, more sustainable rural development model that makes better use of the resources already present on the site while limiting new disturbance and infrastructure duplication.

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).
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Municipal services are not available nor required as the properties will be making use of own supply and services as detailed above.

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.
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The need and desirability of the proposed Hoogeland Coastal Farmsteads development, considered in terms of the Department's Guideline on Need and Desirability, which requires an assessment of whether the proposed activity is needed at this location and whether it represents a proper, sustainable and context-sensitive use of land and resources.

The guideline requires consideration of strategic context, ecological sustainability, efficient resource use, socio-economic need, alternatives, cumulative impacts, and the extent to which the proposal gives effect to the principles of sustainable development contained in NEMA.

The proposed activity is needed because the application area is an existing agricultural landscape with a complex ownership, land-use and occupation history that requires formalisation and rationalisation. The farms currently consist of multiple cadastral units, existing agricultural activities, existing farm roads, existing water-use infrastructure, existing dwellings, an existing school and approximately 110 families with confirmed permanent tenure rights in terms of ESTA. These families are already resident on the farms and have indicated that they wish to remain in the Hoogekraal area rather than relocate to George or Mossel Bay. The proposal therefore responds to an existing social and tenure-rights reality by consolidating scattered occupation into a planned and serviced rural farmworker village, while retaining the community's connection to the land.

The proposal is also needed from a land-use management perspective. The current arrangement is fragmented and does not provide a coherent long-term framework for agricultural use, conservation management, access, services, stormwater, biodiversity protection or the formal accommodation of existing lawful occupiers. The proposed consolidation, subdivision and rezoning will create a more coordinated and enforceable land-use structure, with agricultural areas, conservation areas, open space, utility infrastructure, roads, communal facilities and the rural village clearly defined and managed.

From an agricultural perspective, the specialist assessments indicate that large-scale conventional commercial agriculture across the whole site is constrained by soil suitability, water availability and existing land capability. The proposed reconfiguration allows agricultural use to continue on land that is suitable or historically transformed, but shifts the emphasis toward smaller-scale, diversified and lifestyle agricultural activities, including grazing, planted pastures, orchards, food gardens, equestrian agriculture and other small-scale farming activities. This represents a more realistic and adaptive agricultural model for the site than attempting to maintain or expand conventional commercial farming across land with variable potential.

The desirability of the proposal is strengthened by the fact that it retains approximately 264 ha of the application area for agricultural use while assigning approximately 182 ha to conservation-oriented zoning or conservation management. This means that the proposal does not simply convert agricultural land to urban development, but rather creates a mixed rural land-use model that combines continued agriculture, biodiversity protection, restoration, low-impact eco-property use, communal open space and formal rural housing. This is consistent with the Need and Desirability guideline's emphasis on

avoiding unnecessary loss of productive land, using land efficiently, and ensuring that environmental assets are protected as part of development planning.

The development is desirable in its spatial context because it does not constitute conventional urban sprawl or a high-density coastal resort. It is located within an existing rural/agricultural landscape and is designed as a low-density rural farmstead development, with strict controls on building footprints, architectural character, landscape treatment and environmental management. Eco-properties are limited to a maximum developable area of 2,000 m² per farm, including all buildings and hard surfaces, ensuring that the majority of those properties remain natural or available for rehabilitation. This is a substantially lower-impact approach than the previously contemplated Lagoon Bay Lifestyle Estate, which included extensive residential, lodge, hotel, golf course and resort-related components, or the 2ha smallholdings currently approved by the Department of Agriculture.

The proposal also responds to the environmental dimension of need and desirability. Specialist assessments have confirmed the presence of sensitive biodiversity, including remnants of Critically Endangered Garden Route Granite Fynbos, Critical Biodiversity Areas, Ecological Support Areas, watercourses, seep wetlands, drainage lines and strategic water source area sensitivities. The layout and zoning have been influenced by these sensitivities, with higher-sensitivity areas avoided as far as possible, incorporated into Open Space Zone III / Nature Conservation Area, or subject to reduced development footprints and long-term management controls. This gives practical effect to the mitigation hierarchy by avoiding and minimising impacts before relying on rehabilitation and management.

The proposal is also desirable because it optimises existing infrastructure and resources rather than requiring a fully new municipal-serviced development model. Existing farm roads will largely be retained and improved, unnecessary roads will be closed and rehabilitated, and services such as pipelines will be located within road reserves where possible. Access will be obtained from Morrison Road, with required safety upgrades undertaken by the developer.

Existing lawful water uses verified through the BOCMA process will be used for agricultural and domestic purposes, supplemented by rainwater harvesting and on-site treatment.

Wastewater will be managed through on-site treatment systems, with treated effluent reused for irrigation where appropriate. This limits the demand placed on municipal bulk water and sanitation infrastructure.

Socio-economically, the proposed activity is desirable because it provides for formal housing and ownership opportunities for existing ESTA beneficiaries, retains the existing school, creates a more organised rural settlement pattern, supports small-scale farming opportunities, and is expected to generate employment during construction and operation. The socio-economic assessment indicates that the reconfiguration of the land into small farms, conservation parcels and the farm village provides greater socio-economic returns and employment potential than maintaining the existing conventional agricultural model under current constraints.

The proposal further supports intergenerational equity and long-term sustainability by placing land-use, architectural, biodiversity, infrastructure and management controls into a formal planning and governance framework.

The HOA / management body, design guidelines, EMPr, biodiversity management measures, alien invasive plant control, water-use authorisations, stormwater controls and land-use conditions will provide enforceable mechanisms to manage impacts over time. This is preferable to continued ad hoc occupation, unmanaged grazing, scattered infrastructure, alien invasion and uncoordinated land-use change.

In terms of alternatives, the continuation of the status quo would not resolve the fragmented cadastral pattern, the scattered ESTA occupation, the lack of coordinated services, or the need to protect and manage sensitive biodiversity areas.

The previously approved/intended Lagoon Bay-type development would have represented a substantially more intensive land-use form, with greater potential impacts on rural character, traffic, water demand, sensitive vegetation and coastal landscape character. The current proposal therefore represents a more balanced and lower-impact alternative that responds to the site's agricultural, social, biodiversity and infrastructure constraints.

On balance, the proposed activity is both needed and desirable because it addresses an existing land-use and social need, formalises tenure and services for existing farm occupiers, retains a meaningful agricultural land-use component, protects and restores sensitive biodiversity areas, makes efficient use of existing roads and water infrastructure, avoids dependence on municipal bulk services, and provides a low-density rural development form that is compatible with the surrounding landscape. Subject to implementation of the specialist recommendations, environmental authorisation conditions, water-use approvals, land-use controls and long-term management measures, the proposal is considered to satisfy the Department's Need and Desirability considerations and to represent an appropriate sustainable development response for the site.

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.

Linear activities covered as part of the main development proposal.

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 will commence with this pre-application Draft BAR.

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

All State Departments and Organs of State will be consulted through this pre-application draft BAR.

Provincial Roads Vanessa Stoffels vanessa.stoffels@westerncape.gov.za

SANRAL Nicole Abrahams (WR) AbrahamsN@nra.co.za

National Department of Agriculture luahelpdesk@nda.gov.za / [luahelpdesk@Dalrrd.gov.za](mailto:luahelpdesk@dalrrd.gov.za)

CapeNature- mdevilliers@capenature.co.za

DEADP-EIAAdmin George DEADPEIAAdmin.George@westerncape.gov.za

George Municipality LJosias ljosas@george.gov.za D Power dpower@george.gov.za

Garden Route District Municipality Nina Viljoen nina@gardenroute.gov.za info@gardenroute.gov.za

BOCMA - Carlo Abrahams cabrahams@bocma.co.za

DEADP – Coastal Management Caren George caren.george@westerncape.gov.za

SACAA- environment@caa.co.za

Department of Health Nathan.Jacobs@westerncape.gov.za

HWC- HWC.HWC@westerncape.gov.za

DFFE - Department Forestry - Innocent Mapokgole imapokgole@dffe.gov.za

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

All above will be consulted

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

Pre-application phase – no formal participation to date.

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.

Pre-application phase – no issues raised to date other than in terms of the ESTA – where beneficiaries have indicated unwillingness to be relocated to George or Mossel Bay and beneficiaries will be accommodated on site in the proposed Rural Farmworkers Village.

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.		
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
	No change to ground water use proposed.		
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.		
	No change or influence		

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.		
	Colin Fordham – Upstream consulting		
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		

The presence of watercourses and wetlands on the properties has materially influenced the proposed development by requiring the layout to respond to the site's hydrological and aquatic sensitivity.

The aquatic assessment identified a network of hillslope seep wetlands, valley-bottom wetland areas, non-perennial drainage lines, surface-flow paths and hydrologically connected systems that ultimately drain toward the Maalgate River and the Indian Ocean. Although many of these systems have been modified by historical agriculture, grazing, roads, dams, alien vegetation and altered drainage patterns, they continue to perform important ecological and hydrological functions, including flow regulation, infiltration, sediment control, habitat connectivity and downstream water-quality support.

As a result, the development has not been designed as a uniform subdivision across the whole property. The mapped watercourses, wetlands and drainage features have informed the placement of conservation areas, eco-properties, roads, services and development footprints. Sensitive aquatic features and their associated buffers are to be avoided as far as possible, with more intensive agricultural and residential uses directed toward historically transformed or less sensitive areas. Areas associated with aquatic, riparian and wetland sensitivity are incorporated into conservation-oriented zoning, open space or low-impact eco-property management where appropriate.

The aquatic features have also influenced the proposed road network. Existing farm roads will largely be retained in their current alignments so as to avoid unnecessary new disturbance and further fragmentation of watercourse systems. Where drainage-line crossings already exist, these will be retained or upgraded where required, while any new crossings will be limited, assessed and authorised through the environmental authorisation and Water Use Licence Application processes. Low-water crossings or drift-type crossings are proposed where roads need to cross areas of subsurface seepage or surface flow, so that natural water movement can continue across the landscape.

The stormwater management approach has similarly been shaped by the presence of wetlands and watercourses. The proposal retains the existing catchment delineations and natural drainage patterns, with runoff continuing to move toward existing drainage lines, the Maalgate River and the ocean. Gravel roads, grass swales, limited hardened surfaces, rainwater harvesting, infiltration-based measures and low-water crossings are proposed to reduce peak runoff and avoid concentrating flows into sensitive aquatic systems. The development footprint on eco-properties is limited to a maximum of 2,000 m² per farm, which also reduces the extent of hard surfaces and assists in maintaining natural infiltration and overland flow.

The presence of wetlands and watercourses has also influenced service infrastructure. Water pipelines are proposed within road reserves as far as possible, thereby avoiding additional disturbance corridors through aquatic or wetland areas. Wastewater from the rural farmworker village will be treated in an on-site package plant, with treated effluent reused for irrigation and subject to monitoring, rather than being discharged directly into aquatic systems. Individual farms will be required to manage sewage on site in accordance with municipal requirements, with appropriate treatment measures to avoid contamination of soils, groundwater, wetlands or drainage lines.

The aquatic assessment further recommended management measures to protect and improve the condition of the remaining systems. These include buffer areas of approximately 35–42 m around watercourses and wetlands where applicable, alien invasive plant control, rehabilitation of disturbed wetland and drainage-line edges, protection of indigenous vegetation, restriction of livestock access to sensitive aquatic features, erosion control, and careful management of earthworks near drainage areas. These measures will be incorporated into the EMP and long-term management obligations of the HOA or relevant management body.

The presence of watercourses and wetlands also affects the regulatory process. Activities within watercourses or within 32 m of watercourses, including road crossings, upgrading of infrastructure, infilling, excavation or movement of material, may trigger listed activities under the NEMA EIA Regulations. In addition, water uses associated with impeding or diverting flow, altering beds or banks, storage of water, abstraction, and irrigation with treated effluent will require assessment and authorisation through the associated Water Use Licence Application under the National Water Act. The WULA process is therefore being run in parallel with the NEMA and planning processes to ensure that aquatic impacts are assessed and managed in an integrated manner.

In summary, the watercourses and wetlands have directly influenced the proposed development by shaping the conservation zoning, buffers, road alignments, crossing designs, stormwater system, service routes, wastewater management and authorisation requirements. The proposal seeks to retain existing hydrological patterns, avoid and minimise disturbance to aquatic features, rehabilitate degraded areas, and manage runoff, livestock, alien plants and wastewater so that the ecological functioning of the wetland and watercourse systems is maintained and, where possible, improved over time.



Wetland delineation and buffers as defined by Upstream Consulting with NFEPA mapping – note that the NFEPA wetlands do not align with the site assessment and delineation, the groundtruth data is the correct data for assessment purposes.

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.	Covered under the Fresh Water Specialist assessment above – Colin Fordam, Upstream Consulting.	
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.		

The proposed Hoogeland Coastal Farmsteads development has been planned with due regard to the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA") and the relevant coastal management considerations applicable to land within the coastal environment. The ICMA seeks to ensure that development within coastal areas is undertaken in a manner that protects the ecological integrity, natural character, public value and resilience of the coastal zone, while allowing appropriate forms of land use that are compatible with the coastal setting.

The application area is located within a sensitive coastal landscape between the N2, Morrison Road, the Maalgate River and the Indian Ocean.

The proposal is for a low-density rural agricultural farmstead development, with conservation areas, eco-properties, private open space, agricultural holdings, equestrian facilities, a rural farmworker village and associated infrastructure. This land-use form is more consistent with the purpose of coastal management, as it retains the rural and landscape character of the coastal platform and avoids urban expansion into the coastal environment.

The ICMA and associated coastal management zones are intended to manage development so that coastal ecosystems, dynamic coastal processes, coastal public property, coastal access, estuaries, rivers, wetlands, coastal vegetation, scenic resources and risk-prone areas are not compromised. The proposed development responds to this intention by directing higher levels of use toward historically transformed agricultural areas and by assigning more sensitive natural areas to conservation-oriented zoning. Approximately 182 ha is proposed for conservation, while approximately 264 ha remains under agricultural use, with the balance comprising roads, utilities, recreation and village-related land uses. This spatial arrangement supports the ICMA objective of locating development where it is least likely to affect coastal ecological functioning.

The proposed Open Space Zone III / Nature Conservation Area portions are particularly important in demonstrating alignment with the purpose of the coastal management framework. These areas will protect natural vegetation, ecological corridors, watercourse systems, wetland and seep areas, coastal landscape features and areas of higher biodiversity sensitivity. The conservation zoning, together with the proposed development controls, ensures that the most sensitive parts of the coastal landscape are managed primarily for biodiversity protection, rehabilitation and low-impact use rather than for intensive built development.

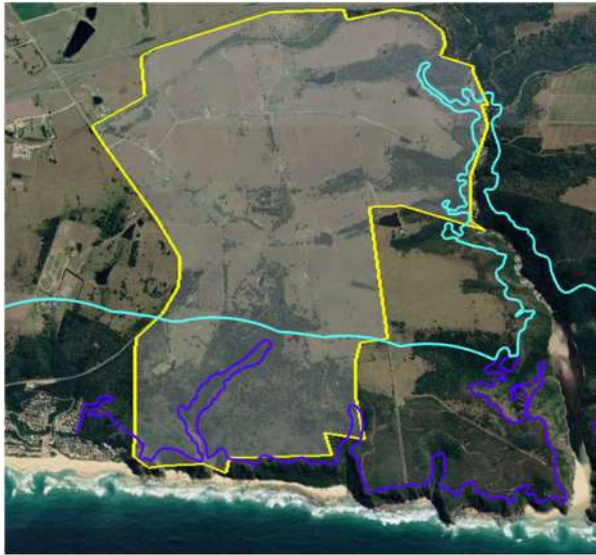
The Eco Properties also reflect the coastal management intent of limiting disturbance in sensitive coastal environments. These properties are located within more natural or environmentally sensitive landscapes and are subject to a maximum developable area of 2,000 m² per farm, including all buildings and hard surfaces. This means that the majority of each eco-property will remain in a natural or rehabilitated condition. This approach reduces vegetation clearance, limits soil disturbance, maintains landscape permeability and avoids unnecessary hardening of the coastal environment.

The proposed development further aligns with the ICMA by retaining existing drainage patterns and protecting water-related ecological processes. The site drains toward the Maalgate River and the ocean, and includes wetlands, seeps, non-perennial drainage lines and watercourses. The stormwater approach is therefore based on the continued use of existing catchment drainage patterns, grass swales, low-water crossings and infiltration-based measures. Roads and services are to follow existing disturbed corridors as far as possible, while new or upgraded crossings of watercourses will be assessed and authorised through the NEMA and associated Water Use Licence processes. This is consistent with the ICMA's purpose of protecting coastal water quality, ecological functioning and downstream coastal systems.

The development also avoids compromising coastal public property or coastal access. The proposal relates to the reconfiguration of privately owned agricultural land and does not propose interference with the seashore, or development that would alter coastal public property.

From a visual and landscape perspective, the proposal is also consistent with the ICMA's broader coastal management objectives. The coastal zone is not only an ecological resource, but also a scenic and cultural landscape. The proposed architectural and landscape guidelines require modest building forms, agricultural vernacular architecture, subdued colours, low visual intrusion, indigenous planting, rehabilitation of disturbed areas and protection of natural buffers. These measures will assist in maintaining the rural coastal character of the area and preventing the visual degradation of the coastal platform. The proposed rural farmworker village is also consistent with the ICMA's principle of promoting equitable and sustainable use of coastal resources and land.

Overall, the proposed development is consistent with the intention and purpose of the relevant ICMA coastal management zones because it applies a low-impact, rural and conservation-led development model within a sensitive coastal landscape. It retains agricultural use on transformed land, protects sensitive coastal and biodiversity features through conservation zoning, limits development footprints in natural areas, manages stormwater and watercourse crossings, avoids impacts on coastal public property, and incorporates long-term environmental management through the HOA, EMPr and specialist mitigation measures. Subject to implementation of the specialist recommendations, coastal authority comments, environmental authorisation conditions and water-use approvals, the proposal is considered compatible with the coastal management objectives of the ICMA.



Coastal Management Line (CML) = dark blue; Coastal Protection Zone (CPZ) = light blue – the proposed development layout shows how the Conservation Zone aligns and expands on the CML and CPZ.

3.4. Explain how estuary management plans (if applicable) have influenced the proposed development.

The Maalgate Estuary Management Plan (2022 Draft) has influenced the proposed development by requiring the planning, layout and management measures to recognise that the application area forms part of the broader Maalgate River catchment and drains ultimately toward the Maalgate Estuary and the Indian Ocean. Although the proposed development is not located within the estuary itself, activities on the properties have the potential to affect downstream estuarine functioning through changes in stormwater runoff, sediment movement, water quality, abstraction, wastewater management, alien vegetation, erosion and disturbance to watercourses and wetlands.

The estuary management planning framework emphasises the need to maintain ecological functioning, water quality, hydrological connectivity and natural coastal processes within the estuarine system. This has influenced the proposal by ensuring that the development does not introduce an intensive urban or resort-type land use immediately upstream of the estuary. Instead, the proposal has been structured as a low-density rural agricultural and conservation-based development, with extensive conservation areas, limited development footprints and continued agricultural use on historically transformed land.

The presence of the Maalgate River system and its downstream estuarine environment has also influenced the treatment of watercourses, wetlands and drainage features on the site. Existing drainage patterns are to be retained as far as possible, and stormwater will continue to follow existing catchment delineations toward existing drainage lines, the Maalgate River and the ocean. The use of gravel roads, grass swales, low-water crossings, limited hardened surfaces, rainwater harvesting and infiltration-based stormwater measures is intended to prevent concentrated runoff, erosion and sediment mobilisation that could affect downstream aquatic and estuarine environments.

The Estuary Management Plan has further influenced the servicing approach. Wastewater from the rural farmworker village will be treated through an on-site package plant, with treated effluent reused for irrigation and subject to quality monitoring, rather than being discharged directly into watercourses or the estuary. Individual farms will also be required to manage sewage on site in accordance with municipal and environmental requirements. These measures are important because poorly managed wastewater, nutrients or contaminants could affect downstream water quality in the Maalgate River and estuarine system.

The proposed water-use approach also responds to downstream estuarine considerations. Existing lawful water uses from the Maalgate River have been verified through the water-use process, and the proposed water demand is substantially lower than the existing lawful entitlement. The associated Water Use Licence Application will assess abstraction, storage, crossings, treated effluent irrigation and any activities that may impede or divert flow. This ensures that the development is assessed in relation to the ecological functioning of the river system and its downstream receiving environment, including the estuary. The development layout has also been influenced through the allocation of sensitive areas to conservation zoning and eco-property management. Wetlands, watercourses, riparian corridors, natural vegetation and areas of higher biodiversity sensitivity will be avoided as far as possible, buffered, rehabilitated or managed under Open Space Zone III / Nature Conservation Area zoning. This assists in maintaining ecological corridors and catchment processes that support the health of the Maalgate River and estuary.

In practical terms, the influence of the Estuary Management Plan is reflected in the proposal's commitment to avoid unnecessary disturbance of aquatic systems, maintain natural drainage routes, minimise hardened surfaces, manage stormwater at source, control erosion and sedimentation, rehabilitate degraded drainage areas, implement alien invasive plant control, monitor treated effluent quality, and regulate activities through the EMPr, HOA management rules and WULA conditions.

In summary, the Maalgate Estuary Management Plan has influenced the proposed development by requiring an upstream catchment-sensitive design response. The proposal has therefore been shaped to reduce potential downstream impacts on the Maalgate River and estuarine environment through low-density rural land use, conservation zoning, aquatic buffers, low-impact road crossings, on-site wastewater treatment, water-quality monitoring, stormwater controls, rehabilitation measures and integrated management through the NEMA and National Water Act processes.

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.
	See response to 3.3 above.

4. Biodiversity

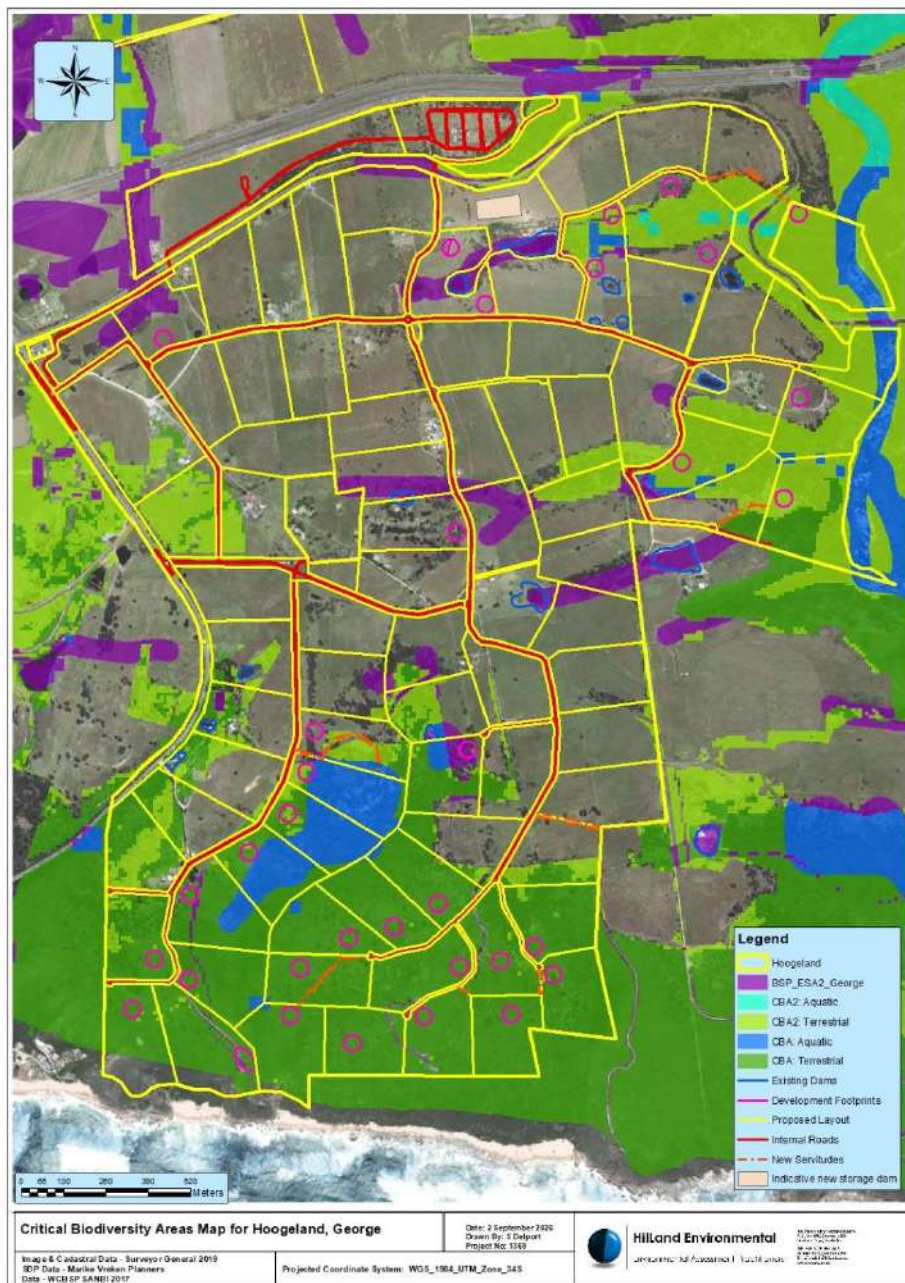
4.1.	Were specialist studies conducted?	YES	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
Dr David Hoare – BioCensus			
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		

The proposed development has been informed by a number of systematic conservation planning tools and biodiversity datasets, as well as the findings of the aquatic and terrestrial biodiversity specialists.

The biodiversity informants used for the assessment include the Western Cape Biodiversity Spatial Plan (WCBSP), national vegetation and ecosystem threat-status mapping, the Screening Tool biodiversity themes, freshwater and wetland datasets such as NFEPA and related water-resource mapping, Strategic Water Source Area information, protected-area and ecological corridor datasets, species distribution records, aerial imagery, historical land-use interpretation and specialist field verification.

These datasets were not used in isolation, but were ground-truthed through the aquatic and terrestrial biodiversity specialist assessments and then used to inform the proposed layout, zoning and management response.

The WCBSP was one of the key systematic conservation planning informants. It identifies portions of the application area as Critical Biodiversity Areas and Ecological Support Areas, which indicates that the property contributes to biodiversity pattern, ecological process, landscape connectivity and the functioning of freshwater and terrestrial ecological systems. This influenced the proposed development by ensuring that the site was not treated as a uniform agricultural subdivision. Instead, areas of higher biodiversity importance have been incorporated into conservation zoning, open space or low-impact eco-property management, while more transformed or historically cultivated areas have been retained for agricultural use.



WCBSP - CBA and ESA data for the site.

National and provincial vegetation mapping also influenced the proposal. The site falls within the mapped extent of Garden Route Granite Fynbos, which is recognised as a Critically Endangered ecosystem, with remaining natural patches being of high conservation value due to the extent of historical transformation and fragmentation. The vegetation mapping, together

National Biodiversity Areas Map showing the Remaining Extent of Threatened Ecosystems

Scale: 0 100 200 300 400 500 Meters

Legend

- Hoogland
- Cape Lowland Alluvial Vegetation (EN)
- Garden Route Granite Fynbos (CR)
- Existing Dams
- Development Footprints
- Proposed Layout
- Internal Roads
- New Servitudes
- Indicative new storage dam

Metadata:

Title: National Biodiversity Areas Map showing the Remaining Extent of Threatened Ecosystems
 Date: 2 September 2026
 Drawn by: S. Oelofse
 Project No: 1363

Projected Coordinate System: WGS_1984_UTM_Zone_36S

Hilland Environmental
 100% SOUTH AFRICAN OWNED & OPERATED
 100% SOUTH AFRICAN EMPLOYMENT

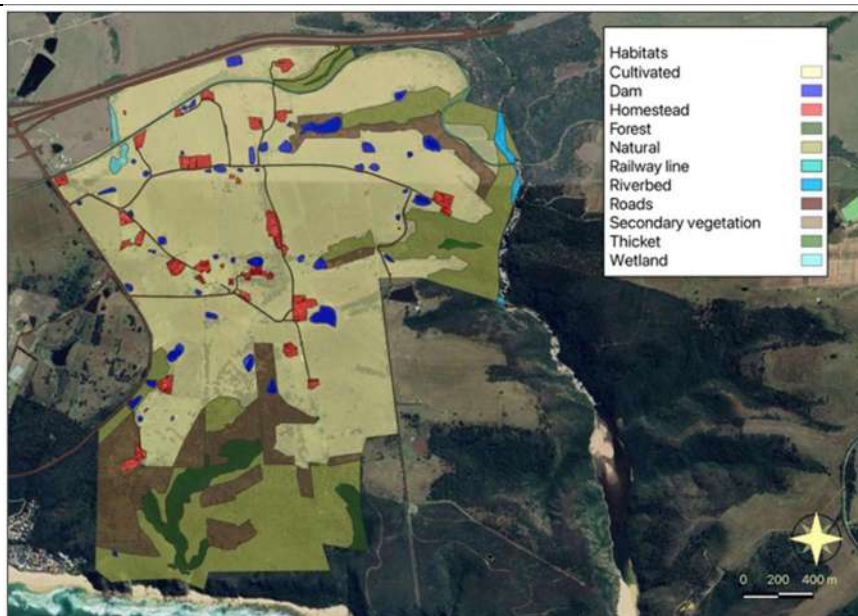


Figure-12:-Habitats-on-site.¶

Biocensus 2026

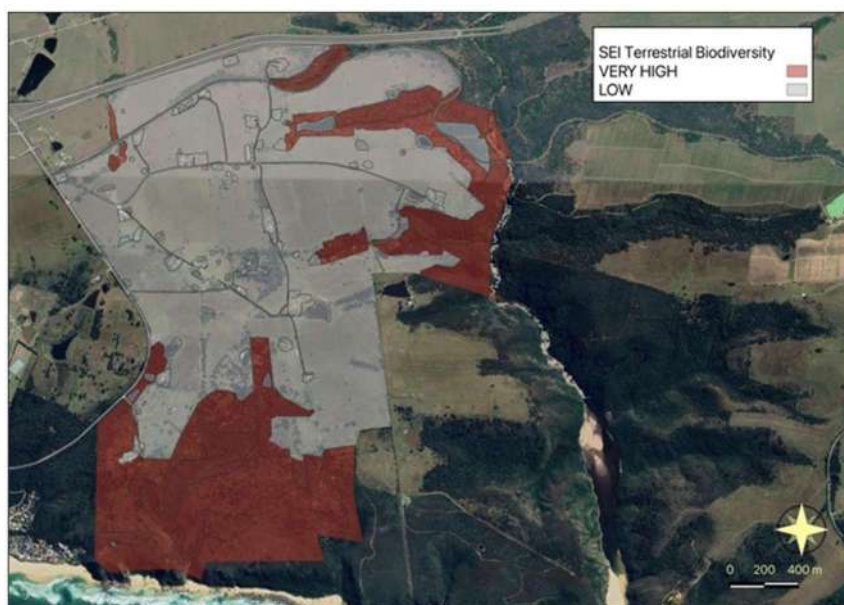


Figure-14:- Site Ecological Importance for Terrestrial Biodiversity- Theme.¶

Biocensus 2026

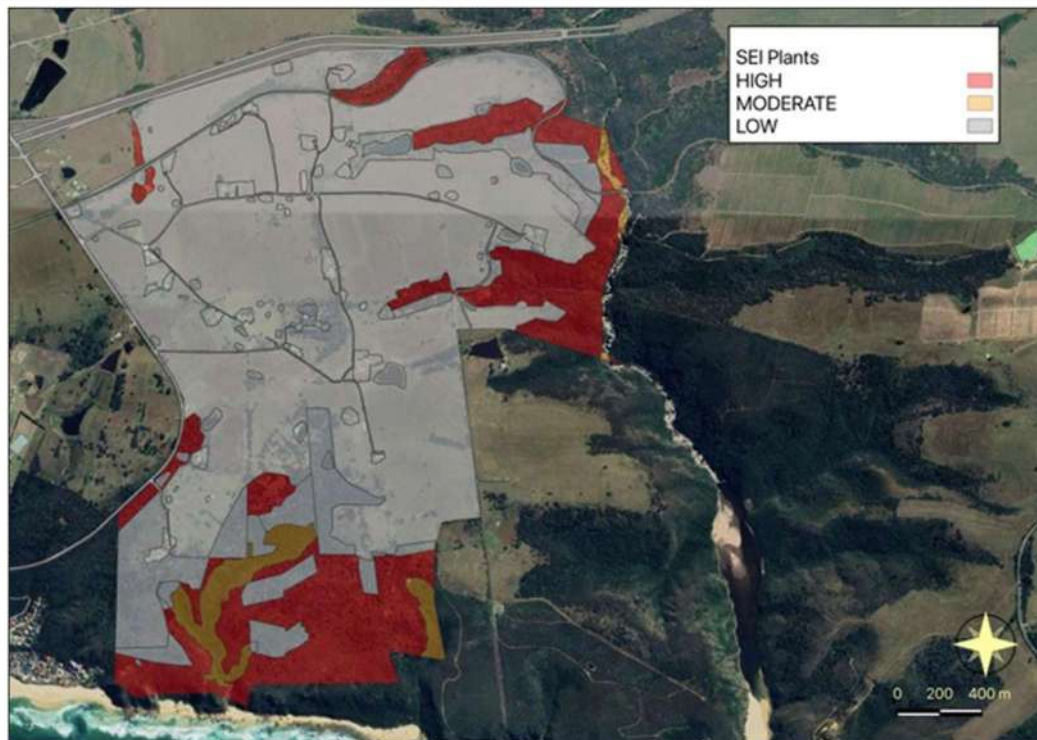


Figure-15:-Site-Ecological-Importance-for-Plant-Species-Theme.¶

Biocensus, 2026

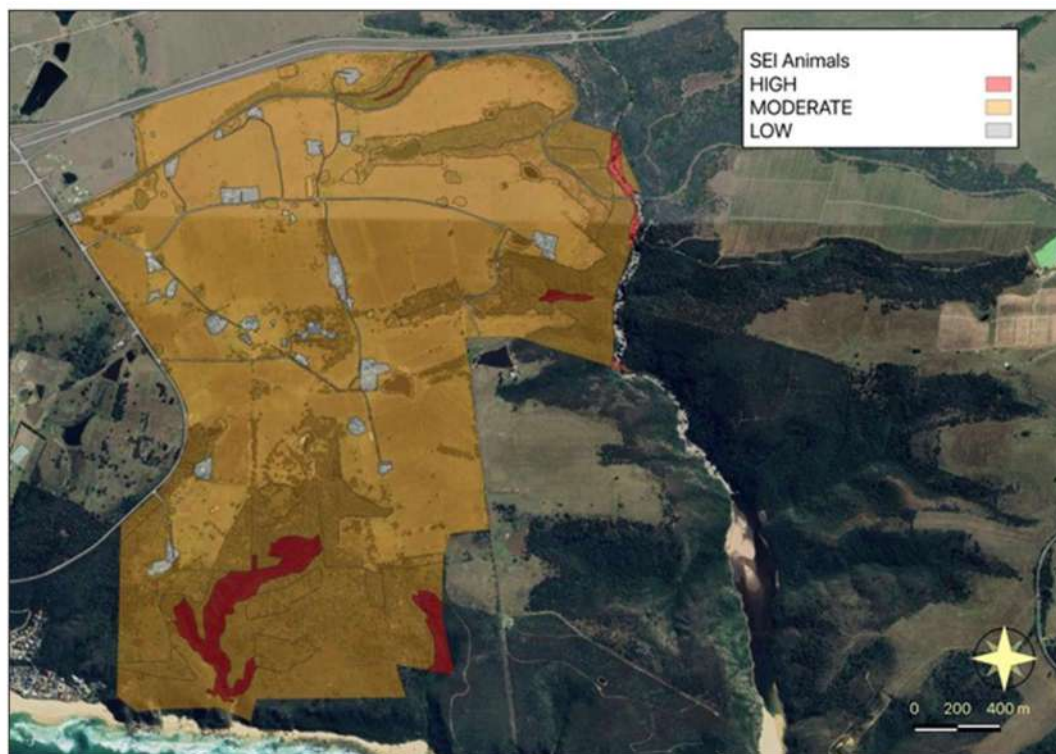


Figure-15:-Site-Ecological-Importance-for-Animal-Species-Theme.¶

Biocensus, 2026

The National Freshwater Ecosystem Priority Areas information, wetland and watercourse mapping, and aquatic specialist verification were used to identify freshwater features and their ecological context. These informants confirmed the presence of hillslope seep wetlands, valley-bottom wetland areas, non-perennial drainage lines, flow paths and hydrologically connected systems that drain toward the Maalgate River and ultimately the coast. This influenced the proposal by requiring aquatic buffers, low-impact stormwater design, retention of existing drainage patterns, limitation of hardened surfaces, careful design of road crossings, and the need for a Water Use Licence Application for activities that may alter flow, affect beds and banks, involve water storage, abstraction or treated-effluent irrigation.

The Strategic Water Source Area mapping was also relevant, as parts of the site fall within the Outeniqua Strategic Water Source Area. This indicates that the broader landscape contributes to regional water yield and catchment functioning. As a result, the proposed development has incorporated measures to protect infiltration, avoid unnecessary hardening of the landscape, maintain natural drainage patterns, use grass swales and low-water crossings, promote rainwater harvesting, and manage wastewater through on-site treatment and reuse rather than uncontrolled discharge.

Species-level biodiversity informants were also used. The biodiversity specialist considered available species distribution records, habitat suitability, the Screening Tool outputs and field observations to assess plant and animal species of conservation concern. This included habitat associated with threatened plant species in fynbos areas, forest and thicket habitat for faunal species of conservation concern, and sensitive wetland or riparian habitats. This influenced the proposed development by requiring avoidance of high-sensitivity habitats where possible, restricting development footprints in eco-properties, retaining habitat corridors, requiring further species-specific management where necessary, and incorporating alien invasive plant control and rehabilitation into the EMPr and long-term HOA management obligations.

Historical aerial imagery and current satellite imagery were also important informants because they helped distinguish between areas that have been cultivated, grazed, roads or otherwise transformed over time, and areas that have retained natural or semi-natural vegetation and alien infestation. This historical land-use interpretation influenced the layout by supporting the retention of agricultural use in transformed areas and the allocation of less transformed or ecologically recoverable areas to conservation or low-impact eco-property use.

The cumulative effect of these biodiversity informants is reflected in the proposed development layout and land-use structure. The proposal provides for approximately 264 ha to remain under agricultural use, approximately 182 ha to be placed under conservation-oriented zoning or conservation management, and the balance to accommodate roads, utilities, private open space, the farmworker village and related infrastructure. The split-zoning approach, the use of Open Space Zone III / Nature Conservation Area, the 2,000 m² development footprint limit on eco-properties, the retention of ecological corridors, the protection of aquatic systems, the use of existing roads where possible, and the closure and rehabilitation of unnecessary roads all flow from the biodiversity constraints identified through these planning tools and specialist studies.

In summary, the systematic conservation planning and biodiversity informants have substantially shaped the proposed development. They identified which parts of the site are important for threatened ecosystems, CBAs, ESAs, freshwater systems, wetlands, watercourses, strategic water production, ecological connectivity and species of conservation concern. In response, the proposal has been designed to avoid and minimise impacts on higher-sensitivity areas, retain agriculture on historically transformed land, formalise conservation zoning and management, reduce development footprints in natural areas, protect watercourses and wetlands, maintain ecological corridors, and implement rehabilitation, alien control and long-term biodiversity management through the EMPr, HOA and related authorisations.

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.
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The objectives and management guidelines of the Biodiversity Spatial Plan have been used as a key informant in the planning and assessment of the proposed Hoogeland Coastal Farmsteads development.

The Biodiversity Spatial Plan identifies biodiversity-priority areas, including Critical Biodiversity Areas, Ecological Support Areas, threatened ecosystem remnants, freshwater systems, ecological corridors and areas that are important for maintaining ecological processes. These spatial designations were used to understand which portions of the site should be avoided, protected, restored or subject to stricter land-use controls.

The primary objective of the Biodiversity Spatial Plan is to ensure that biodiversity pattern and ecological processes are maintained in the landscape. In response, the proposed development has not treated the application area as a uniform agricultural subdivision. Instead, the layout distinguishes between historically transformed agricultural areas, which are more suitable for continued agricultural or rural farmstead use, and natural or semi-natural areas, which are more important for biodiversity conservation, ecological connectivity and rehabilitation. This has directly influenced the proposed split-zoning approach.

The management guidelines for Critical Biodiversity Areas require that these areas be maintained in a natural or near-natural state, with land uses managed so that they do not result in the loss of irreplaceable biodiversity features or ecological functioning. This has influenced the proposal by directing development footprints away from the most sensitive areas where feasible, allocating sensitive portions to Open Space Zone III / Nature Conservation Area, limiting development within Eco Properties, and requiring that natural vegetation, fynbos, forest, thicket patches and ecological corridors be retained and restored / rehabilitated and are managed over the long term.

The management guidelines for Ecological Support Areas recognise that these areas may already be modified but remain important for supporting ecological processes such as hydrological functioning, buffering, connectivity, erosion control and movement of species through the landscape. This has influenced the proposed development by requiring that watercourses, wetlands, seep areas, drainage lines and associated buffers be incorporated into the layout and managed as part of the broader open space and conservation system. Roads and services are therefore proposed to follow existing disturbed corridors as far as possible, with pipelines located within road reserves, unnecessary roads closed and rehabilitated, and watercourse crossings limited to existing or essential crossing points.

The Biodiversity Spatial Plan guidelines have also influenced the development intensity and form. The proposal provides for Agri Properties mainly within historically cultivated, grazed or transformed areas, while Eco Properties occur in more natural or sensitive landscapes and are subject to a maximum developable area of 2,000 m² per farm, including all buildings and hard

surfaces. This ensures that the majority of each Eco Property remains in a natural or rehabilitated condition and that built development remains subordinate to biodiversity and landscape objectives.

The identified biodiversity sensitivities also influenced the proposed management responsibilities. The proposal includes long-term commitments to alien invasive plant control, rehabilitation of disturbed areas, protection of indigenous vegetation, use of locally appropriate indigenous landscaping, restriction of livestock access to sensitive aquatic features, erosion control, protection of wetland and watercourse buffers, and the implementation of an Environmental Management Programme. These measures are consistent with the Biodiversity Spatial Plan's objective of improving ecological condition where priority areas have been degraded.

The Biodiversity Spatial Plan also informed the need for biodiversity overlay mapping and specialist verification. The desktop biodiversity layers were checked through the terrestrial biodiversity, plant and animal species assessment and the aquatic sensitivity assessment. The specialist findings confirmed and mapped the presence of high-sensitivity terrestrial and aquatic features, including Critically Endangered Garden Route Granite Fynbos, natural fynbos, forest and thicket habitats, wetlands, seep systems, non-perennial drainage lines and hydrologically connected systems draining toward the Madgate River. These findings refined the practical application of the Biodiversity Spatial Plan on site and informed the final zoning, layout and mitigation measures.

In summary, the objectives and management guidelines of the Biodiversity Spatial Plan have influenced the proposal by shaping the conservation zoning, split-zoning approach, location of agricultural versus eco-property areas, reduced development footprints, road and service alignments, protection of aquatic features and ecological corridors, and long-term rehabilitation and management commitments. The proposal therefore seeks to retain agriculture on transformed land, avoid and minimise impacts on biodiversity-priority areas, protect remaining natural habitat, maintain ecological connectivity and improve the condition of degraded biodiversity areas through formal conservation zoning and enforceable management measures.

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.
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The proposed development will have a **moderated and managed impact** on the site-specific features and functions of the BSP categories because the layout has been shaped around the mapped biodiversity constraints, rather than imposed uniformly across the properties.

The application area includes land mapped in the Biodiversity Spatial Plan as biodiversity-priority areas, including Critical Biodiversity Areas and Ecological Support Areas. These categories indicate that the site performs important biodiversity and ecological-process functions, including the retention of remnants of Critically Endangered Garden Route Granite Fynbos, maintenance of habitat connectivity, support for species of conservation concern, protection of wetland and drainage-line systems, regulation of hydrological flows, erosion control and support for downstream aquatic systems linked to the Madgate River and coastal environment.

The proposed development has the potential to affect these site-specific features and functions through vegetation clearance for homesteads and associated infrastructure, increased human activity, road upgrades, new or upgraded watercourse crossings, services, stormwater changes, edge effects, alien invasive plant spread, livestock disturbance and disturbance to wetland or drainage-line buffers. If unmanaged, these impacts could reduce habitat integrity, fragment remaining natural vegetation, alter surface-water movement, increase erosion and sedimentation, and weaken the ecological-support role of the CBA and ESA network.

These potential impacts have directly influenced the proposed development layout and land-use structure. The site has not been treated as a uniform agricultural subdivision. Instead, the proposed layout differentiates between historically transformed areas, which are more suitable for continued agricultural use, and natural or semi-natural areas, which are more important for biodiversity pattern and ecological process where restoration should be prioritised.

This has resulted in the use of agricultural zoning for transformed farming areas, Open Space Zone III / Nature Conservation Area zoning for environmentally sensitive portions, and split zoning where only part of a property is suitable for agricultural or development use while the balance must remain under conservation management.

The development therefore seeks to avoid and minimise impacts on the core site-specific functions of the BSP categories.

Approximately 182 ha is proposed for conservation-oriented zoning or conservation management, while approximately 264 ha remains available for agricultural use. This allows agricultural activity to continue mainly on transformed land, while the more sensitive natural vegetation, fynbos, thicket, forest patches, watercourses, seep wetlands, drainage lines and ecological corridors are retained, buffered or managed as part of the conservation and open-space system.

The CBA-related functions have influenced the proposal most strongly in the Eco Properties and conservation portions. Eco Properties are located in more natural or sensitive landscapes and are subject to a maximum developable area of 2,000 m² per farm, including all buildings and hard surfaces. This means that the majority of each eco-property remains natural or available for rehabilitation. The purpose is to ensure that the remaining natural vegetation continues to function as habitat, ecological linkage and landscape matrix, rather than being fragmented by unrestricted development.

The ESA-related functions have influenced the treatment of watercourses, wetlands, drainage lines and seep areas. These areas support hydrological connectivity, flow regulation, sediment control and downstream water quality. In response, the proposal retains existing drainage patterns, limits hardened surfaces, uses grass swales and low-water crossings, places services such as pipelines within road reserves where possible, and requires authorisation of watercourse-related works through the

NEMA and WULA processes. Buffers, rehabilitation measures, alien invasive plant control and restrictions on livestock access to sensitive aquatic features are also required to maintain or improve ecological functioning.

The proposed internal road and service layout has also been influenced by the BSP functions. Existing roads and disturbed corridors are used as far as possible to avoid creating new fragmentation through CBAs, ESAs or remaining natural vegetation. Roads that are unnecessary will be closed and rehabilitated, while required roads will remain gravel farm roads with grass swales to maintain a rural and permeable character. Water pipelines are proposed within road reserves to avoid additional disturbance corridors through sensitive areas.

The proposal will still result in some residual impact on BSP features because new homesteads, roads, services and associated infrastructure will introduce development into a biodiversity-sensitive landscape together with the rehabilitation of these areas. However, the impact is reduced by avoiding the most sensitive areas where possible, limiting development footprints, retaining most natural areas under conservation or eco-property management, requiring on-site stormwater and wastewater controls, maintaining ecological corridors, and implementing long-term biodiversity management through the EMP, HOA rules and specialist recommendations.

In summary, the presence of CBA and ESA areas on the site has materially influenced the proposed development by requiring a biodiversity-led layout. The potential impacts on site-specific BSP features and functions have resulted in conservation zoning, split zoning, reduced development footprints, avoidance of sensitive habitats, protection of wetlands and watercourses, controlled road and service alignments, rehabilitation of disturbed areas, alien invasive plant management, livestock control and long-term environmental management. The proposal therefore seeks to retain agriculture on transformed areas while protecting and restoring the biodiversity-pattern and ecological-process functions that justify the BSP categories on the site.

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.
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N/A

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.
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The presence of fauna on and adjacent to the proposed development has influenced the proposal by requiring the development to retain habitat connectivity, avoid high-sensitivity habitats where possible, and manage construction and operational disturbance in a way that reduces impacts on animal movement, breeding, foraging and sheltering areas.

The presence of fauna on and adjacent to the proposed development has been considered through the Plant Species, Animal Species and Terrestrial Biodiversity baseline study and sensitivity verification, as well as through the aquatic and landscape assessments. These studies indicate that the site and its surrounds provide habitat for a range of faunal species associated with fynbos, forest, thicket, wetland, drainage-line and agricultural-edge habitats. The biodiversity assessment also identified the potential occurrence of animal species of conservation concern, including species associated with open grassland/fynbos areas, forest and thicket patches, wetland margins and broader ecological corridors.

Although much of the application area has been historically transformed by agriculture, grazing, farm roads, dams, dwellings and alien invasive vegetation, the remaining natural and semi-natural areas continue to provide important faunal habitat. Forest, thicket and fynbos remnants, drainage lines, wetland edges, the Maalgate River corridor and adjoining natural areas all contribute to movement routes, refuge areas, feeding habitat and ecological connectivity across the landscape. The presence of fauna has therefore reinforced the need to avoid treating the site as a uniform development footprint.

This has influenced the proposed layout by directing more intensive agricultural, residential and infrastructure components toward historically disturbed or transformed portions of the site, while retaining more natural areas under conservation zoning, open space or low-impact eco-property management. The proposed Open Space Zone III / Nature Conservation Area portions and the split-zoning approach will assist in retaining habitat blocks and movement corridors for fauna, particularly in areas associated with natural vegetation, watercourses, wetlands and ecological linkages.

The Eco Properties have also been influenced by faunal sensitivity. These properties are located within more natural or environmentally sensitive parts of the landscape and are subject to a maximum developable area of 2,000 m² per farm, including all buildings and hard surfaces. This ensures that the majority of each eco-property remains natural or available for rehabilitation, thereby retaining habitat and reducing fragmentation. The limitation on hard surfaces also assists in maintaining permeability across the landscape for smaller mammals, reptiles, amphibians, birds and invertebrates.

The proposed conservation and landscape management measures are also important for fauna. Alien invasive plant control, rehabilitation of disturbed areas, use of indigenous vegetation, retention of fynbos, forest and thicket patches, protection of wetland and drainage-line buffers, and restriction of livestock access to sensitive aquatic features will improve habitat quality over time. These measures are intended not only to protect plants and aquatic systems, but also to maintain the habitat structure required by fauna.

The presence of watercourses and wetlands is particularly relevant to faunal movement and habitat use. These features provide habitat for amphibians, reptiles, birds, invertebrates and other moisture-dependent species, and also function as movement corridors through the broader agricultural landscape. In response, the proposal retains existing drainage patterns, limits new crossings, uses low-water crossings where necessary, places services within road reserves where possible, and requires aquatic buffers and WULA authorisation for works affecting watercourses. This reduces the risk of severing hydrological and faunal movement links.

The road and trail network has also been influenced by faunal considerations. Existing farm roads will be used as far as possible to avoid creating additional disturbance corridors through natural habitat. Roads that are unnecessary will be closed and

rehabilitated, while private roads and trails will remain low-impact and aligned to existing disturbed routes or contours where feasible. This reduces further fragmentation and helps maintain movement opportunities between habitat patches.

During construction, faunal protection will require practical mitigation measures, including pre-construction checks in sensitive areas, demarcation of no-go areas, control of vegetation clearing, phased or limited clearing where possible, prevention of unnecessary disturbance to wetlands and natural vegetation, speed control on internal roads, prohibition on hunting or collection of animals, and procedures for safely allowing displaced fauna to move away from active construction areas.

During operation, ongoing management through the HOA, design guidelines and EMPr will be important to reduce long-term faunal impacts. This should include control of domestic animals, management of lighting to minimise disturbance to nocturnal fauna, maintenance of vegetated corridors and buffers, control of alien invasive plants, erosion control, responsible trail use, and continued rehabilitation of disturbed areas. Fencing should, where feasible and safe, avoid unnecessary obstruction of fauna movement, particularly within conservation and open space areas.

In summary, the presence or potential presence of fauna has influenced the proposed development by supporting a biodiversity-led layout that retains natural habitat, protects ecological corridors, limits development footprints in sensitive areas, keeps roads and services largely within existing disturbed corridors, protects wetlands and watercourses, and requires long-term habitat rehabilitation and management. The proposal therefore seeks to avoid and minimise disturbance to faunal habitat and movement patterns while allowing a low-density rural agricultural and conservation-based development to proceed in a controlled manner.

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.

The key **geographical aspects** that may be affected are the site's **coastal-plateau setting, natural drainage patterns, watercourses and wetlands, slope/topography, coastal landscape character, and relationship to the Maalgate River and Indian Ocean.**

The proposed development is located on a rural coastal plateau between the N2 National Road, Morrison Road, the Maalgate River and the Indian Ocean. The geographical setting of the site has therefore been a key informant in the design of the proposal. The site is not a uniform land parcel, but includes gently sloping agricultural land, surface drainage lines, wetland and seep areas, areas draining toward the Maalgate River, areas draining directly toward the ocean, natural vegetation remnants, coastal landscape features and visually exposed areas associated with the broader Garden Route coastal platform.

The main geographical aspects that may be affected by the proposed development relate to changes in landform, drainage, runoff, erosion potential, visual exposure and the relationship between the development and the surrounding coastal and riverine landscape. Construction of houses, farm buildings, roads, services, water infrastructure, the rural farmworker village, equestrian facilities and trails could result in localised earthworks, vegetation disturbance, increased hardened surfaces, altered runoff patterns and visual change if not carefully managed.

These geographical constraints have directly influenced the proposed development layout. The proposal seeks to retain the existing rural/agricultural pattern of the land. Agricultural properties are located within the areas used for and already transformed by agricultural use on gently sloping agricultural areas. The more sensitive natural, visually exposed or ecologically important portions are proposed for conservation zoning, eco-property management or open space use. This allows the development to respond to the physical character of the site rather than overriding it.

Topography and drainage have also influenced the road and stormwater design. Existing farm roads will largely remain in their current alignments, thereby limiting new cut-and-fill, slope disturbance and fragmentation of the landscape. Roads will generally remain gravel farm roads with grass swales, and unnecessary roads are proposed to be closed and rehabilitated. Where roads cross drainage lines, seep areas or surface-flow paths, low-water crossings or drift-type crossings will be used so that overland flow and subsurface seepage can continue through the landscape. Any new or upgraded crossings will be assessed and authorised through the NEMA and WULA processes.

The natural catchment functioning of the site has also influenced the stormwater approach. The existing catchment delineations will remain substantially unchanged after development, with northern catchments draining via existing culverts and channels toward the Maalgate River and other catchments draining directly toward the river or ocean through existing surface-flow paths. Although a slight increase in runoff is anticipated because of new roofs, roads and hard surfaces, the proposal limits hardened areas, requires rainwater harvesting, use of grass swales, retains infiltration opportunities and makes use of existing dams and drainage routes to attenuate and manage runoff.

The coastal location and visual character of the site have also influenced the proposal. The site forms part of a sensitive rural coastal landscape with views toward the ocean, the Maalgate River corridor and the Outeniqua Mountains. As a result, the development is proposed as a low-density rural farmstead model rather than an intensive residential estate. Building footprints are restricted, particularly on Eco Properties, where only 2,000 m² per farm may be developed, including all buildings and hard surfaces. Architectural and landscape guidelines require modest building forms, low visual intrusion, agricultural vernacular architecture, subdued colours, indigenous landscaping and visual buffering where needed, especially near exposed edges and transport corridors.

The presence of the Maalgate River, wetlands, seep areas and downstream coastal receiving environment has further influenced the servicing strategy. Watercourses and wetlands are to be buffered and avoided as far as possible, pipelines will follow road reserves where feasible, and wastewater will be treated on site rather than discharged directly into aquatic

systems. Treated effluent from the rural farmworker village will be reused for irrigation subject to monitoring, and individual farms will be required to use appropriate on-site sanitation systems approved by the municipality. These measures reduce the risk of pollution, erosion or altered flows affecting downstream riverine and coastal systems.

Soil and erosion considerations have also shaped the proposal. The agricultural assessment indicates that much of the land has limitations for intensive commercial cropping, while the aquatic assessment notes that historical agriculture, grazing and roads have already contributed to compaction, altered drainage and erosion in places. The proposal therefore retains agriculture mainly where it is already established or suitable, while conservation and rehabilitation areas are used to stabilise and improve more sensitive or degraded landscape components. Topsoil management, alien invasive plant control, rehabilitation of disturbed areas and restrictions on livestock access to sensitive water-linked areas will assist in reducing further degradation.

Overall, the proposed development will affect geographical features only in a localised and managed manner, primarily through new buildings, roads, services, the rural village and associated infrastructure. However, the proposal has been influenced by the geographical context by retaining existing drainage patterns, following existing road alignments, limiting earthworks and hardened surfaces, protecting watercourses and wetlands, responding to slope and visual exposure, and maintaining the rural coastal character of the area. The result is a development layout that seeks to work with the site's topography, hydrology and coastal landscape character rather than substantially modifying or urbanising it.

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.		
Jenna Lavin – Artefactual Heritage Consulting			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
<p>Areas containing sensitive heritage resources have influenced the proposed development by requiring the layout and management measures to avoid, retain, protect and formally manage heritage features rather than treating the site as a uniform developable area.</p> <p>The presence of sensitive heritage resources on and adjacent to the application area has directly influenced the proposed development layout, land-use planning, design controls and mitigation measures. A Notice of Intent to Develop was submitted to Heritage Western Cape, followed by a Heritage Impact Assessment as requested. The heritage process identified that the broader Hoogekraal and Buffelsdrift landscape has historical, cultural, archaeological and social significance associated with agricultural settlement, historic farmsteads, burial grounds, the rural cultural landscape, possible archaeological resources and coastal cave systems.</p> <p>The most important heritage informant is the historic Hoogekraal Farm werf precinct, which has been identified as a key heritage resource with higher local heritage significance. This precinct is excluded from the proposed development footprint and will remain unchanged. The exclusion of the werf from development has influenced the layout by directing new subdivision, roads, buildings and infrastructure away from this heritage core, thereby avoiding direct physical impacts on the most significant built heritage component of the site. Cadastral boundaries are being shifted in order to ensure that all the heritage features associated with the historic homestead and family graves are contained on the cadastral unit to be excluded from the development area.</p> <p>Several individual structures of local contextual value were also identified in the Heritage Impact Assessment, including structures graded IIIC. These structures are required to be retained and protected, and any future alterations will require the necessary heritage approvals or permits from Heritage Western Cape. This has influenced the proposal by ensuring that existing heritage buildings are not simply demolished or absorbed into new development parcels without control, but are recognised as constraints (opportunities) and integrated into the long-term management framework for the estate. Proposed property boundaries have been modified to accommodate these buildings.</p> <p>Burial grounds and cemetery areas have also influenced the proposal. Two burial grounds were identified, including one associated with the farm werf and another informal cemetery. These areas are to be protected, formalised and fenced where appropriate, with ongoing access maintained. The proposal therefore accommodates existing community and heritage use of the land by ensuring that cemetery areas remain identifiable, respected and accessible, rather than being disturbed by new development, roads or services.</p> <p>The heritage sensitivity of the wider cultural landscape has also shaped the architectural and landscape response. The proposed development is required to retain a rural, agricultural character rather than introduce visually intrusive or urban-type built form. Architectural guidelines therefore promote a contemporary agricultural vernacular, modest building forms, subdued colours, low visual intrusion, simple roofscape, indigenous landscaping and visual buffering. These measures respond to the heritage and scenic value of the rural coastal landscape and assist in maintaining the landscape setting within which the heritage resources occur.</p> <p>Archaeological sensitivity has also influenced the proposal. Although the Heritage Impact Assessment indicates that much of the immediate development area has been disturbed by historical agriculture, the broader landscape remains archaeologically sensitive, particularly near the Maalgate River, coastal cliffs, caves, cemeteries and the werf precinct. This has resulted in mitigation requirements for construction monitoring in sensitive areas, chance-find procedures, and an obligation to stop work and notify Heritage Western Cape should archaeological material, human remains or other heritage resources be uncovered during earthworks.</p>			

The presence of possible sea-cut caves and coastal archaeological resources has further influenced the proposal by requiring that these areas be treated cautiously. A survey of the sea-cut caves in the cliffs has been recommended to assess their scientific and heritage value and to inform any further conservation management requirements should any activities be proposed in this area. No activities are proposed on or near the coastal cliffs and archaeological areas associated with caves etc.

The proposed internal road, trail and service layout has also been influenced by heritage considerations. Existing roads and disturbed corridors are used as far as possible, while unnecessary roads are to be closed and rehabilitated. Trails, access routes and communal facilities must be located and managed so that they do not compromise burial grounds, historic structures, the werf precinct or archaeologically sensitive areas. Where access to heritage sites is required, it must be formalised and controlled.

In summary, sensitive heritage resources have materially influenced the proposed development by requiring the exclusion of the historic werf precinct from development, retention and protection of graded structures, formal protection of burial grounds, maintenance of access to cemeteries, adoption of rural architectural and landscape design controls, archaeological monitoring in sensitive areas, chance-find procedures during construction, and further assessment of coastal cave resources should any activities be proposed in that area in future.

The proposal has therefore been shaped to avoid direct impacts on significant heritage resources while allowing a low-density rural agricultural and conservation-based development to proceed in a manner that respects the cultural landscape.



Figure 7.1: Identified heritage elements within the area proposed for development

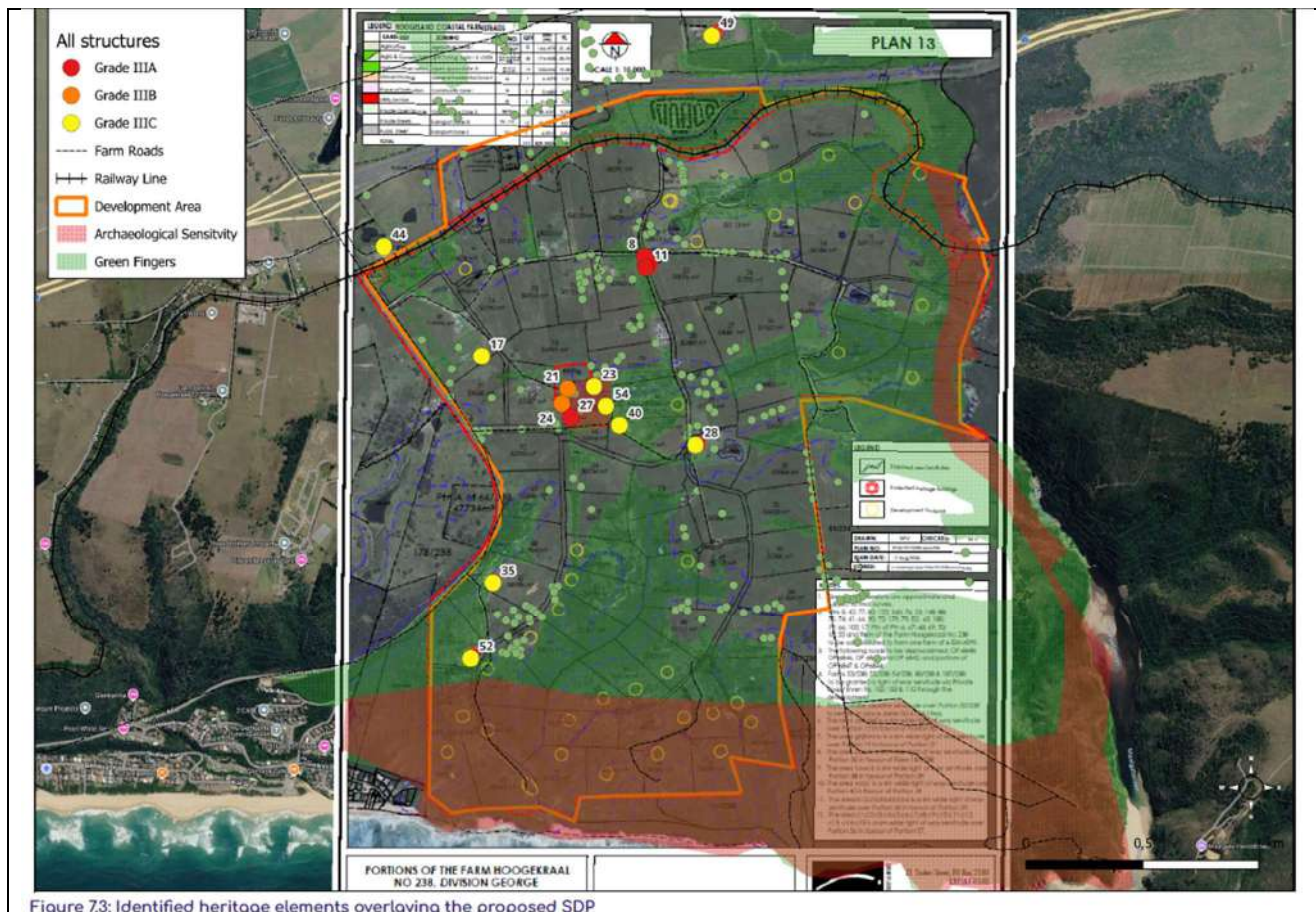


Figure 7.3: Identified heritage elements overlaying the proposed SDP

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.

There **are culturally and historically significant elements as contemplated in section 2 of the NHRA** that may be affected by the broader proposal. The proposal has been shaped to **avoid direct impacts on the most significant heritage resources** and to manage any residual risks through heritage controls, design guidelines and construction-phase mitigation.

The National Heritage Resources Act, 1999 (Act No. 25 of 1999) defines heritage resources broadly to include places, buildings, structures, archaeological and palaeontological sites, graves and burial grounds, landscapes and natural features of cultural significance, and other places or objects of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value. In this context, the Heritage Impact Assessment confirmed that the application area and its surroundings contain a number of culturally and historically significant elements that fall within the broad definition of heritage resources under section 2 of the NHRA.

The most significant heritage element identified is the historic Hoogekraal Farm werf precinct, which includes historic buildings and associated burial grounds and forms part of the rural agricultural history of the area. This precinct has been recognised as a key heritage resource of local significance and has been **excluded from the proposed development footprint**. This exclusion has directly influenced the proposed development layout by ensuring that new subdivision boundaries, buildings, roads, services and communal facilities are directed away from the heritage core, thereby avoiding direct physical alteration or loss of the most sensitive built heritage component.

The HIA also **identified several individual structures of local contextual heritage value**, including structures graded IIIC. These structures are not proposed to be demolished as part of the development and **must be retained and protected. Any future alteration to such structures would require the necessary heritage approvals or permits from Heritage Western Cape**. The presence of these structures has therefore influenced the proposal by requiring that they be recognised as constraints (opportunities) within the layout and incorporated into the long-term management framework for the estate.

Burial grounds and graves are also culturally significant heritage resources under the NHRA. Two burial grounds have been identified, including one associated with the farm werf and another informal cemetery. These areas may be affected by increased access, nearby development activity, roads, services or changes in land ownership if not properly protected. In response, the proposal provides for the cemetery areas to remain in place, to be formalised and fenced where appropriate, and for continued access to be maintained. This has influenced the layout and management approach by ensuring that burial grounds are treated as heritage no-go or controlled-access areas rather than developable land.

The cultural landscape itself is also a heritage consideration under the NHRA because the site forms part of a rural agrarian coastal landscape with historic farmsteads, agricultural fields, old access routes, scattered structures, burial places, coastal cliffs and possible cave features. The proposal could affect this cultural landscape through visual change, new buildings, roads and activity. This has influenced the development concept by requiring a low-density rural farmstead model rather than a conventional urban or resort-type layout. Architectural and landscape guidelines require modest building forms, agricultural vernacular design, subdued colours, low visual intrusion, indigenous landscaping and visual buffering, particularly along exposed edges and transport corridors.

In summary, culturally and historically significant elements as defined in section 2 of the NHRA are present on and adjacent to the application area, including the historic Hoogekraal Farm werf precinct, graded historic structures, burial grounds, the rural agricultural cultural landscape.

These heritage resources have influenced the proposed development by requiring exclusion of the werf precinct from development, retention of graded structures, formal protection of burial grounds, maintenance of access to cemeteries, archaeological monitoring and chance-find procedures, and the adoption of architectural and landscape controls that retain the rural cultural landscape character.

Subject to implementation of the HIA recommendations and final comment from Heritage Western Cape, the proposed development is therefore expected to avoid direct impacts on the most significant heritage resources and to manage any residual heritage impacts through enforceable mitigation and long-term management measures.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
	<p>The proposed development is located within a rural agricultural area near Glentana, within the George municipal area and the broader Garden Route District.</p> <p>The surrounding community is characterised by a combination of commercial and lifestyle agricultural holdings, rural residential occupation, conservation and natural areas, transport corridors, and established coastal settlements such as Glentana and nearby urban centres including George and Mossel Bay.</p> <p>The area therefore has both rural and peri-coastal characteristics, with a strong relationship between agriculture, rural settlement, tourism, conservation, and access to regional service centres.</p> <p>The immediate social environment is strongly influenced by the long-standing presence of farmworker families on the Hoogekraal and Buffelsdrift farm portions. Approximately 110 families currently reside on the farms and have confirmed permanent tenure rights in terms of the Extension of Security of Tenure Act, 1997. These families were historically associated with employment on the farms and remain scattered in small residential nodes across the application area. Their presence means that the site is not an unoccupied rural landscape, but an existing lived-in agricultural area with established social ties, informal settlement patterns, community use areas, graves or cemetery areas, and dependence on the land for residence and livelihood.</p> <p>The existing community has indicated a preference to remain within the Hoogekraal area rather than relocate to the urban settlements of George or Mossel Bay. This is an important social characteristic of the site because it reflects a continued connection to the rural landscape, existing family and community networks, and the historical relationship between the residents and the farms. The proposed rural farmworker village is therefore responding to an existing social reality rather than introducing an entirely new residential community into the area.</p> <p>The existing Hoogekraal Primary School is also an important community facility within the site. Its retention and formalisation on its own cadastral property recognises its role as part of the existing social infrastructure serving the farmworker community and surrounding rural area. The presence of the school indicates that the area already supports community services and that the proposal must accommodate existing social infrastructure in a planned and legally secure manner.</p> <p>Economically, the surrounding area has traditionally been associated with agriculture, including grazing, planted pastures and limited crop production. However, the agricultural and socio-economic assessments indicate that conventional large-scale commercial agriculture across the whole site is constrained by soil capability, water availability, land fragmentation and financial viability. The land remains important as an agricultural resource, but its future economic use is more likely to be based on diversified small-scale farming, lifestyle agriculture, equestrian agriculture, limited high-value crops, food gardens, grazing, conservation management and rural services rather than uniform commercial farming.</p> <p>The broader George economy is more diversified than the immediate rural area, with strong contributions from services, finance, real estate, business services, manufacturing, tourism and construction. The rural area around the site is therefore economically linked to George and the Garden Route economy, while retaining a local agricultural and rural character. Employment opportunities in the immediate vicinity are likely to be linked to farming, farm maintenance, equestrian activities, construction, landscaping, conservation management, domestic work, tourism-related services and local support services.</p> <p>The socio-economic baseline indicates that unemployment and the need for local job creation remain important considerations in George and the broader region. In this context, the proposed development has potential to create construction-phase employment, as well as longer-term operational employment associated with small farms, conservation properties, grounds maintenance, agricultural activities, equestrian facilities, security, estate management, landscaping, alien invasive plant control, infrastructure maintenance and community facilities.</p>

Existing service provision in the rural area is more limited than in urban settlements and is not based on full municipal bulk infrastructure in the same way as town-based development. The existing farms make use of on-site services such as septic tanks and soakaways, existing water abstraction and storage infrastructure, farm roads, Eskom supply in places, and informal or farm-based service arrangements. This rural service context has influenced the proposed development by requiring on-site water treatment, rainwater harvesting, on-site wastewater treatment, treated-effluent reuse, private internal roads, and HOA-managed infrastructure rather than reliance on conventional municipal urban services.

The community and land-use context is also influenced by existing access routes, including Morrison Road, the N2 National Road and existing minor roads across the farms. These routes connect the area to George, Mossel Bay, Glentana and the wider Garden Route, but the site itself remains rural in character. The proposal therefore needs to retain rural accessibility while avoiding the creation of an urbanised settlement pattern or excessive pressure on the surrounding road network.

In summary, the community in the vicinity of the proposed site is characterised by a rural agricultural and coastal setting, long-standing farmworker occupation with ESTA tenure rights, an existing farm school, cemetery and community-use areas, historical dependence on farming, limited conventional agricultural viability, links to the broader George and Garden Route economy, and a need for formalised tenure, services and employment opportunities.

These social and economic characteristics have influenced the proposed development by requiring a rural farmworker village for existing residents, retention of the school, continued agricultural use on suitable land, diversification into small-scale farming and equestrian uses, conservation and rehabilitation of sensitive areas, and a servicing model appropriate to a rural rather than urban context.

8.2. Explain the socio-economic value/contribution of the proposed development.

The proposed development will make a **positive socio-economic contribution** by converting an under-performing and fragmented agricultural landholding into a managed rural settlement that combines continued agriculture, formal housing for existing tenure-right holders, conservation management, infrastructure investment and ongoing local employment.

The proposed Hoogeland Coastal Farmsteads development has socio-economic value because it responds to both the existing social conditions on the farms and the economic limitations of the current agricultural land-use model. The properties are already occupied and used for agricultural, residential, school, access, cemetery and service-related purposes. The proposal does not therefore introduce development into an untouched landscape, but seeks to rationalise and formalise an existing rural settlement and agricultural area in a way that provides clearer land-use rights, improved services, conservation management and long-term economic activity. As a collaborative project between Attwood and surrounding owners of farms, the consolidated project provides an opportunity for current owners to realise economic value, without having to sell and leave their farms completely.

A key socio-economic contribution of the proposal is the formal accommodation of approximately 110 families with confirmed permanent tenure rights in terms of ESTA. These families currently reside in scattered nodes across the application area and have indicated that they do not wish to relocate to George or Mossel Bay. The proposed rural farmworker village will consolidate this existing occupation into a planned and serviced settlement within the same rural area. This will provide more secure, formalised housing arrangements, associated communal agricultural and recreational areas, and access to potable water, electricity and wastewater treatment infrastructure. The proposal therefore addresses an existing social obligation and improves the living environment of an established rural community.

The development also retains and formalises existing community infrastructure. The Hoogekraal Primary School will remain on its own cadastral property, while cemetery areas and existing community-use areas will be protected and accommodated within the layout. This maintains important social and cultural links within the community and avoids displacing facilities that already serve the farmworker families and surrounding rural area. Additional recreational agricultural activities will be added to the proposal to increase the agricultural sense of place.

From an economic perspective, the proposal provides a more viable use of the land than the continuation of conventional large-scale agriculture alone. The agricultural and socio-economic assessments indicate that commercial-scale farming across the whole site is constrained by soil suitability, water availability, land fragmentation and financial viability. The proposed reconfiguration allows agricultural use to continue on suitable or historically transformed land, but diversifies the economic base through small-scale farming, orchards, grazing, equestrian agriculture, food gardens, conservation properties, estate management and associated services. This creates a broader range of economic opportunities than the existing agricultural model.

The socio-economic assessment indicates that the proposal is expected to outperform conventional farming scenarios in terms of economic return and employment creation. The development is expected to generate employment during construction through civil works, housing construction, road upgrades, services installation, landscaping, fencing, rehabilitation and building activity. During the operational phase, employment opportunities are expected to arise from small farms, equestrian facilities, conservation management, alien invasive plant control, landscaping, maintenance, security, administration, domestic work, farm labour, trail management, infrastructure maintenance and community services.

The proposal will also contribute to the local and regional economy through private capital investment, increased property values, municipal rates income, procurement of local goods and services, and ongoing household and operational expenditure. The expenditure associated with construction and long-term management of the farms, conservation areas, private roads, water and wastewater infrastructure, communal facilities and the rural village will support businesses and employment in George, Mossel Bay and the broader Garden Route economy.

The conservation component also has socio-economic value. Approximately 182 ha of the site is proposed for conservation-oriented zoning or conservation management, while approximately 264 ha will remain available for agriculture. The conservation areas will require ongoing alien invasive plant control, rehabilitation, fire management, monitoring, trail maintenance and environmental stewardship. These activities generate local employment while protecting natural assets that support the broader rural and tourism economy of the Garden Route.

The development further contributes by making efficient use of existing resources and infrastructure. Existing farm roads, water abstraction infrastructure, dams, agricultural areas, servitudes and settlement patterns will be retained, upgraded or reorganised where appropriate. Existing lawful water uses will be used within verified allocations, supplemented by rainwater harvesting. Wastewater from the rural village will be treated on site and reused for irrigation, reducing pressure on municipal bulk infrastructure. This supports a cost-effective rural development model that reduces dependence on municipal services. The proposal also has social value because it creates a structured governance and management system through the HOA / management body. This will allow for coordinated maintenance of roads, services, conservation areas, stormwater systems, landscaping, common facilities and environmental obligations. This is preferable to ongoing fragmented land use, scattered occupation, unmanaged infrastructure and inconsistent environmental management across multiple farm portions.

In summary, the proposed development will contribute socio-economically by formalising housing for existing ESTA beneficiaries, retaining the school and community facilities, supporting small-scale and diversified agriculture, generating construction and operational employment, increasing local investment and rates income, creating conservation-related work, improving rural services, and providing a coordinated long-term management framework. The proposal therefore offers a more sustainable and socially responsive use of the land than the continuation of the current fragmented agricultural and settlement pattern, while retaining the rural character and productive potential of the area.

8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
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The applicant's social initiatives are centred on **formalising the existing farmworker community, improving security of tenure, providing serviced housing, retaining community facilities, and creating opportunities for local livelihood support.**

The proposed development includes a number of social initiatives intended to address the needs of the existing community on the farms and to contribute to the upliftment of the area. These initiatives are not peripheral to the proposal, but form an integral part of the development concept, particularly because approximately 110 families with confirmed permanent tenure rights in terms of ESTA currently reside on the application area in scattered nodes.

The most significant social initiative is the establishment of a formal rural farmworker village for the existing ESTA beneficiaries. The village will provide approximately 110 residential units for the families who already live on the farms and who have indicated that they wish to remain in the Hoogekraal area rather than relocate to George or Mossel Bay. This responds directly to an existing social and tenure-rights obligation and provides a planned alternative to continued scattered and informal occupation across the farm portions.

The rural village will provide the beneficiaries with formalised residential opportunities, improved settlement structure and ownership or secure tenure arrangements. The concept is for the units to have a rural village character, rather than a standardised low-cost housing appearance, with single or duet-type housing designs intended to create a more integrated and dignified settlement form. This will assist in improving the quality of the living environment while retaining the community within its established rural context.

The village will also include communal agricultural and recreational areas for the beneficiary community. These spaces will support continued connection to the land, opportunities for household food production, small-scale agricultural activity, recreation and social interaction. This is important because the existing community has a long-standing relationship with the farms and has historically used portions of the land for living, farming, community activities and cemetery purposes.

The proposal further supports social upliftment by retaining and formalising the existing Hoogekraal Primary School on its own cadastral property. This will protect an existing community facility and provide greater long-term certainty for educational use on the site. The retention of the school also avoids the displacement of an established social service that currently forms part of the rural community structure.

Existing cemetery and graveyard areas will be retained, respected and protected within the development layout. This is an important social, cultural and heritage initiative because it recognises the community's historical connection to the land and ensures that burial grounds remain accessible and managed. The protection of these areas helps maintain continuity between the existing community, its history and the proposed future land-use structure. In addition provision for ongoing burial for these beneficiaries is included in the proposal.

The applicant will also implement infrastructure-related initiatives that will improve the living conditions of the existing farmworker community. The rural farmworker village will be provided with potable water treated on site, electricity supplied by Eskom and/or solar, and wastewater treatment through an on-site package plant. Treated effluent will be reused for irrigation, subject to monitoring, thereby supporting a more sustainable and serviced rural settlement model. These services represent a significant improvement over scattered farm-based service arrangements. These facilities will be maintained by the applicant and HOA, ensuring long-term maintenance that does not place any burden on the municipality.

The development is also expected to generate local employment and economic opportunities during construction and operation. Construction-phase opportunities will arise from civil works, housing construction, road upgrades, service installation, landscaping, fencing and rehabilitation. Operational opportunities may include work associated with small farms, equestrian facilities, conservation management, alien invasive plant clearing, landscaping, maintenance, security, estate administration,

domestic work, agricultural activities and infrastructure management. Where feasible, these opportunities should prioritise local residents and existing beneficiary households.

Environmental and conservation management will also contribute to upliftment by creating ongoing work opportunities linked to alien invasive plant control, rehabilitation of disturbed areas, maintenance of trails and open spaces, protection of watercourses and wetlands, and broader land stewardship. This links socio-economic benefit with environmental improvement and provides a practical mechanism for long-term community participation in the management of the estate.

The proposed Homeowners' Association or management body will provide a formal governance structure for maintaining roads, services, open spaces, conservation areas, communal facilities, stormwater infrastructure and environmental management commitments. This will help ensure that social and environmental obligations are not left unmanaged after approval, but are incorporated into the long-term functioning of the development.

In summary, the applicant's social initiatives include the creation of a formal rural farmworker village for approximately 110 ESTA beneficiary families, provision of serviced housing, retention of the existing school, protection of cemetery areas, inclusion of communal agricultural and recreational spaces, creation of employment opportunities, support for skills and livelihood opportunities linked to farming and conservation management, and establishment of a long-term management structure. These initiatives are intended to improve living conditions, provide secure and dignified accommodation, retain the community's connection to the land, and contribute to the social and economic upliftment of the Hoogekraal area.

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.
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The proposal may affect people's health and well-being in the short term, mainly during construction and through longer-term changes to traffic, noise, dust, visual character and sense of place. However, these potential effects have influenced the proposal by requiring a low-density rural layout, on-site service controls, visual design guidelines, traffic upgrades, and environmental management measures.

The proposed development has the potential to affect people's health and well-being through both construction-phase and operational-phase impacts. These relate primarily to noise, dust, traffic movement, visual change, sense of place, safety, access, and changes to the rural living environment. These considerations have influenced the proposal by requiring the development to be planned as a low-density rural agricultural and conservation-based development rather than as an intensive urban estate.

During construction, temporary impacts may include noise from earthworks, road upgrades, building construction, vegetation clearing, delivery vehicles and service installation. The area is however not close to any urban residential areas that would be affected and the current occupants on the farms are the beneficiaries of the rural village which they will be moving to once complete.

Dust will continue to be generated by vehicle movement on gravel roads (as is the current situation), increase in dust will be limited to times when there is exposed soil, earthworks and construction areas, particularly during dry and windy conditions. These impacts could affect existing farm residents, adjoining landowners, road users and the nearby rural community if not managed. As a result, the proposal will require construction-phase management through the EMP, including dust suppression, control of working hours, maintenance of construction vehicles, speed control, demarcation of work areas, erosion control, and rehabilitation of disturbed areas.

Operational noise is expected to be lower and more consistent with a rural agricultural setting. The development will include small-scale agricultural holdings, equestrian facilities, a polo field, private roads and a rural farmworker village, which may generate vehicle movement, farm-related activities, maintenance work and occasional recreational noise. However, the low-density nature of the proposal, the large farm portions, private open space areas, conservation areas and retained agricultural character will limit the intensity of operational noise to being largely similar to the existing agricultural use noises. The proposal has therefore been influenced by the need to retain a rural scale and avoid land uses that would introduce persistent high-noise activities.

Odour has also influenced the servicing design. The rural farmworker village will be serviced by an on-site package sewage treatment plant, with treated effluent reused for irrigation and subject to quality monitoring. Individual farms will also manage sewage on site through approved systems such as septic tanks and soakaways, conservancy tanks, artificial wetland treatment systems or mini-package plants, subject to municipal requirements. The location, operation and maintenance of these systems will be important to avoid odour nuisance, groundwater contamination and health risks. For this reason, the proposal includes HOA responsibility for the package plant, regular quality monitoring of treated effluent, and regulatory approval through the relevant municipal and water-use processes.

The development may also affect people's well-being through visual change and sense of place. The site currently forms part of a rural coastal agricultural landscape between the N2, Morrison Road, the Maalgate River and the Indian Ocean. New dwellings, farm buildings, roads, equestrian infrastructure and the rural village will alter the existing landscape to some extent.

This has directly influenced the proposed development concept, which is based on a low-impact rural farmstead model rather than a conventional urban subdivision or resort. Building footprints are limited, particularly on eco-properties where the developable area is restricted to 2,000 m² per farm, including buildings and hard surfaces. Architectural and landscape guidelines require modest building forms, agricultural vernacular design, subdued colours, non-reflective materials, indigenous landscaping, visual buffering and the retention of rural landscape character.

The sense of place has also influenced the treatment of roads and open spaces. Existing farm roads will largely be retained, upgraded where necessary and kept as gravel roads with grass swales, while unnecessary roads are to be closed and rehabilitated. This avoids the introduction of an urban road pattern and assists in maintaining the rural character of the area. Trails, equestrian routes, conservation areas and communal open spaces will be integrated with the existing topography and vegetation, reinforcing the intended rural and landscape-based character of the development.

Traffic and road safety are also relevant to health and well-being. The Traffic Impact Assessment indicates that the proposal will generate few additional trips, and access will be taken from Morrison Road. To manage safety and reduce traffic friction, dedicated right-turn lanes are recommended at both access points from Morrison Road, with the costs to be borne by the developer.

Internal roads will be private and maintained by the HOA, with access arrangements controlled through servitudes where required. These measures reduce potential safety risks for residents, neighbouring landowners and road users.

The proposal is expected to have a positive effect on the well-being of the existing farmworker community by formalising accommodation for approximately 110 ESTA beneficiary families who already live on the farms. The rural farmworker village will provide a planned settlement structure, serviced housing, communal agricultural and recreational spaces, and continued access to the existing school and cemetery areas. This is expected to improve living conditions compared with scattered occupation across the farms in mostly informal housing, while allowing the community to remain within its established rural context.

Health and well-being considerations have also influenced the environmental management measures. Protection of wetlands and watercourses, control of stormwater, erosion management, alien invasive plant clearing, rehabilitation of disturbed areas, indigenous planting and management of treated effluent are all important for maintaining environmental quality and reducing indirect health risks. By retaining natural drainage patterns and avoiding uncontrolled discharge to aquatic systems, the proposal reduces the risk of downstream water-quality impacts.

In summary, the proposal may result in temporary construction impacts and permanent changes to the rural landscape, but these have been addressed through the design and management of the development. Noise, dust, odour, traffic, visual character and sense of place have influenced the proposal by requiring low-density rural development, limited building footprints, rural architectural and landscape controls, use of existing roads, road safety upgrades, on-site wastewater treatment and monitoring, stormwater controls, conservation areas and long-term HOA/EMPr management. With these measures in place, the development is expected to avoid significant adverse impacts on people's health and well-being and to provide positive social benefits for the existing farmworker community.

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.	
<p>The preferred property alternative is the consolidation, rationalisation and re-subdivision of the application area comprising portions of Farm Hoogekraal No. 238 and portions of Farm Buffelsdrift No. 227, George, located south of the N2 National Road, west of the Maalgate River, east of Morrison Road and north of the Indian Ocean. The preferred site is therefore the area already forming part of the existing Hoogekraal / Buffelsdrift agricultural landholding and associated rural occupation area.</p> <p>The property alternative is preferred because it represents the logical area within which the applicant can address the existing land-use, cadastral, agricultural, social and environmental issues on the farms. The properties are already used for agriculture, grazing, farm roads, dams, water abstraction infrastructure, existing dwellings, a school, cemetery areas and occupation by approximately 110 ESTA beneficiary families. The proposal therefore does not introduce a new unrelated development onto a separate greenfield site, but restructures an existing rural agricultural landscape into a more coordinated and managed land-use pattern.</p> <p>The preferred properties were purchased as part of the previous Lagoon Bay Golf Estate development which then never progressed. Certain of the individual farms not under the ownership of Attwood remain in private ownership and certain of those owners have elected to join into the application for the farmsteads (see full ownership and consent list)</p> <p>The preferred site alternative is limited to the area south of the N2 National Road. Farm portions north of the N2 will remain agricultural and do not form part of the NEMA EIA application. This distinction has influenced the application area by excluding land north of the N2 from the environmental authorisation process and focusing the proposed development on the southern farm portions where the agricultural farmstead estate, conservation areas, rural farmworker village, private open space, utilities and internal roads are proposed. Where current farm portions extend over the N2 (north and south) the portions to the north will be consolidated with other portions to allow for subdivision north and south of the N2. Similarly properties that currently extend over Morrison Road will be cut and consolidated with surrounding farm portions and only the portions to the east of Morrison Road will be included in this application.</p> <p>The preferred alternative involves the creation of a low-density rural agricultural and conservation-based development over approximately 529.3957 ha. The proposal includes 81 farm portions, comprising agricultural properties, conservation properties and split-zoned properties, together with a rural farmworker village for the existing ESTA beneficiaries, private open space areas,</p>	

communal equestrian and recreational facilities, the existing school, utility infrastructure, private roads and limited public street components.

Under the preferred layout, the existing Agriculture Zone I land will be reorganised so that land already used or suitable for agriculture remains primarily in agricultural use, while more environmentally sensitive or natural areas are placed under Open Space Zone III / Nature Conservation Area or split zoning. Approximately 264.0785 ha will remain under agricultural use, approximately 182.3239 ha will be placed under conservation-oriented zoning or management, and approximately 82.9933 ha will accommodate roads, recreation, utilities, the village and other supporting land uses.

This site alternative is preferred because it responds directly to the site's existing conditions and constraints. Historically cultivated or transformed areas are used for agri-properties and continued small-scale or lifestyle farming, while more natural and sensitive areas are used for eco-properties or conservation zoning. Eco-properties are subject to a maximum developable area of 2 000 m² per farm, including all buildings and hard surfaces, so that the majority of these properties remains natural or available for rehabilitation.

The preferred site layout has also been influenced by existing infrastructure and access. Existing farm roads will largely be retained, improved where necessary and converted into private roads maintained by the HOA. Unnecessary roads will be closed and rehabilitated. Existing and new service routes, including water pipelines, will follow road reserves as far as possible. External access will be obtained from Morrison Road, with dedicated right-turn lanes recommended at both access points to improve traffic safety. This makes use of existing access infrastructure and limits the need for unnecessary new disturbance corridors.

The preferred alternative also makes use of existing lawful water resources and infrastructure. Existing water abstraction infrastructure from the Maalgate River and existing dam infrastructure will be refurbished and used within the verified lawful water allocations. Agricultural water will be distributed to individual farms, while rainwater harvesting will be required on each farm. Potable water for the rural farmworker village will be treated on site. Wastewater will be treated through on-site systems, including a package plant for the village, with treated effluent reused for irrigation where appropriate.

The preferred site alternative is also influenced by the presence of existing farmworker families with permanent tenure rights in terms of ESTA. The proposal includes a rural farmworker village of approximately 110 units for these existing families, who have indicated that they wish to remain in the Hoogekraal area rather than relocate to George or Mossel Bay. The village will consolidate existing scattered occupation into a planned and serviced rural settlement, while retaining the existing Hoogekraal Primary School and protecting cemetery areas and community-use spaces.

Environmentally, the preferred alternative has been shaped by the biodiversity, aquatic, heritage, agricultural, visual and socio-economic specialist findings. Sensitive biodiversity areas, wetlands, watercourses, natural vegetation, heritage resources and visually sensitive areas have influenced the location of conservation zoning, eco-properties, road alignments, service routes, stormwater controls and development footprints. The layout therefore represents a site-specific response that seeks to avoid and minimise impacts while allowing continued agricultural use and formalised rural settlement.

In summary, the preferred property and site alternative is the development of the southern Hoogekraal / Buffelsdrift farm portions as a low-impact rural agricultural farmstead estate with conservation areas and a formal rural farmworker village. This alternative is preferred because it uses land already associated with the applicant's existing agricultural properties and existing rural occupation, excludes the farm portions north of the N2 from the NEMA application, retains agricultural use on transformed land, protects environmentally sensitive areas through conservation zoning, uses existing infrastructure and access as far as possible, and provides a planned social response for the existing ESTA beneficiary families.

Provide a description of any other property and site alternatives investigated.

It was originally proposed to include additional neighbouring properties into the farmstead plan in the area between Morrison road and the Maalgate river and the coast, however, individual landowner agreement was not reached and they elected to remain as they currently are with access through the development to their individual farms.

In addition, the original Golf Estate option was considered and rejected as was the current Department of Agriculture approval for 2ha smallholdings over the area as the municipality indicated preference for agricultural portions larger than 5ha to keep within the context of the rural agricultural area and not to become "small holdings".

Provide a motivation for the preferred property and site alternative including the outcome of the site selection matrix.

- **The preferred property alternative is the southern Hoogekraal / Buffelsdrift farm portions south of the N2**, because this is the area where the proposed NEMA-listed activities, re-subdivision, conservation zoning, rural farm village, private roads, utilities and associated infrastructure will occur. The properties are owned by the applicant or agreement has been reached by the registered landowner to join into the application.
- **The farm portions north of the N2 are excluded from the NEMA application**, will remain agricultural, and do not require environmental authorisation as part of this application.
- **The preferred site represents a brownfield rural/agricultural restructuring**, because the land is already used for agriculture, grazing, farm roads, existing dwellings, water infrastructure, a school, cemeteries and occupation by ESTA beneficiary families.
- **The site is preferred because it responds to an existing social need**, namely the formal accommodation of approximately 110 families with permanent ESTA tenure rights who already reside on the farms and wish to remain in the Hoogekraal area.
- **The preferred site allows the existing farmworker occupation to be consolidated into a planned rural village**, with formal housing, communal agricultural and recreational areas, potable water, electricity and on-site wastewater treatment, while not requiring the beneficiaries to be relocated to George or Mossel Bay which they find undesirable.

- **The proposal retains the existing Hoogekraal Primary School on its own cadastral property**, thereby protecting an existing community facility and avoiding unnecessary displacement of established social infrastructure.
- **The site is preferred because it allows continued agricultural use of the historically transformed and suitable portions of the land**, rather than abandoning the agricultural function of the farms.
- **Approximately 264.0785 ha will remain under agricultural use**, supporting small-scale farming, grazing, orchards, food gardens, lifestyle farming and equestrian-related agricultural activities. Where lifestyle farming will improve the agricultural use of the land in cases where the current farm units are an uneconomical size for conventional agricultural activities.
- **The proposal also provides for approximately 182.3239 ha of conservation-oriented land**, through Open Space Zone III / Nature Conservation Area zoning and conservation components within split-zoned properties.
- **A further approximately 82.9933 ha will accommodate supporting land uses**, including roads, recreation, utilities, the farmworker village and associated communal infrastructure.
- **The preferred site layout is based on a split-zoning approach**, where transformed agricultural areas remain available for agriculture and sensitive natural areas are retained for conservation, rehabilitation or low-impact eco-property use.
- **Eco-properties are restricted to a maximum developable area of 2 000 m² per farm**, including all buildings and hard surfaces, ensuring that the majority of these properties remains natural or available for rehabilitation.
- **The preferred alternative avoids a conventional urban expansion or resort-style development**, and instead provides a low-density rural agricultural farmstead model that is more compatible with the rural coastal landscape.
- **The site is preferred because it makes use of existing access and infrastructure**, including existing farm roads, existing proclaimed minor roads, existing water abstraction infrastructure, dams, road servitudes and established settlement patterns.
- **Existing farm roads will largely remain in their current alignments**, thereby reducing the need for new disturbance corridors, while unnecessary roads will be closed and rehabilitated.
- **Internal roads will become private roads maintained by the HOA**, with right-of-way servitudes registered where required to ensure that existing landowner access rights who need to traverse the site to reach their properties are not affected.
- **External access will be taken from Morrison Road**, with road safety improvements such as dedicated right-turn lanes recommended at both access points.
- **Water provision will rely on existing lawful water uses verified through the BOCMA process**, supplemented by rainwater harvesting and on-site treatment where required.
- **The proposed water demand is lower than the existing lawful entitlement**, which supports the selection of the preferred site because the development can operate within existing water-resource capacity.
- **Wastewater will be managed on site**, with a package plant for the farmworker village, reuse of treated effluent for irrigation, and individual on-site treatment systems for the farms, reducing reliance on municipal bulk sanitation infrastructure.
- **The preferred site allows biodiversity-sensitive planning**, because CBAs, ESAs, Critically Endangered Garden Route Granite Fynbos, wetlands, watercourses, seep areas and ecological corridors have been identified and incorporated into the layout response.
- **Sensitive biodiversity and aquatic features have influenced the preferred layout**, with conservation zoning, aquatic buffers, low-impact road crossings, stormwater controls, alien invasive plant control and rehabilitation measures incorporated into the proposal.
- **The preferred site avoids direct development of the most sensitive heritage areas where possible**, including exclusion of the historic Hoogekraal Farm werf precinct from the development footprint and protection of burial grounds and graded structures.
- **The preferred layout is also influenced by visual and landscape considerations**, with low-density development, rural architectural guidelines, indigenous landscaping, visual buffering and limited building footprints intended to retain rural coastal character.
- **The site selection matrix supports the preferred alternative because it performs best overall when environmental, social, agricultural, infrastructure, heritage, visual and planning criteria are considered together.**
- **The preferred alternative scores favourably because it:**
 - uses already disturbed or transformed agricultural land where possible;
 - avoids or protects sensitive biodiversity areas;
 - retains agricultural use on suitable land;
 - provides a formal solution for existing ESTA beneficiaries;
 - makes use of existing roads and service corridors;
 - protects existing school and cemetery areas;
 - limits additional pressure on municipal bulk services;
 - maintains the rural and coastal landscape character; and
 - provides enforceable long-term management through the HOA, EMPr and specialist recommendations.
- **Alternative sites outside the existing Hoogekraal / Buffelsdrift landholding were not preferred**, because they would not address the existing cadastral, land-use, infrastructure, agricultural and ESTA tenure issues on the farms.
- **The no-go or status quo alternative is not preferred**, because it would retain the fragmented cadastral pattern, scattered farmworker occupation, unmanaged or ad hoc servicing, limited formal conservation protection, and existing agricultural constraints without resolving the underlying social and environmental management issues.
- **The previously contemplated Lagoon Bay-type development is not preferred**, because it represented a more intensive resort/residential model with greater potential impacts on rural character, water demand, traffic, visual quality, biodiversity and the coastal landscape.

- **The preferred property and site alternative therefore represents the most balanced planning outcome**, as it combines social redress, agricultural continuity, conservation protection, infrastructure efficiency and low-density rural development within the existing affected landholding.

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

- **A broad property-screening exercise was first undertaken** to identify which farm portions formed part of the Hoogekraal / Buffelsdrift landholding and which portions were relevant to the proposed rural restructuring.
- **Landowners wishing to form part of the proposed application entered into agreement with the applicant.**
- **The properties north and south of the N2 were separated for planning purposes**, because the land north of the N2 will remain agricultural and does not form part of the NEMA EIA application.
- **The preferred site was refined to the land south of the N2**, as this is the area where the proposed re-subdivision, farmstead development, conservation zoning, rural farm village, internal roads and service infrastructure are proposed.
- **Farm portions that straddle the N2 were divided along the N2 alignment**, with the northern portions excluded from the application area and retained or re-consolidated with agricultural land north of the N2.
- **Farm portions affected by Morrison Road were similarly rationalised**, with only the portions relevant to the proposed development area included in the preferred site layout.
- **Landowners within the broader area who did not wish to participate were excluded**, and their properties will remain privately owned and operated, with continued servitude access through the estate where required.
- **Existing cadastral boundaries were reviewed and rationalised** to create a more coherent farm layout, rather than retaining the current fragmented pattern of farm portions and roads.
- **Existing land uses were mapped**, including agricultural fields, grazing areas, existing dwellings, farm roads, water infrastructure, dams, the Hoogekraal Primary School, cemetery areas and areas occupied by existing ESTA beneficiaries.
- **Historically transformed and actively used agricultural areas were identified** as the most suitable areas for continued agricultural use and were therefore prioritised for Agri Properties.
- **Natural, marginal, degraded but recoverable, and biodiversity-sensitive areas were identified** as more appropriate for conservation zoning, eco-property use or rehabilitation.
- **Desktop environmental informants were overlaid onto the site**, including biodiversity planning layers, vegetation sensitivity, watercourses, wetlands, coastal sensitivities and other environmental constraints.
- **Specialist field verification was then used to refine the desktop sensitivities**, particularly in relation to terrestrial biodiversity, plant and animal species, aquatic systems, agricultural potential, visual character, heritage resources and socio-economic conditions.
- **The layout was iteratively adjusted to avoid and minimise impacts on sensitive areas**, particularly Critically Endangered Garden Route Granite Fynbos, CBAs, ESAs, wetlands, drainage lines, seep areas, ecological corridors and heritage-sensitive structures and areas.
- **The preferred layout was structured around a split-zoning approach**, allowing agricultural activities to continue on transformed land while assigning sensitive portions to Open Space Zone III / Nature Conservation Area or conservation components within split-zoned properties.
- **Eco Properties were located in more natural or sensitive parts of the landscape**, with a maximum developable area of 2 000 m² per farm to ensure that the balance remains natural or available for rehabilitation.
- **The rural farmworker village location was selected to address the existing ESTA occupation pattern**, while allowing approximately 110 beneficiary families to remain within the Hoogekraal area in a planned and serviced rural settlement. Agreement with the beneficiaries was reached in relation to the location of the village and associated facilities and use areas.
- **The existing Hoogekraal Primary School was retained as part of the preferred layout**, and is proposed to be formalised on its own cadastral property.
- **Existing cemetery and graveyard areas were retained and protected**, and were treated as social, cultural and heritage constraints in the layout process.
- **Existing farm roads and proclaimed minor roads were assessed**, with the preferred layout retaining roads where useful, closing and rehabilitating unnecessary roads, and converting internal access roads to private roads maintained by the HOA. De-proclamation of certain roads will be required and Provincial Roads is in agreement as long as servitudes protecting access rights are implemented.
- **Access was rationalised through Morrison Road**, with targeted road safety upgrades recommended by the traffic assessment.
- **Services were planned to follow existing disturbed corridors as far as possible**, with water pipelines located within road reserves to avoid additional disturbance through agricultural land, wetlands or conservation areas.
- **Existing lawful water uses and infrastructure were considered as part of the site-selection process**, with the preferred alternative making use of existing abstraction, storage and distribution infrastructure rather than relying on a new municipal bulk-water supply.
- **On-site sanitation and treated-effluent reuse were incorporated into the preferred layout**, including a package plant for the rural farmworker village and individual on-site sanitation systems for farms, subject to municipal and water-use approvals.
- **Stormwater planning influenced the final layout**, with existing catchment delineations and overland flow paths retained, low-water crossings used where required, and hardened surfaces limited.
- **The visual and landscape assessment influenced the preferred alternative**, by requiring low-density development, rural architectural guidelines, indigenous landscaping, green buffers and limited visual intrusion.

- **Heritage resources influenced the preferred layout**, including exclusion of the historic Hoogekraal werf precinct from development, retention of graded structures, and protection of burial grounds.
- **The site selection matrix therefore favoured the preferred alternative**, because it achieved the best overall balance between environmental sensitivity, existing land-use rights, agricultural continuity, social need, infrastructure efficiency, heritage protection and rural landscape character.
- **The preferred alternative was selected because it avoids a conventional urban or resort-style development**, while providing a lower-impact rural agricultural and conservation-based layout.
- **The no-go/status quo option was not preferred**, because it would retain the fragmented cadastral pattern, scattered ESTA occupation, unmanaged servicing arrangements, limited formal conservation protection and unresolved access and land-use issues.
- **The preferred alternative was therefore reached through an iterative process of cadastral rationalisation, environmental screening, specialist input, infrastructure planning, social need assessment and layout refinement**, resulting in a site-specific proposal that retains agriculture where appropriate, protects sensitive areas, formalises existing social occupation, and provides a coordinated long-term management framework.

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

No reasonable or feasible alternative properties or alternative sites were considered for the proposed development, as the activity is intrinsically linked to the existing Hoogekraal / Buffelsdrift landholding, its cadastral configuration, existing agricultural use, existing infrastructure, existing social occupation, and the specific tenure-rights obligations associated with the properties.

The proposal is not a speculative development that could be transferred to any other vacant rural property. It is a site-specific land rationalisation and restructuring proposal for land already owned or controlled by the applicant and participating landowners. The application area consists of portions of Farm Hoogekraal No. 238 and Farm Buffelsdrift No. 227, George. These properties already contain the existing agricultural land uses, farm roads, dams, water abstraction infrastructure, school, cemetery areas, dwellings and approximately 110 ESTA beneficiary families that the proposal seeks to formalise, reorganise and manage.

The need for the development arises directly from the existing circumstances on these farms. Several families with confirmed permanent tenure rights in terms of the Extension of Security of Tenure Act currently live in scattered nodes across the application area and have indicated that they wish to remain in the Hoogekraal area rather than relocate to George or Mossel Bay. An alternative property elsewhere would not address this existing tenure-rights situation, would not retain the community's historic relationship with the farms, and would not resolve the current scattered occupation pattern on the affected properties.

Similarly, alternative sites outside the existing landholding would not address the current cadastral and land-use fragmentation of the Hoogekraal / Buffelsdrift properties. The proposal is intended to consolidate, rationalise and re-subdivide the existing farm portions into a more coherent rural agricultural and conservation-based layout. This includes retaining agricultural use on transformed and suitable land, allocating sensitive natural areas to conservation zoning, formalising the existing school, protecting cemetery areas, rationalising existing roads and servitudes, and providing a planned rural farmworker village. These objectives can only be achieved on the affected properties themselves.

The application area has also been defined by clear physical and planning constraints. Only the portions south of the N2 National Road form part of the NEMA application, as this is where the proposed re-subdivision, farmstead development, conservation zoning, farmworker village, roads, utilities and associated listed activities will occur. The farm portions north of the N2 will remain agricultural and do not require environmental authorisation as part of this application. Properties whose owners did not wish to participate have been excluded from the application area and will remain privately owned and operated, with access arrangements protected where required through servitudes.

From an environmental perspective, the absence of alternative properties does not mean that alternatives were not considered. Instead, the alternative assessment has focused on the internal layout and site-specific response within the application area.

The preferred layout has been refined through specialist input, environmental screening, biodiversity mapping, heritage assessment, agricultural assessment, aquatic assessment, visual assessment, engineering design and socio-economic evaluation. This process resulted in the internal differentiation of the site into agricultural areas, conservation areas, split-zoned areas, eco-properties, private open space, utilities, roads and the rural farmworker village.

The internal development footprint has therefore been guided by the environmental and social constraints of the site. Historically cultivated, grazed or transformed land has been retained primarily for agricultural use, while areas with higher biodiversity sensitivity, natural vegetation, watercourses, wetlands, drainage features, ecological corridors and heritage sensitivity have been avoided where possible or incorporated into conservation zoning, open space or low-impact eco-property management. Eco-properties are subject to a maximum developable area of 2 000 m² per farm, including buildings and hard surfaces, so that the majority of each property remains natural or available for rehabilitation.

The use of existing infrastructure further supports the decision not to consider alternative properties. The proposed development makes use of existing farm roads, existing access from Morison Road, existing lawful water uses, existing abstraction infrastructure from the Maalgate River, existing dams, existing agricultural areas, existing settlement areas and the existing Hoogekraal Primary School. Developing on an alternative property would require duplication of access, services, water supply arrangements and social infrastructure, and would not optimise the resources already present on the affected farms.

The preferred site is also a brownfield rural/agricultural restructuring rather than a conventional greenfield development. The land is already used for agriculture, grazing, farm dwellings, farmworker occupation, roads, services, water infrastructure, school and cemetery purposes. The proposal therefore seeks to formalise and improve an existing land-use situation instead of opening

up an unrelated new site elsewhere. In this context, the consideration of alternative properties would not be reasonable or meaningful, as it would fail to address the very issues that triggered the application.

The “no-go” alternative remains relevant and has been considered as the baseline against which the proposal is assessed. However, the no-go alternative would retain the current fragmented cadastral pattern, scattered ESTA occupation, limited formal conservation protection, existing infrastructure inefficiencies, unresolved road and servitude arrangements, and the continued absence of a coordinated long-term management structure. It would also not provide a formal rural village for the existing tenure-rights holders or secure the proposed conservation and rehabilitation commitments.

In summary, no alternative properties or alternative sites were considered because the proposal is inseparably linked to the existing Hoogekraal / Buffelsdrift properties, the existing land-use and ownership pattern, the existing social and ESTA tenure-rights obligations, the existing agricultural and service infrastructure, and the need to rationalise the affected cadastral units. The assessment has therefore appropriately focused on internal layout refinement within the application area, together with the no-go alternative, rather than on unrelated off-site property alternatives that would not meet the purpose and need of the proposed activity.

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

- **Preferred property/site alternative — positive impacts**

- **Brownfield rural restructuring:** The preferred alternative makes use of an already transformed agricultural landscape with existing farms, roads, dwellings, dams, water infrastructure, school facilities, cemeteries and farmworker occupation, rather than opening up an unrelated greenfield site.
- **Retention of agricultural land use:** Approximately 264.0785 ha will remain under agricultural use, allowing continued grazing, planted pastures, lifestyle farming, orchards, food gardens, equestrian agriculture and small-scale farming.
- **Formal conservation gain:** Approximately 182.3239 ha will be placed under conservation-oriented zoning or management, including Open Space Zone III / Nature Conservation Area and conservation portions within split-zoned farms.
- **Protection of sensitive biodiversity areas:** The preferred layout responds to CBAs, ESAs, Critically Endangered Garden Route Granite Fynbos, watercourses, wetlands, seep areas, forest/thicket habitat and ecological corridors by assigning sensitive areas to conservation or low-impact eco-property use.
- **Reduced development footprint in sensitive areas:** Eco-properties are limited to a maximum developable area of 2 000 m² per farm, including buildings and hard surfaces, thereby retaining the majority of each property in a natural or rehabilitated condition.
- **Improved long-term land management:** The proposal introduces HOA / management-body controls, EMP requirements, alien invasive plant control, rehabilitation, stormwater management, protection of watercourses and wetland buffers, and ongoing maintenance responsibilities.
- **Use of existing infrastructure:** Existing farm roads, proclaimed minor roads, road servitudes, water abstraction infrastructure, dams and existing access from Morrison Road are used or rationalised where possible, reducing the need for extensive new infrastructure.
- **Improved road and access management:** Internal roads will become private roads maintained by the HOA, existing access rights will be secured through servitudes, unnecessary roads will be closed and rehabilitated, and Morrison Road access will be improved through right-turn lanes.
- **Protection of hydrological functioning:** Existing drainage patterns and catchment delineations will largely be retained, with grass swales, low-water crossings, rainwater harvesting, limited hardened surfaces and continued overland flow to drainage lines, the Maalgate River and the ocean.
- **Efficient use of lawful water resources:** The proposal relies on existing lawful water uses verified through the BOCMA process, supplemented by rainwater harvesting and on-site water treatment, rather than requiring a new municipal bulk-water supply.
- **Improved wastewater management:** The rural village will be serviced by an on-site package plant, with treated effluent reused for irrigation and monitored, while individual farms will use approved on-site sewage systems.
- **Social upliftment:** The preferred alternative provides a formal rural farmworker village for approximately 110 ESTA beneficiary families who already live on the farms and wish to remain in the Hoogekraal area.
- **Retention of community facilities:** The existing Hoogekraal Primary School will be retained and formalised on its own cadastral property, while cemetery and graveyard areas will be protected and access maintained.
- **Heritage protection:** The historic Hoogekraal werf precinct is excluded from the development footprint, graded structures are to be retained, burial grounds protected, and chance-find procedures implemented.
- **Improved visual and landscape controls:** The development is based on a low-density rural farmstead model, with architectural guidelines, subdued materials, indigenous landscaping, limited building footprints and green buffers to maintain rural coastal character.
- **Socio-economic benefits:** The preferred alternative is expected to generate construction and operational employment, support small-scale agriculture, conservation management, equestrian uses, estate maintenance and local procurement.
- **Better outcome than the previous Lagoon Bay-type proposal:** Compared with the earlier resort/golf estate concept, the current preferred alternative is substantially lower intensity, with stronger agricultural, conservation and social components.

- **Preferred property/site alternative — negative impacts**

- **Loss or transformation of some agricultural land:** Although agriculture is retained on a substantial portion of the site, some land will be changed from Agriculture Zone I to conservation, residential, utility, open space and transport uses.

- **Vegetation clearance:** Some indigenous vegetation clearance will be required for new homesteads, roads, services, farm infrastructure, the rural village and associated development footprints.
 - **Potential impact on Critically Endangered vegetation:** Remaining patches of Garden Route Granite Fynbos and associated natural habitats may be affected if clearing, edge effects, alien invasion or fragmentation are not strictly controlled.
 - **Disturbance to CBAs and ESAs:** Development within a biodiversity-priority landscape may affect ecological connectivity, habitat integrity and ecological support functions, even where impacts are reduced through zoning and footprint controls.
 - **Aquatic impacts:** Road crossings, services, stormwater infrastructure and works within or near watercourses may affect beds, banks, drainage lines, seep wetlands and hydrological connectivity.
 - **Stormwater changes:** Additional roofs, roads and hard surfaces may result in a slight increase in runoff, with associated erosion, sedimentation and water-quality risks if not properly managed.
 - **Water-use impacts:** Continued abstraction from the Maalgate River system and use of existing lawful water allocations must be carefully managed to avoid effects on downstream aquatic and estuarine systems.
 - **Wastewater risks:** On-site sewage systems and the package plant create potential risks relating to odour, malfunction, seepage, nutrient enrichment or groundwater contamination if not properly operated and maintained.
 - **Construction-phase disturbance:** Temporary impacts may include dust, noise, vegetation disturbance, traffic, erosion, waste generation and disturbance to residents, fauna and surrounding landowners.
 - **Operational disturbance:** Increased human presence, vehicles, domestic animals, lighting, farming activity, equestrian activity and maintenance may affect fauna, sense of place and the quiet rural character of the area.
 - **Visual change:** New dwellings, farm buildings, roads, village structures and equestrian facilities will alter the existing rural/coastal landscape, especially where visible from the N2, Morrison Road, neighbouring properties or elevated viewpoints.
 - **Traffic impacts:** The development will generate additional trips and may increase traffic pressure on Morrison Road, although this is to be mitigated through access upgrades.
 - **Heritage risk:** Although significant heritage features are avoided or protected, construction activities may still affect unknown archaeological resources, graves or cultural landscape features if chance finds are not properly managed.
 - **Fragmentation risk:** Subdivision into smaller properties may create long-term management risks if individual owners do not comply with conservation, agricultural, architectural and environmental controls.
 - **Alien invasive plant risk:** Disturbance, new roads and increased activity may facilitate the spread of alien invasive species unless active control is implemented.
 - **Management dependency:** The environmental acceptability of the preferred alternative depends strongly on effective implementation of the EMP, HOA rules, WULA conditions, heritage requirements, biodiversity mitigation and long-term monitoring.
- **No-go/status quo alternative — positive impacts**
 - **Avoids immediate construction disturbance:** No new construction-phase dust, noise, traffic, vegetation clearing, road works or service installation would occur.
 - **Avoids new visual intrusion:** The current visual character would remain largely unchanged in the short term.
 - **Avoids new hard surfaces and infrastructure:** There would be no additional roofs, roads, package plant, service routes or new formal development footprints.
 - **Avoids immediate listed-activity impacts:** No new NEMA-listed vegetation clearance, watercourse works, road development or land-use change would be triggered by the proposal.
 - **No-go/status quo alternative — negative impacts**
 - **Existing fragmented land-use pattern remains unresolved:** The current cadastral, access, road, service and land-use fragmentation would continue.
 - **No formal conservation zoning benefit:** Sensitive biodiversity areas would remain largely under agricultural zoning, without the proposed conservation zoning and enforceable long-term management.
 - **Continued unmanaged disturbance:** Existing grazing, alien invasive plants, roads, altered drainage, scattered occupation and disturbed areas may continue without coordinated rehabilitation or conservation management.
 - **No formal rural village for ESTA beneficiaries:** Approximately 110 beneficiary families would remain in scattered occupation patterns without the planned serviced village and associated tenure formalisation.
 - **No improvement to rural services:** Existing ad hoc or scattered water, sanitation, roads and settlement infrastructure would not be rationalised or upgraded.
 - **No closure and rehabilitation of unnecessary roads:** Existing road disturbance and fragmentation would likely remain.
 - **No coordinated aquatic rehabilitation:** Watercourses, wetlands and drainage lines would not benefit from the proposed buffers, livestock controls, alien clearing, stormwater controls and WULA-linked management.
 - **No socio-economic upliftment from the proposal:** Construction jobs, operational jobs, small-scale farming opportunities, conservation-related work and local investment would not materialise.
 - **No formal protection of cemetery and community areas through the new layout:** Existing cemetery and community-use areas would not be integrated into a formal land-use and management framework.
 - **Agricultural viability constraints remain:** The current farming model would continue despite specialist findings that large-scale conventional agriculture is constrained by soil, water and financial limitations.

	<ul style="list-style-type: none"> • Overall environmental comparison <ul style="list-style-type: none"> ○ The preferred property/site alternative has greater short- and medium-term environmental impacts than the no-go alternative, mainly because it involves construction, land-use change, vegetation clearance, new infrastructure, road upgrades, watercourse-related works and increased human activity. ○ However, the preferred alternative also creates substantial long-term environmental and social benefits by formalising conservation zoning, protecting sensitive areas, improving land management, rationalising services, retaining agriculture on transformed land, addressing ESTA tenure obligations and introducing enforceable management controls. ○ The no-go alternative avoids immediate development impacts, but it does not resolve the existing fragmented land-use pattern, scattered occupation, limited conservation protection, degraded aquatic systems, alien invasive plant issues, or agricultural viability limitations. ○ On balance, the preferred alternative is environmentally preferable if all mitigation, EMP, WULA, heritage, biodiversity, visual, stormwater, wastewater and HOA management requirements are implemented and enforced.
1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred activity alternative.	
<p>The preferred activity alternative is the consolidation, rezoning and subdivision of the southern Hoogekraal / Buffelsdrift farm portions into the proposed Hoogeland Coastal Farmsteads development. The activity comprises a low-density rural agricultural and conservation-based development, including agricultural farm portions, conservation farm portions, split-zoned agricultural/conservation properties, eco-properties, a rural farmworker village for existing ESTA beneficiaries, private open space areas, equestrian and recreational facilities, internal private roads, utility infrastructure, water supply infrastructure, on-site wastewater treatment, stormwater management infrastructure and associated service routes.</p>	
<p>The preferred activity is not a conventional urban township or resort development, but a restructuring of an existing agricultural landscape. The proposal will retain agricultural use on historically transformed and suitable portions of the site, while assigning environmentally sensitive areas to Open Space Zone III / Nature Conservation Area or conservation components within split-zoned properties. The activity therefore includes both land-use change and physical development, but in a manner that seeks to retain the rural character of the site and avoid unnecessary disturbance of ecological, aquatic and heritage-sensitive areas. In terms of the NEMA EIA Regulations, the preferred activity alternative is associated mainly with listed activities relating to land transformation, vegetation clearance, development within or near watercourses, roads and infrastructure, and the change of agricultural land to non-agricultural uses.</p>	
Listing Notice 1 activities relevant to the preferred activity alternative	
<ul style="list-style-type: none"> • Activity 12 and Activity 48 are relevant because the preferred activity includes the construction, upgrading or replacement of infrastructure within watercourses or within 32 m of watercourses. This relates particularly to existing and proposed road crossings, low-water crossings, drainage-line crossings, service infrastructure, stormwater infrastructure and any infrastructure upgrades required where farm roads, private roads or services interact with wetlands, seep areas, drainage lines or watercourses. • Activity 19 is relevant because road crossings, drainage-line works, upgrading of existing crossings, stormwater interventions or other infrastructure may require infilling, excavation, removal, moving or depositing of material of more than 10 m³ within a watercourse. This activity is therefore linked to the physical works required to retain or improve access across water-linked features while maintaining hydrological functioning. • Activity 27 is relevant because the preferred activity will require clearance of more than 1 ha of indigenous vegetation, excluding linear activities, for homesteads, farm buildings, the rural farmworker village, services, utility infrastructure, private open space uses and associated development footprints. The total indigenous vegetation clearance is expected to remain below the 20 ha threshold, which confirms that the Basic Assessment process is appropriate. • Activity 28 is relevant because the preferred activity involves the change of land use from agriculture to other land uses. Although the whole application area is currently largely Agriculture Zone I, the proposal includes rezoning portions of agricultural land to Open Space Zone III / Nature Conservation Area, General Residential Zone I for the rural farmworker village, Open Space Zone II for private open space and equestrian/recreational facilities, Community Zone for the existing school, Utility Zone for service infrastructure, Transport Zone III for private roads, and a public street erf. This activity therefore captures the land-use transformation component of the proposal. 	
Listing Notice 3 activities relevant to the preferred activity alternative	
<ul style="list-style-type: none"> • Activity 4 and Activity 18 are relevant because the proposal includes the development of new roads wider than 4 m and/or the widening or upgrading of existing roads within areas containing indigenous vegetation. Although the farm roads will largely remain in their current alignments and will remain gravel farm roads with grass swales, some road improvements, new private roads and access upgrades may affect indigenous vegetation and therefore trigger these activities. • Activity 12 is relevant because the site includes areas of indigenous vegetation within a Critically Endangered ecosystem, namely Garden Route Granite Fynbos. Any clearance of indigenous vegetation within these sensitive ecosystem areas, including for homesteads, eco-properties, roads, services or farm infrastructure, must therefore be assessed in terms of this listed activity. • Activity 14 and Activity 23 are relevant because the preferred activity includes the development of infrastructure or structures of more than 10 m² within watercourses or within 32 m of watercourses in areas that include CBAs and ESAs. This applies to infrastructure such as road crossings, stormwater structures, services, utility infrastructure, pipelines, water infrastructure and potentially other built components located near aquatic features. 	

Activity components forming part of the preferred activity alternative

- The consolidation and subdivision of the affected farm portions south of the N2 into a more coherent rural agricultural and conservation layout.
- The creation of 81 farm portions, including agricultural properties, conservation properties and split-zoned agricultural/conservation properties.
- Retention of approximately 264.0785 ha under agricultural use.
- Allocation of approximately 182.3239 ha to conservation-oriented zoning or conservation management.
- Allocation of approximately 82.9933 ha to supporting uses such as roads, recreation, utilities, the farmworker village and associated infrastructure.
- Establishment of a rural farmworker village for approximately 110 existing ESTA beneficiary families.
- Formalisation of the existing Hoogekraal Primary School on its own cadastral property.
- Provision of private open space portions for communal equestrian facilities, recreation, trails, cemetery areas and shared amenities.
- Creation or upgrading of internal private roads and rationalisation of existing proclaimed minor roads.
- De-proclamation of certain existing minor roads, subject to access rights being protected through servitudes.
- Access from Morison Road, including road safety upgrades such as dedicated right-turn lanes where required.
- Installation of water supply infrastructure using existing lawful water uses, existing abstraction infrastructure, existing dams, on-site treatment, filtration, storage and distribution.
- Installation of pipelines generally within road reserves to avoid additional disturbance corridors.
- Use of rainwater harvesting on individual farms.
- On-site wastewater treatment, including a package plant for the rural farmworker village and individual on-site sanitation systems for the farm portions.
- Reuse of treated effluent for irrigation, subject to monitoring and relevant approvals.
- Stormwater management through retention of existing catchment patterns, gravel roads, grass swales, low-water crossings, infiltration and limited hardened surfaces.
- Protection of wetlands, drainage lines, seep areas, watercourses and associated buffers.
- Implementation of biodiversity, aquatic, visual, heritage and environmental management measures through the EMP, HOA rules and specialist recommendations.

Overall description of the preferred activity alternative

The preferred activity alternative is therefore the implementation of a controlled, low-density agricultural farmstead and conservation development on the southern Hoogekraal / Buffelsdrift farm portions. The activity will trigger listed activities mainly because it involves the clearance of indigenous vegetation, limited disturbance within or near watercourses, road and service infrastructure, development in biodiversity-sensitive areas, and the change of land use from agriculture to conservation, private open space, residential village, utility, road and community uses.

The preferred activity has been selected because it provides a more balanced alternative to both the status quo and the previously contemplated higher-intensity Lagoon Bay-type development. It retains agriculture on transformed land, protects sensitive areas through conservation zoning, limits development footprints in eco-properties, formalises housing for existing ESTA beneficiaries, uses existing infrastructure where possible, and introduces long-term environmental management controls.

In summary, the NEMA-listed activities are not triggered by one isolated component, but by the combined effect of the proposed rural restructuring, vegetation clearance, watercourse-related works, road upgrades, land-use changes and service infrastructure. The preferred activity alternative has therefore been designed to reduce the extent and intensity of these impacts through avoidance of sensitive areas, use of existing roads, low-impact crossings, conservation zoning, limited development footprints, on-site services, stormwater controls and enforceable management measures.

Provide a description of any other activity alternatives investigated.

Apart from the preferred activity alternative, the main activity alternatives considered relate to the **no-go/status quo alternative**, the **existing Act 70 of 1970 agricultural subdivision approval**, and the **previous Lagoon Bay Lifestyle Estate concept**.

No fundamentally different off-site activity alternative was considered reasonable, because the proposal is linked to the existing Hoogekraal / Buffelsdrift landholding, existing agricultural use, existing infrastructure, existing farmworker occupation, and the need to rationalise the affected farm portions.

1. No-go / status quo alternative

- Under the no-go alternative, the proposed consolidation, rezoning, subdivision, farmstead estate, conservation zoning, rural farmworker village, internal private road restructuring and associated infrastructure would not proceed.
- The land would remain largely under its existing agricultural zoning and current fragmented cadastral arrangement.
- Existing agricultural activities, grazing, farm roads, dams, water infrastructure, dwellings, school use, cemetery areas and scattered farmworker occupation would continue in their current or similar form.
- The existing ESTA beneficiary families would remain scattered across the farms, without the proposed formal rural village, secure planned housing layout, communal agricultural areas and upgraded service infrastructure.
- Sensitive biodiversity areas would not receive the proposed conservation zoning or formal long-term management through the HOA, EMP and specialist-recommended rehabilitation measures.
- The no-go alternative would avoid immediate construction impacts such as vegetation clearance, earthworks, dust, noise, road upgrades and watercourse-related works.

- However, it would not resolve the existing fragmented land-use pattern, ESTA settlement situation, road and servitude complexity, ad hoc servicing, limited formal conservation protection, alien invasive plant issues or the need for coordinated long-term environmental management.
- For this reason, the no-go alternative is not preferred.

2. Existing Act 70 agricultural subdivision approval

- During September 2021, approval was granted in terms of the Subdivision of Agricultural Land Act, 1970, for the consolidation and subdivision of the application area to create a larger number of agricultural farm portions.
- This approval remains relevant as an existing land-use and agricultural subdivision informant, but it does not represent the preferred activity alternative in its current form.
- The current proposal amends and refines the earlier agricultural subdivision concept by reducing and rationalising the number of farm portions and by incorporating a more explicit conservation, social and infrastructure response.
- The earlier agricultural subdivision alternative would have retained a stronger agricultural subdivision emphasis, but would not have responded as comprehensively to the mapped biodiversity sensitivities, aquatic systems, heritage constraints, conservation zoning requirements and formal accommodation needs of the ESTA beneficiaries.
- It would also not have provided the same structured distinction between Agri Properties, Eco Properties, conservation-zoned land, private open space, utility areas, private roads, the existing school and the rural farmworker village.
- The current preferred activity alternative is therefore considered a more appropriate refinement of the Act 70 approval, because it incorporates specialist findings, environmental constraints and social obligations into a single coordinated land-use structure.

3. Previous Lagoon Bay Lifestyle Estate concept

- The application area previously formed part of the broader Lagoon Bay Lifestyle Estate proposal.
- That previous concept included a substantially more intensive lifestyle estate development, including two 18-hole golf courses, 895 single residential houses, 320 single and fractional title lodges, 150 single and fractional title apartments, a hotel, wellness centre, spa and clubhouse precinct, a commercial area, conference centre and private nature reserve.
- An environmental authorisation was issued for that earlier development, but the planning application was not concluded due to legal proceedings.
- The Lagoon Bay-type alternative is not pursued as part of the current application and is not preferred.
- Compared with the current proposal, the earlier Lagoon Bay concept represented a higher-intensity residential, resort, leisure and tourism development model, with greater potential implications for water demand, traffic generation, visual character, rural sense of place, biodiversity, agricultural land transformation and municipal service requirements.
- The current preferred activity alternative is substantially lower in intensity and is more strongly rural, agricultural, conservation-based and socially responsive.
- The current proposal retains agricultural use over a significant portion of the site, formally protects sensitive areas through conservation zoning, limits development footprints on Eco Properties, provides a rural farmworker village for existing ESTA beneficiaries, makes use of existing infrastructure where feasible, and avoids the golf estate/resort character of the previous proposal.
- For these reasons, the previous Lagoon Bay development concept is not considered a preferred activity alternative.

4. Internal layout and design refinements

- Although no separate fundamentally different activity alternative is being advanced, the preferred activity has been refined through internal layout and design alternatives.
- These refinements included:
 - retaining transformed and historically used land for agricultural purposes;
 - allocating more sensitive natural areas to Open Space Zone III / Nature Conservation Area;
 - using split zoning where a property contains both agricultural and conservation components;
 - limiting Eco Property development footprints to 2 000 m² per farm;
 - locating the rural farmworker village to accommodate existing ESTA beneficiaries in a planned settlement;
 - retaining the existing Hoogekraal Primary School;
 - shifting boundaries and services to protect cemetery areas and heritage resources;
 - retaining existing farm roads where feasible;
 - closing and rehabilitating unnecessary roads;
 - locating pipelines within road reserves;
 - using low-water crossings where roads interact with drainage lines or seep areas;
 - treating wastewater on site and reusing treated effluent for irrigation; and
 - retaining natural drainage patterns through grass swales, infiltration and limited hardened surfaces.
- These internal refinements are important because they demonstrate that the preferred activity alternative has been shaped by specialist input and environmental constraints, even though no separate off-site activity alternative was considered reasonable.

5. Overall description

In summary, the other activity alternatives investigated were essentially the no-go/status quo alternative, the previously approved agricultural subdivision concept under Act 70 of 1970, and the earlier Lagoon Bay Lifestyle Estate development concept.

The no-go alternative would avoid immediate construction impacts but would not resolve the existing cadastral, social, servicing, agricultural and environmental management issues on the farms.

The Act 70 subdivision approval provides an important background informant but has been refined by the current proposal to better address biodiversity, conservation, heritage, watercourse, infrastructure and ESTA-related considerations.

The former Lagoon Bay Lifestyle Estate concept is not preferred because it represented a more intensive resort/residential development form.

The current preferred activity alternative is therefore the most balanced and appropriate option, as it combines continued agriculture, conservation zoning, rural farmworker housing, use of existing infrastructure and long-term environmental management within a low-density rural development framework.

Provide a motivation for the preferred activity alternative.

The preferred activity alternative is the implementation of the Hoogeland Coastal Farmsteads proposal as a low-density rural agricultural, conservation and social restructuring of the southern Hoogekraal / Buffelsdrift farm portions. The activity comprises the consolidation, rezoning and subdivision of the existing agricultural landholding into agricultural properties, conservation properties, split-zoned agricultural/conservation properties, private open space areas, internal private roads, utility infrastructure, communal equestrian and recreational facilities, the formalisation of the existing school, and a rural farmworker village for existing ESTA beneficiaries.

This activity alternative is preferred because it responds directly to the existing conditions on the site. The land is already used for agriculture, grazing, farm roads, existing dwellings, water abstraction and storage infrastructure, school purposes, cemetery areas and occupation by approximately 110 families with confirmed permanent tenure rights in terms of ESTA. The proposal therefore does not represent an unrelated greenfield development, but a planned restructuring of an existing rural agricultural landscape to resolve current cadastral, land-use, servicing, social and environmental management issues.

The preferred activity retains the core agricultural function of the land while adapting it to the site's agricultural capability and economic constraints. Approximately 264.0785 ha will remain under agricultural use, mainly on historically transformed or suitable areas. This allows continued grazing, planted pastures, orchards, food gardens, small-scale farming, lifestyle agriculture and equestrian-related agricultural activities. The activity is therefore preferable to complete conversion of the land to non-agricultural use, as it retains productive rural land while enabling a more viable and diversified agricultural model.

The activity alternative is also preferred because it creates a substantial conservation and rehabilitation outcome. Approximately 182.3239 ha will be placed under conservation-oriented zoning or conservation management – consisting of land currently zoned for Agriculture, historically used for agriculture and currently mostly invaded with alien invasive species that are compromising the biodiversity value of the area. This responds to the presence of Critical Biodiversity Areas, Ecological Support Areas, Critically Endangered Garden Route Granite Fynbos, natural vegetation remnants, wetlands, seep areas, drainage lines, watercourses and ecological corridors. The proposal therefore improves the land-use framework by moving sensitive areas out of general agricultural use and into a more protective zoning and management regime.

The preferred activity has been shaped by the mitigation hierarchy. More intensive use is directed toward historically disturbed or transformed areas, while sensitive biodiversity, aquatic and heritage areas are avoided, buffered, restricted or managed. Eco Properties are limited to a maximum developable area of 2 000 m² per farm, including buildings and hard surfaces, ensuring that the majority of those properties remains natural or available for rehabilitation. This reduces vegetation clearance, hardening of the landscape, fragmentation and disturbance within sensitive areas.

The activity is also socially necessary and desirable because it provides a formal rural village for approximately 110 ESTA beneficiary families who already live on the farms and wish to remain in the Hoogekraal area. The village will consolidate scattered occupation into a planned and serviced settlement, provide secure housing opportunities, include communal agricultural and recreational areas, and retain the community's historic connection to the land. The preferred activity therefore addresses an existing legal and social obligation rather than creating an unrelated settlement.

The preferred activity further protects existing community and heritage resources. The Hoogekraal Primary School will be retained and formalised on its own cadastral property, cemetery areas will be protected and access maintained, and the historic Hoogekraal werf precinct and other graded heritage structures will be retained and managed in accordance with heritage recommendations. This makes the activity preferable to an unmanaged continuation of the current scattered land-use pattern. The activity alternative is preferred from an infrastructure perspective because it optimises existing resources. Existing farm roads, proclaimed minor roads, road servitudes, access from Morrison Road, water abstraction infrastructure, dams and existing lawful water uses will be retained, rationalised, upgraded or reused where appropriate. Internal roads will largely follow existing alignments and become private roads maintained by the HOA, while unnecessary roads will be closed and rehabilitated. Water pipelines will be located within road reserves as far as possible, limiting new linear disturbance.

Water and sanitation services have also been designed to suit the rural context. The proposal will use verified existing lawful water allocations from the Maalgate River system, supplemented by rainwater harvesting and on-site treatment where required. The rural village will be serviced by an on-site package wastewater treatment plant, with treated effluent reused for irrigation and monitored. Individual farms will use approved on-site sanitation systems. This reduces reliance on municipal bulk services and supports a self-managed rural infrastructure model.

The preferred activity is also preferable to the previous Lagoon Bay-type development concept, which represented a substantially more intensive resort/residential and golf estate model. The current activity is lower density, more rural in character, more strongly linked to agriculture and conservation, and more responsive to the existing ESTA community. It therefore presents a reduced-impact alternative to a high-intensity coastal lifestyle estate.

The activity is also preferred over the no-go alternative. While the no-go alternative would avoid immediate construction impacts, it would not resolve the fragmented cadastral pattern, scattered ESTA occupation, ad hoc servicing arrangements, road and access complexities, agricultural viability constraints, limited formal conservation protection, alien invasive plant issues

<p>or the need for coordinated long-term management. The preferred activity provides a structured framework to address these issues through rezoning, subdivision, conservation management, infrastructure planning, an EMPr, HOA controls and specialist mitigation.</p> <p>The NEMA listed activities triggered by the proposal are therefore not isolated activities, but arise from the integrated rural restructuring of the land. These include activities associated with clearance of indigenous vegetation, disturbance within or near watercourses, movement of material within watercourses, road development or upgrading, development in biodiversity-sensitive areas, and the change of land use from agriculture to conservation, residential village, utility, transport, open space and community uses. The preferred activity has specifically been designed to reduce the significance of these impacts by limiting clearance, retaining agricultural use where appropriate, protecting sensitive areas, using existing infrastructure, managing watercourse crossings and imposing long-term environmental controls.</p> <p>On balance, the preferred activity alternative is considered the most appropriate and balanced option because it combines agricultural continuity, biodiversity protection, social redress, heritage protection, infrastructure efficiency and rural landscape retention. It provides a practical response to the site's existing constraints and opportunities, while avoiding the greater impacts associated with more intensive development and the unresolved environmental and social risks associated with the status quo. Subject to implementation of the specialist recommendations, EMPr, WULA requirements, heritage conditions, planning controls and HOA management obligations, the preferred activity alternative is considered environmentally acceptable, socially responsive and aligned with the principles of sustainable development.</p>
<p>Provide a detailed motivation if no activity alternatives exist.</p> <p>No separate activity alternatives were identified as reasonable or feasible for this application because the proposed activity is intrinsically linked to the existing Hoogekraal / Buffelsdrift landholding, the current cadastral and land-use pattern, the existing agricultural infrastructure, the presence of ESTA beneficiaries on the farms, and the need to regularise and manage the site as one integrated rural restructuring proposal.</p> <p>No reasonable or feasible activity alternatives, other than the preferred activity and the no-go alternative, were identified for assessment. The proposed activity is not a generic development that could be substituted with a materially different form of land use while still meeting the project need. The activity specifically comprises the consolidation, rezoning and subdivision of an existing agricultural landholding to create a coordinated rural farmstead development, conservation areas, private open space, utility areas, internal private roads, the formalisation of the existing school, and a rural farmworker village for existing ESTA beneficiaries. These components are interdependent and arise directly from the existing conditions on the affected properties.</p> <p>The need for the activity is site-specific. The application area already contains agricultural land, farm roads, water abstraction and storage infrastructure, dwellings, an existing school, cemetery areas, minor roads, servitudes, and approximately 110 farmworker families with confirmed permanent tenure rights in terms of ESTA. A fundamentally different activity, such as a conventional urban residential estate, resort development, commercial agriculture-only continuation, or relocation-based housing development, would not address the combination of issues that the proposal is intended to resolve. These include cadastral fragmentation, scattered farmworker occupation, long-term tenure obligations, environmental sensitivity, constrained agricultural viability, road access rationalisation, and the need for formal conservation management.</p> <p>The activity has therefore been refined internally rather than replaced by a different activity alternative. The preferred activity has been shaped through specialist input, biodiversity and aquatic sensitivity mapping, heritage assessment, agricultural viability assessment, socio-economic assessment, engineering design and planning requirements. This refinement has resulted in a lower-impact rural development model that retains agricultural use on historically transformed land, places sensitive natural areas under conservation-oriented zoning, limits development footprints on eco-properties, uses existing roads and service corridors where possible, protects wetlands and watercourses, retains the school and cemeteries, and provides a formal rural village for the existing ESTA beneficiaries.</p> <p>A commercial agriculture-only alternative was not considered a reasonable activity alternative because specialist input indicates that large-scale conventional farming across the entire site is constrained by soil suitability, water availability, land fragmentation and financial viability. The preferred activity retains approximately 264 ha for agricultural use, but allows this to occur as diversified lifestyle farming, grazing, small-scale agriculture, equestrian agriculture, orchards and food gardens, which better reflects the realistic agricultural potential of the land.</p> <p>A conventional residential or resort-style activity alternative was also not considered reasonable or desirable. The earlier Lagoon Bay-type concept represented a substantially more intensive residential, golf estate and resort development. That form of activity would have had greater potential implications for water demand, traffic generation, visual character, rural sense of place, biodiversity loss and municipal service requirements. The current activity is intentionally lower in intensity and more rural, agricultural, conservation-led and socially responsive.</p> <p>A relocation-based housing alternative for the ESTA beneficiaries was also not considered a reasonable activity alternative, as the beneficiary families have indicated that they wish to remain in the Hoogekraal area rather than relocate to George or Mossel Bay. Relocation elsewhere would not address their historical connection to the farms or the existing social and tenure-rights context. The rural farmworker village is therefore an integral component of the preferred activity and cannot reasonably be separated from the land restructuring proposal.</p> <p>The internal road, water, wastewater and stormwater components are also not separate activity alternatives, but supporting infrastructure required to make the preferred activity functional and environmentally manageable. These components have been designed to follow existing disturbed corridors where possible, retain existing drainage patterns, use existing lawful water allocations, provide on-site wastewater treatment, reuse treated effluent for irrigation, and avoid unnecessary dependence on municipal bulk services. The layout of new roads was informed by the environmental constraints, and layouts that compromised these sensitivities were rejected and redesigned to AVOID impacts.</p>

The absence of separate activity alternatives does not mean that alternatives were not considered. Instead, the assessment has focused on iterative design refinement within the preferred activity, together with the no-go alternative. The layout has been adjusted to respond to biodiversity sensitivities, wetlands, watercourses, heritage resources, agricultural capability, visual character, access requirements, engineering constraints and social needs. This design-refinement process is considered more meaningful than assessing artificial activity alternatives that would not meet the purpose and need of the application.

In summary, no separate activity alternatives exist because the proposed activity is a single integrated and site-specific response to the existing agricultural, social, cadastral, environmental and infrastructure circumstances on the Hoogekraal / Buffelsdrift properties. The preferred activity represents the only reasonable development form that addresses the existing ESTA tenure obligations, retains agricultural use where appropriate, secures conservation management for sensitive areas, formalises existing community facilities, rationalises roads and services, and provides an enforceable long-term management framework. The only realistic alternative to the preferred activity is therefore the no-go alternative, which would retain the current fragmented land-use pattern and would not resolve the identified social, environmental, agricultural or infrastructure issues.

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

- **Preferred activity alternative — positive environmental impacts**
 - Converts part of the existing agricultural land-use system into a more defined combination of agriculture, conservation, rural settlement and supporting infrastructure.
 - Reduces the likelihood of unconstrained agricultural clearing on ecologically sensitive portions by assigning conservation and low-impact eco-property functions to those areas.
 - Creates a formal mechanism for managing activities that trigger NEMA, including vegetation clearance, watercourse works, road upgrades and land-use change.
 - Enables sensitive aquatic interventions, such as road crossings and stormwater measures, to be assessed and authorised rather than continuing as unmanaged farm infrastructure.
 - Allows redundant or unnecessary farm roads to be closed and rehabilitated, reducing long-term disturbance where roads are no longer required.
 - Concentrates the rural village and service infrastructure into defined areas, reducing scattered servicing impacts across the broader farm landscape.
 - Replaces multiple scattered sanitation arrangements over time with more controlled wastewater treatment for the rural village and regulated on-site systems for individual farms.
 - Promotes water efficiency through rainwater harvesting, on-site storage and the use of verified existing lawful water allocations rather than creating a new municipal bulk-water demand.
 - Encourages a more environmentally controlled land-use form than the previous high-intensity Lagoon Bay-type activity, particularly in relation to density, water demand, roads, visual change and biodiversity disturbance.
 - Provides a basis for long-term environmental governance through the EMPr, HOA rules, design review, water-use authorisation conditions and specialist mitigation measures.
- **Preferred activity alternative — negative environmental impacts**
 - Triggers direct physical disturbance through vegetation clearance for dwellings, roads, utility infrastructure, the rural village and supporting facilities.
 - Results in permanent land-use change on portions of land currently zoned or used for agriculture.
 - Introduces new built form, hard surfaces and human activity into a rural agricultural and biodiversity-sensitive setting.
 - Requires works within or near watercourses, including crossings and stormwater-related interventions that may alter beds, banks or flow paths if not carefully designed.
 - May increase ecological edge effects around conservation areas, wetlands, watercourses and remaining indigenous vegetation.
 - May increase operational pressures from domestic animals, lighting, noise, vehicle movement, recreational use and human access into previously less-used areas.
 - May increase risk of alien invasive plant spread along new roads, service corridors, disturbed areas and property edges.
 - May create cumulative disturbance from many small development footprints, even where each individual footprint is limited.
 - Requires long-term compliance by multiple future landowners, meaning environmental outcomes depend on effective enforcement of restrictions and management rules.
 - May increase fire-management complexity because residential, agricultural and conservation uses will occur within the same landscape.
- **Act 70 agricultural subdivision / agriculture-only activity alternative — positive environmental impacts**
 - Would retain a predominantly agricultural activity focus and avoid introducing a broader mix of residential village, utility, conservation estate and recreational components.
 - Would likely involve fewer formal land-use categories and less change from the existing agriculturally zoned baseline.
 - Could avoid some of the built-form and operational impacts linked specifically to the rural farmstead estate and communal recreational facilities.
 - Would maintain the visual and functional identity of the properties as agricultural land to a greater degree than a mixed rural development.
 - Could reduce the extent of formal infrastructure required for a more complex estate-type layout.

- **Act 70 agricultural subdivision / agriculture-only activity alternative — negative environmental impacts**
 - Would provide weaker formal protection for sensitive biodiversity areas if these remained under general agricultural use rather than conservation zoning.
 - Could allow continued or future agricultural disturbance in areas better suited to conservation, rehabilitation or low-impact management.
 - Would not necessarily impose the same 2 000 m² development-footprint restriction on sensitive eco-property areas.
 - Would not create the same integrated EMPr, HOA and design-control framework for managing biodiversity, stormwater, roads, services and conservation areas.
 - Would not address scattered occupation and servicing in the same coordinated manner, allowing existing dispersed impacts to remain.
 - Could perpetuate livestock access, alien invasion, erosion and drainage disturbance in sensitive areas unless separate management controls were imposed.
 - Would not provide the same opportunity to rationalise roads, close unnecessary access routes and rehabilitate redundant disturbed corridors.
 - Would not align as strongly with the specialist-driven conservation response now proposed for CBAs, ESAs, watercourses, wetlands and threatened vegetation.
 - Could result in a less environmentally responsive outcome because the activity would remain driven mainly by agricultural subdivision rather than by biodiversity-led layout refinement.
- **Previous Lagoon Bay-type activity alternative — positive environmental impacts**
 - Would have concentrated development into a single planned estate framework rather than leaving fragmented existing land uses unmanaged.
 - Could have provided formal infrastructure, internal access planning, stormwater systems and estate-level environmental management if implemented with strict conditions.
 - May have created a defined private nature reserve or open-space component, depending on the form of that previous approval.
 - Would have required environmental authorisation and therefore formal assessment of major impacts.
 - Could have enabled rehabilitation or management of some open-space areas as part of a broader estate management system.
- **Previous Lagoon Bay-type activity alternative — negative environmental impacts**
 - Would have represented a substantially more intensive land-use activity than the current preferred proposal.
 - Would likely have resulted in greater vegetation clearance, earthworks, road construction and landscape transformation.
 - Would likely have generated higher water demand and greater pressure on catchment and water-resource management.
 - Would have introduced a more urban/resort character into the rural coastal landscape, with greater visual and sense-of-place impacts.
 - Golf-course and resort components would likely have required more intensive landscape modification, irrigation, fertiliser use and ongoing maintenance.
 - Higher residential and tourism densities would have increased traffic, lighting, noise, wastewater generation and operational disturbance.
 - The activity would likely have had greater cumulative impacts on fauna movement, habitat connectivity and ecological corridors.
 - It would have been less directly responsive to the existing agricultural character and the need to retain productive rural land.
 - It would have been less compatible with a low-impact rural conservation-and-agriculture model than the current preferred activity.
- **No-go / status quo activity alternative — positive environmental impacts**
 - Avoids the immediate impacts associated with construction, listed activities and land-use transformation.
 - Avoids new formal development footprints, utility areas and new or upgraded private road infrastructure.
 - Avoids short-term disturbance to vegetation, soils, watercourses, fauna and neighbouring land users.
 - Avoids additional operational traffic, lighting and recreational activity associated with the proposed rural estate.
 - Maintains the current physical landscape in the short term.
- **No-go / status quo activity alternative — negative environmental impacts**
 - Does not introduce formal conservation zoning for sensitive areas that currently remain within an agricultural landscape.
 - Does not secure the proposed biodiversity, aquatic, stormwater, alien-clearing and rehabilitation commitments.
 - Allows existing degraded or fragmented aquatic systems to remain without a coordinated improvement programme.
 - Does not rationalise roads or rehabilitate unnecessary disturbed corridors.
 - Does not replace scattered service arrangements with a coordinated and monitored servicing model.
 - Does not create a single enforceable management structure for conservation, open space, roads, stormwater, sanitation and alien invasive plant control.
 - Does not resolve existing land-use fragmentation that may continue to result in piecemeal environmental impacts.

	<ul style="list-style-type: none"> o Does not provide a mechanism to direct future disturbance away from sensitive areas through a biodiversity-led layout. o Does not convert sensitive portions from general agricultural use to a more protective conservation management regime.
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.	
<p>The preferred design/layout alternative is a low-density rural agricultural and conservation-based layout for the southern Hoogekraal / Buffelsdrift farm portions, known as the Hoogeland Coastal Farmsteads development. The layout has been designed to rationalise the existing cadastral pattern, retain agriculture on transformed and suitable land, place sensitive natural areas under conservation-oriented management, formalise existing farmworker occupation, and use existing roads, water infrastructure and disturbed corridors as far as possible.</p> <p>The layout applies only to the land south of the N2 National Road, which forms the NEMA application area. Farm portions north of the N2 will remain agricultural and do not form part of the environmental authorisation application. Portions affected by the N2 and Morrison Road are rationalised along these road alignments, and landowners who do not wish to participate are excluded from the development while retaining servitude access where required.</p> <p>The preferred layout provides for a total application area of approximately 529.3957 ha. The land is reorganised into 81 farm portions, together with a rural farmworker village, private open space areas, utility infrastructure, transport erven, a public street erf and the existing school. The layout therefore does not create a conventional residential township, but a managed rural farmstead estate with agricultural, conservation, community and infrastructure components.</p> <p>The design distinguishes between areas that are suitable for continued agricultural use and areas that are more appropriate for conservation, rehabilitation or low-impact rural living. Approximately 264.0785 ha, or 49.88% of the site, will remain under agricultural use. This land includes areas that are historically cultivated, grazed, transformed or otherwise suited to continued agricultural activity. Approximately 182.3239 ha, or 34.44% of the site, will be placed under conservation-oriented zoning or conservation management. The remaining approximately 82.9933 ha, or 15.67%, will accommodate supporting uses such as roads, recreation, utilities, the rural village and associated communal infrastructure.</p> <p>The preferred layout uses a split-zoning approach where appropriate. Some properties will remain Agriculture Zone I, some will be rezoned to Open Space Zone III / Nature Conservation Area, and some will contain both agricultural and conservation components. In split-zoned properties, development is directed to the agricultural or less sensitive portion of the property, while the conservation portion is protected from disturbance and managed for biodiversity, rehabilitation and ecological connectivity.</p> <p>The preferred layout provides for Agri Properties and Eco Properties. Agri Properties are intended for lifestyle farming, small-scale agricultural activity, grazing, orchards, vegetable gardens and equestrian-related agricultural uses. These properties retain a working rural character and may accommodate a primary dwelling, barn and limited agricultural outbuildings in accordance with the municipal scheme and HOA design guidelines.</p> <p>Eco Properties are located in more natural or environmentally sensitive parts of the landscape. These properties are subject to a maximum developable area of 2 000 m² per farm, including all buildings and hard surfaces. This restriction ensures that the majority of each eco-property remains in a natural or rehabilitated condition and that development within sensitive areas is kept to a limited, low-impact footprint.</p> <p>The layout also provides for a rural farmworker village for approximately 110 families with confirmed permanent ESTA tenure rights who already reside on the farms. The village is intended to consolidate scattered occupation into a planned and serviced rural settlement within the Hoogekraal area. It will include residential units, communal agricultural areas, recreational areas and associated services. This design response allows the existing community to remain within its established rural context while improving settlement structure and service provision.</p> <p>The existing Hoogekraal Primary School is retained and formalised on its own cadastral property. Cemetery and graveyard areas are also retained and protected within the layout, with access maintained. These elements are included as part of the preferred layout because they form part of the existing social, cultural and community fabric of the site.</p> <p>The preferred road layout is based on using existing farm roads and minor road alignments as far as possible. Several existing proclaimed minor roads cross the application area and are proposed to be deproclaimed, subject to access rights being maintained through registered right-of-way servitudes. Internal roads will become private roads maintained by the HOA. Roads will generally remain gravel farm roads with grass swales for drainage, thereby retaining a rural character and reducing hard-surfacing impacts.</p> <p>External access will be obtained from Morrison Road. The Traffic Impact Assessment recommends dedicated right-turn lanes at both access points to reduce friction on Morrison Road and improve road safety. Internal access will then follow the private road layout shown on the site development plan.</p> <p>The preferred layout has also been influenced by watercourses, wetlands, seep areas and drainage lines. Existing drainage patterns and catchment delineations will be retained as far as possible. Where roads cross drainage lines or areas of subsurface seepage or surface flow, low-water crossings or drift-type crossings will be used. Any new or upgraded crossings will be assessed and authorised through the NEMA process and the associated Water Use Licence Application.</p>	

Service infrastructure has been designed to follow existing disturbed corridors where possible. Water pipelines will be located within road reserves as far as possible to avoid additional disturbance through agricultural, wetland or conservation areas. Existing lawful water uses and existing abstraction infrastructure from the Maalgate River will be used, with water pumped to an existing central dam and then treated, filtered and distributed to the rural village and individual farm portions.

The rural farmworker village will be supplied with potable water treated on site and will be serviced by an on-site package sewage treatment plant. Treated sewage effluent will be reused for irrigation and may be stored in a reservoir or off-channel dam for this purpose, subject to water-use authorisation and quality monitoring. Individual farms will be responsible for their own on-site sanitation systems, such as septic tanks, soakaways, conservancy tanks, artificial wetland treatment systems or mini-package plants, subject to municipal requirements.

The stormwater design forms part of the preferred layout alternative. The development will continue to use existing topography, surface-flow paths and drainage patterns, with catchment delineations remaining broadly unchanged after development. A slight increase in stormwater runoff is expected due to additional roofs, roads and hard surfaces, but this will be managed through limited development footprints, rainwater harvesting, grass swales, low-water crossings, infiltration and the continued use of dams and natural drainage routes.

The preferred layout has also been shaped by biodiversity, aquatic, heritage, visual and agricultural specialist input. Sensitive biodiversity areas, including CBAs, ESAs, Critically Endangered Garden Route Granite Fynbos, wetlands, watercourses, forest and thicket patches and ecological corridors, are avoided where possible or incorporated into conservation zoning and low-impact management areas. Heritage-sensitive areas, including the historic Hoogekraal werf precinct, graded structures and burial grounds, are retained and protected.

The visual and landscape response is integral to the preferred design. Architectural and landscape guidelines require a contemporary agricultural vernacular, modest building forms, low profiles, subdued colours, non-reflective materials, indigenous landscaping, visual buffering and limited earthworks. Common facilities such as the polo field, equestrian infrastructure, trails and communal spaces are designed to reinforce the rural character of the estate and avoid an urban or resort-type appearance.

In summary, the preferred design/layout alternative is a site-specific rural restructuring layout that combines agriculture, conservation, rural housing, community facilities, open space, private roads and utility infrastructure. It is preferred because it retains agriculture on suitable transformed land, protects sensitive natural and heritage areas, formalises existing farmworker occupation, makes use of existing access and infrastructure, limits development footprints in sensitive areas, maintains natural drainage patterns, and establishes a long-term HOA and EMP management framework. This layout is therefore considered the most appropriate design response to the physical, environmental, social and planning constraints of the site.

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

Other than the preferred layout, no fully separate design or layout alternative is being advanced for assessment because the proposal has evolved through an iterative design-refinement process. The current layout represents the outcome of specialist input, engineering constraints, cadastral rationalisation, landowner participation, existing infrastructure, existing farmworker occupation, biodiversity sensitivity, aquatic constraints, heritage resources and visual/landscape considerations. The alternatives investigated were therefore primarily layout refinements and earlier design concepts, rather than completely separate layouts on different parts of the property.

1. Existing cadastral / status quo layout

- The existing layout consists of fragmented farm portions, existing agricultural areas, farm roads, proclaimed minor roads, dwellings, dams, water infrastructure, the existing school, cemeteries and scattered farmworker occupation.
- This layout was considered as the baseline or status quo alternative.
- It was not preferred because it does not provide a coherent long-term structure for the landholding.
- It would retain scattered ESTA occupation across the farms rather than consolidating the existing beneficiaries into a planned rural village.
- It would not formalise conservation areas through Open Space Zone III / Nature Conservation Area zoning.
- It would not rationalise internal roads, road servitudes or proclaimed minor roads.
- It would not close and rehabilitate unnecessary roads.
- It would not provide a coordinated framework for water supply, wastewater treatment, stormwater management, HOA management or biodiversity rehabilitation.
- It would also leave sensitive biodiversity and aquatic areas under a less protective land-use framework.

2. Earlier Act 70 agricultural subdivision layout

- An earlier subdivision layout was approved in terms of the Subdivision of Agricultural Land Act, 1970, for the creation of a larger number of agricultural farm portions.
- This layout was based primarily on agricultural subdivision and cadastral reorganisation.
- It was an important informant for the current proposal but was not retained as the preferred layout in its original form.
- The earlier layout would have resulted in a more uniform agricultural subdivision pattern and a larger number of farming units.
- It did not respond as clearly to the later specialist findings relating to biodiversity, aquatic systems, heritage sensitivity, visual character and the need for a formal rural farmworker village.
- It also did not provide the same conservation zoning structure, split-zoning refinement, eco-property footprint restrictions, private open space network, utility erf and consolidated village layout now proposed.
- The current preferred layout is therefore a refinement of the earlier agricultural subdivision concept, with a stronger environmental, social and infrastructure response.

3. Previous Lagoon Bay Lifestyle Estate layout

- The broader application area previously formed part of the Lagoon Bay Lifestyle Estate concept.
- That layout included a substantially more intensive estate development, including golf-course, resort, residential, lodge, hotel, commercial, conference and private nature reserve components.
- Although environmental authorisation was previously issued, the planning application was not concluded.
- This layout is not preferred because it represented a significantly more intensive land-use and built-form pattern.
- It would have had greater potential impacts on rural character, visual quality, water demand, traffic generation, biodiversity, agricultural land transformation, municipal service requirements and sense of place.
- It was also less directly responsive to the existing ESTA beneficiary occupation and the current intention to retain a low-density agricultural and conservation-based rural character.
- The current preferred layout is considerably less intensive and more closely aligned with agriculture, conservation, rural housing and existing infrastructure.

4. Uniform agricultural layout

- A layout based on retaining all or most of the site as agricultural smallholdings was considered conceptually through the agricultural subdivision process.
- This would have retained the agricultural zoning emphasis across most of the land.
- It was not preferred because not all areas are equally suitable for agricultural use.
- Specialist input identified areas of natural vegetation, Critically Endangered Garden Route Granite Fynbos, CBAs, ESAs, wetlands, seep areas, drainage lines, watercourses and ecological corridors that are more appropriate for conservation or low-impact management than continued agricultural use.
- A uniform agricultural layout would not provide the same protection for biodiversity-priority areas and could perpetuate grazing, clearing, alien invasion, erosion and drainage impacts in sensitive areas.
- It would also not adequately distinguish between transformed agricultural land and natural or recoverable habitat.

5. More intensive residential / estate-style layout

- A more conventional residential estate or higher-density rural lifestyle layout was not preferred.
- Such a layout would require more roads, greater service infrastructure, larger hardened surfaces, increased traffic, more visible built form and greater long-term operational disturbance.
- It would be less compatible with the rural agricultural and coastal landscape character of the site.
- The site falls outside of the urban edge and that form of development would be considered inconsistent with the regional planning policies.
- It would also increase pressure on water resources, wastewater management, stormwater systems, biodiversity corridors and visual absorption capacity.
- The preferred layout instead keeps the development low-density, limits eco-property development footprints to 2 000 m², retains agriculture on suitable land and places sensitive areas under conservation management.

6. Alternative road layout options

- The internal road layout was refined to make use of existing farm roads and proclaimed minor road alignments as far as possible.
- A layout with a more extensive new road network was not preferred because it would create additional disturbance corridors, increase vegetation clearance, fragment habitat, cross more drainage lines and require more earthworks.
- The preferred road layout retains existing farm road alignments where useful, converts internal roads to private roads, deproclaims unnecessary proclaimed roads where appropriate, protects access through servitudes, and closes and rehabilitates roads that are no longer required.
- Pipelines are proposed within road reserves wherever possible to avoid creating additional linear disturbance.

7. Alternative servicing layout options

- The servicing layout was refined to avoid unnecessary duplication of infrastructure and to follow existing disturbed corridors.
- A layout relying on new municipal bulk infrastructure was not preferred because the site is rural and already has existing lawful water-use infrastructure and existing service arrangements.
- The preferred layout uses existing Maalgate River abstraction infrastructure, existing dams, a central treatment/filtration point, road-reserve pipelines, rainwater harvesting, on-site sanitation and a package wastewater treatment plant for the rural village.
- The wastewater treatment plant is located east of the proposed rural village in a lower-lying area to allow gravity-fed reticulation where possible.
- Treated effluent will be reused for irrigation, reducing the need for direct discharge and supporting a circular-services approach.

8. Alternative rural farmworker village arrangements

- Continued scattered occupation by existing ESTA beneficiaries was considered through the status quo but was not preferred.
- A dispersed housing arrangement across the farms would not provide the same level of servicing efficiency, settlement structure, tenure certainty, community facilities or long-term management.
- Relocation outside the application area was not preferred because the beneficiary families have indicated that they wish to remain in the Hoogekraal area rather than relocate to George or Mossel Bay.
- The preferred layout therefore consolidates the approximately 110 beneficiary families into a formal rural farmworker village within the application area, with communal agricultural and recreational areas and access to services.

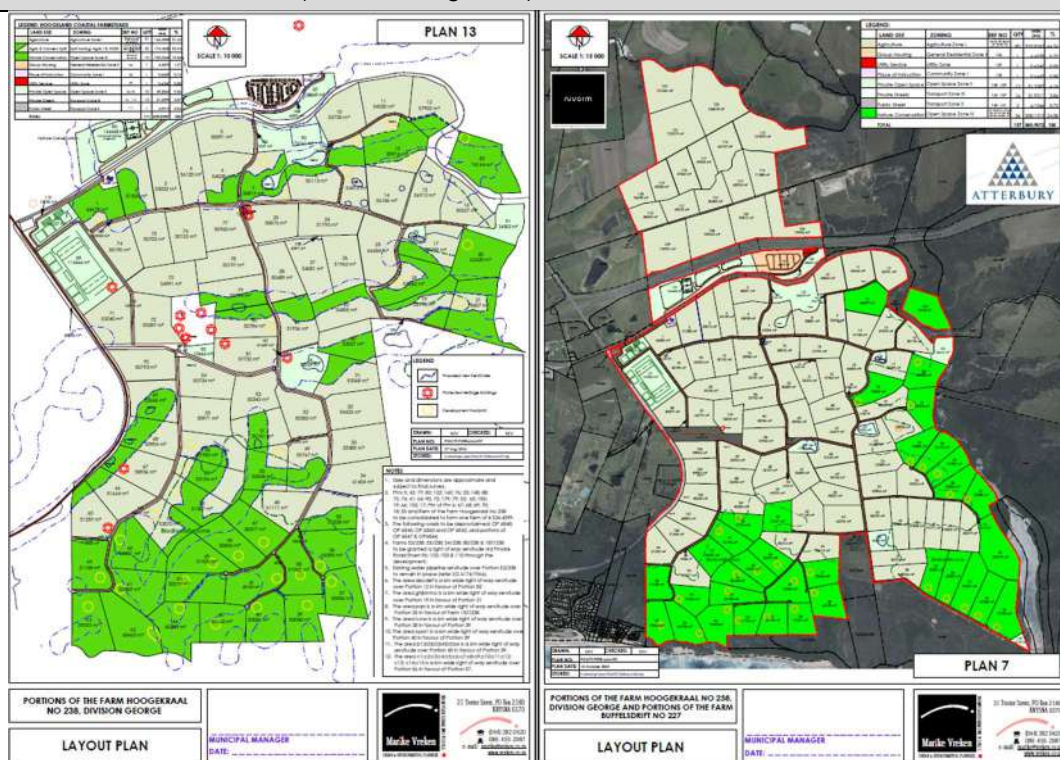
9. Alternative conservation layout options

- A layout that retained sensitive areas under agricultural zoning without formal conservation management was not preferred. Biodiversity benefits would not be able to receive any formal status or protection and consolidated conservation management would not be possible.
- The preferred layout places the most sensitive natural and recoverable areas into Open Space Zone III / Nature Conservation Area or into conservation portions of split-zoned properties.
- This allows the proposal to respond directly to biodiversity mapping, specialist field verification and aquatic constraints.
- The conservation layout also supports rehabilitation, alien invasive plant control, protection of watercourses and wetlands, maintenance of ecological corridors and long-term environmental management through the HOA and EMPr.

10. Summary

In summary, the other design and layout alternatives investigated were the existing cadastral/status quo layout, the earlier Act 70 agricultural subdivision layout, the previous Lagoon Bay Lifestyle Estate layout, a more uniform agricultural layout, a more intensive residential or estate-style layout, alternative internal road arrangements, alternative servicing arrangements, different approaches to the ESTA village, and alternative conservation-zoning configurations. These were not preferred because they either failed to address the existing social and cadastral constraints, resulted in higher environmental or visual impacts, did not sufficiently protect biodiversity and aquatic features, relied on less efficient infrastructure arrangements, or did not provide an appropriate long-term management framework. The preferred layout is therefore the result of iterative refinement and represents the most balanced design response to the site's agricultural, environmental, social, heritage, visual and infrastructure constraints.

Provide a motivation for the preferred design or layout alternative.



The preferred design/layout alternative is motivated by the fact that it provides a site-specific, low-density rural development response that balances agricultural use, conservation, infrastructure efficiency and social need. The layout retains agriculture on historically transformed and suitable land, while placing more sensitive natural areas under conservation zoning or low-impact eco-property management. It also formalises the existing ESTA farmworker occupation into a planned rural village, retains the existing school and cemetery areas, and uses existing farm roads, access points, water infrastructure and disturbed corridors as far as possible. It includes all adjacent land portions who wished to join the proposal, while retaining those unchanged that opted to not form part of the application.

The preferred layout is therefore considered the most appropriate because it avoids a conventional urban or resort-style development, reduces disturbance to biodiversity and aquatic features, limits development footprints in sensitive areas, maintains the rural coastal landscape character, and provides a coordinated long-term management framework through the HOA, EMPr, specialist recommendations and relevant authorisations.

The above figure shows the preferred layout on the left and one of the layouts considered on the right – note the physical area under consideration and the changes to internal road layouts changes effected based on inputs received in the sensitivity assessment and planning phase.

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

No separate or fundamentally different design or layout alternatives were identified as reasonable or feasible for detailed assessment, because the proposed layout is the product of an iterative refinement process that responded directly to the site's fixed cadastral, environmental, engineering, social and heritage constraints. The proposal is not a conventional greenfield

development where several unrelated layouts could reasonably be placed anywhere across the property. It is a site-specific rationalisation of an existing agricultural landholding, existing farm roads, existing water-use infrastructure, existing dwellings, an existing school, cemetery areas, servitudes, sensitive natural areas and existing farmworker occupation.

The layout was therefore determined by the physical and legal realities of the site. The application area is limited to the southern Hoogekraal / Buffelsdrift farm portions south of the N2 National Road, as this is where the NEMA-listed activities, re-subdivision, conservation areas, rural farmworker village, internal roads, utilities and supporting infrastructure are proposed. Farm portions north of the N2 will remain agricultural and do not form part of the NEMA application. Properties whose owners did not wish to participate have also been excluded, with servitude access retained where required. These boundary conditions substantially limited the scope for alternative layouts.

The existing cadastral pattern, road network and service corridors also influenced the layout. Existing farm roads and proclaimed minor roads already traverse the area, and the preferred design seeks to retain, rationalise or improve these routes rather than create an entirely new road network. Unnecessary roads will be closed and rehabilitated, while required internal roads will become private roads maintained by the HOA. Water pipelines and other services are proposed within road reserves as far as possible. A materially different road or services layout would create additional disturbance, require new linear infrastructure corridors, increase vegetation clearance and potentially increase impacts on wetlands, drainage lines and biodiversity-sensitive areas.

The location of the rural farmworker village is similarly constrained by the existing social context. Approximately 110 families with confirmed ESTA tenure rights already reside on the farms and have indicated that they wish to remain in the Hoogekraal area rather than relocate to George or Mossel Bay. The layout therefore had to provide a planned and serviced rural village within the application area, while retaining access to the existing school, cemetery areas, communal agricultural areas and the broader rural setting. A dispersed layout would perpetuate scattered occupation and inefficient service provision, while an off-site or urban relocation layout would not respond to the stated preference and tenure context of the existing community.

Environmental sensitivity was another determining factor. The site contains mapped and verified biodiversity and aquatic constraints, including CBAs, ESAs, Critically Endangered Garden Route Granite Fynbos, natural fynbos, forest and thicket patches, wetlands, seep areas, non-perennial drainage lines, watercourses and ecological corridors. These sensitivities were used to refine the layout so that transformed and historically cultivated areas remain available for agricultural use, while more sensitive natural or recoverable areas are allocated to Open Space Zone III / Nature Conservation Area, conservation portions of split-zoned properties, or low-impact eco-properties. An alternative layout that distributed development more uniformly across the site would be less environmentally responsive and would increase impacts on sensitive features.

The preferred design also incorporates a specific development-footprint control for eco-properties, namely a maximum developable area of 2 000 m² per farm, including buildings and hard surfaces. This restriction is a direct response to the sensitivity of the more natural parts of the site and ensures that most of each eco-property remains natural or available for rehabilitation. A less constrained layout would not provide the same biodiversity, stormwater, visual and landscape protection.

Heritage resources further limited the potential design options. The historic Hoogekraal Farm werf precinct, graded structures, burial grounds, cemetery areas and archaeologically sensitive areas required avoidance, protection and continued access. The layout has therefore been shaped to exclude the key werf precinct from development, retain significant structures, protect graveyard areas and incorporate chance-find and monitoring requirements. A materially different layout could increase the risk of direct or indirect impacts on these heritage resources.

Topography, drainage and stormwater functioning also constrained the design. The proposed layout retains existing catchment delineations and surface-flow patterns as far as possible, with runoff continuing to move toward existing drainage lines, the Maalgate River and the ocean. Low-water crossings are proposed where roads interact with subsurface seepage or surface-flow paths. The layout therefore works with existing topography and drainage rather than requiring major engineered redirection of stormwater. Alternative layouts involving more extensive roads, hard surfaces or reconfigured drainage systems would increase hydrological and erosion risks.

From a visual and landscape perspective, the preferred layout also reflects the site's rural coastal setting. The design avoids a conventional urban or resort-style layout and instead applies a low-density rural farmstead model, with agricultural properties, eco-properties, conservation areas, private open space and shared equestrian facilities. The architectural and landscape guidelines, rural vernacular design approach, indigenous landscaping, limited building footprints and visual buffering are integral to the preferred design. A denser or more urban-style layout would be less compatible with the rural coastal landscape and sense of place.

For these reasons, the assessment has focused on refinement of a single integrated preferred layout, together with the no-go alternative, rather than artificial design alternatives that would not meet the purpose of the proposal or respond appropriately to site constraints. The preferred layout is the outcome of balancing agricultural suitability, biodiversity protection, aquatic constraints, heritage sensitivity, social need, road access, service infrastructure, stormwater management, visual character and long-term governance.

In summary, no separate design or layout alternatives exist because the preferred layout is already the result of site-specific constraint mapping and iterative design refinement. The layout uses existing disturbed areas and infrastructure where possible, retains agriculture on suitable transformed land, places sensitive areas under conservation management, limits development footprints in natural areas, protects wetlands and watercourses, accommodates existing ESTA beneficiaries in a planned rural village, retains the school and cemetery areas, and establishes a coordinated management structure through the HOA and EMPr. A materially different layout would either fail to address the existing social, cadastral and infrastructure context, or would result in greater environmental, heritage, visual or servicing impacts.

- **Preferred design/layout alternative — positive environmental impacts**
 - Concentrates development in a defined layout rather than allowing scattered, incremental development across the broader farm area.
 - Directs homesteads, farm buildings and service infrastructure toward mapped development areas, reducing the risk of ad hoc disturbance in sensitive areas.
 - Separates agricultural, conservation, open space, utility, road and village functions into clear land-use components, improving long-term environmental control.
 - Uses split zoning to keep development out of conservation portions while still allowing appropriate agricultural use on less sensitive land.
 - Limits eco-property development to a maximum of 2 000 m² per farm, reducing hard surfacing, vegetation clearance and disturbance intensity in natural areas.
 - Retains most existing farm-road alignments, thereby reducing new cut-and-fill, habitat fragmentation and disturbance of drainage features.
 - Places water pipelines within road reserves as far as possible, avoiding additional service corridors through conservation, wetland or agricultural areas.
 - Allows unnecessary roads to be closed and rehabilitated, improving long-term landscape integrity.
 - Retains existing drainage patterns and catchment delineations, reducing the need for engineered stormwater diversion.
 - Uses low-water crossings where roads interact with seepage or surface-flow areas, helping maintain natural overland flow.
 - Incorporates conservation parcels and open space into the layout, creating a connected framework for biodiversity management and rehabilitation.
 - Provides a single utility/service area for key infrastructure, reducing the spread of utility impacts across the site.
 - Consolidates the rural farmworker village into a planned serviced area, reducing dispersed sanitation, access and service-related environmental pressures.
 - Retains the existing school and cemetery areas in place, avoiding unnecessary new disturbance associated with relocating these facilities.
 - Provides a design basis for enforcing architectural, landscape, planting, stormwater and environmental controls through the HOA, EMPr and design guidelines.
- **Preferred design/layout alternative — negative environmental impacts**
 - Introduces new built footprints, roads, utility areas and village infrastructure into a rural agricultural landscape.
 - Will require vegetation clearance within approved development areas, including some indigenous vegetation.
 - May create cumulative disturbance from many small, dispersed homestead footprints, even though each footprint is limited.
 - May increase edge effects where development areas adjoin conservation areas, wetlands, watercourses or remaining natural vegetation.
 - Road upgrades and new access links may still disturb soils, vegetation and drainage-line crossings.
 - The rural village will create a concentrated node of human activity, wastewater generation, traffic, lighting and domestic disturbance.
 - Utility infrastructure, including water treatment and wastewater treatment facilities, may create localised visual, odour, noise or spill-risk impacts if not well managed.
 - Increased access into conservation and open-space areas may create risks of trampling, informal paths, disturbance to fauna and spread of alien invasive species.
 - Equestrian facilities, trails and paddocks may cause localised soil compaction, manure/nutrient loading, erosion and disturbance to vegetation if poorly managed.
 - The layout relies on long-term owner and HOA compliance; poor implementation could reduce the effectiveness of conservation zoning and footprint controls.
 - The introduction of private roads and multiple ownership units may increase long-term pressure for further hardening, fencing, landscaping and incremental expansion.
 - Fire-management requirements may become more complex where dwellings, agriculture and conservation areas occur in close proximity.
- **Existing cadastral/status quo layout — positive environmental impacts**
 - Avoids immediate new construction disturbance associated with implementing the preferred design.
 - Avoids new formal development footprints, utility areas, village infrastructure and road upgrades in the short term.
 - Maintains the existing visual and spatial pattern of the farms in the immediate term.
 - Avoids short-term disturbance from construction traffic, earthworks, vegetation clearing and service installation.
- **Existing cadastral/status quo layout — negative environmental impacts**
 - Retains a fragmented farm and road pattern with no coordinated environmental design response.
 - Does not clearly separate conservation-sensitive areas from agricultural or settlement use.
 - Allows existing scattered occupation and servicing arrangements to continue, increasing the risk of dispersed environmental impacts.
 - Does not provide defined development envelopes to direct future building away from sensitive areas.
 - Does not provide the same formal mechanism to rehabilitate unnecessary roads.
 - Does not create a coherent conservation/open-space network across the application area.
 - Does not improve the management of watercourse crossings, stormwater flow paths or aquatic buffers.

- Leaves environmental management dependent on existing individual land-use practices rather than a coordinated HOA/EMPr framework.
- Does not formalise long-term controls for alien clearing, rehabilitation, indigenous landscaping and protection of conservation areas.
- **Earlier Act 70 agricultural subdivision layout — positive environmental impacts**
 - Would retain a stronger agricultural layout and avoid some of the non-agricultural design components now proposed.
 - Could maintain a more traditional small-farm spatial pattern.
 - May involve fewer distinct land-use zones and less design complexity.
 - Could reduce built infrastructure associated with communal open space, utility and village functions if those components were not included.
- **Earlier Act 70 agricultural subdivision layout — negative environmental impacts**
 - Was less clearly biodiversity-led than the preferred design and would not provide the same conservation-zoning response.
 - Could result in a more uniform subdivision pattern that does not adequately distinguish between transformed and sensitive land.
 - Would not necessarily restrict development footprints in natural areas to the same extent as the preferred eco-property model.
 - Could allow agricultural activities or farm infrastructure to occur closer to CBAs, ESAs, wetlands, watercourses or threatened vegetation.
 - Would not provide the same integrated layout response for the rural farmworker village, existing school, cemeteries, utilities and private roads.
 - Would not provide the same opportunity to align services with road reserves and avoid additional disturbance corridors.
 - Could perpetuate less coordinated stormwater and road-crossing management.
 - Would not provide the same conservation/open-space framework for rehabilitation and alien invasive plant control.
- **More intensive residential/resort-style layout — positive environmental impacts**
 - Could concentrate built form into more compact development nodes if carefully designed.
 - Could provide formal services, roads and estate-level management controls.
 - Could include dedicated open-space areas if required through approval conditions.
- **More intensive residential/resort-style layout — negative environmental impacts**
 - Would substantially increase density, hard surfaces, traffic, lighting, noise and wastewater generation.
 - Would likely require more extensive road infrastructure, earthworks and service corridors.
 - Would result in greater visual transformation of the rural coastal landscape.
 - Would likely increase water demand and pressure on wastewater and stormwater systems.
 - Would create greater disturbance to fauna movement, habitat connectivity and remaining natural vegetation.
 - Would be less compatible with the agricultural landscape and rural sense of place.
 - Would increase cumulative impacts on biodiversity, aquatic features and scenic resources compared with the preferred low-density layout.
 - Would be less responsive to the site's conservation, agricultural and heritage constraints.
- **Alternative road/service layout with more new infrastructure — positive environmental impacts**
 - Could improve direct access efficiency to individual properties.
 - Could allow clearer separation of some access routes from existing constrained road sections.
 - Could provide more engineered control of stormwater at specific points.
- **Alternative road/service layout with more new infrastructure — negative environmental impacts**
 - Would create additional linear disturbance corridors through the site.
 - Would increase vegetation clearance, soil disturbance and potential erosion.
 - Would increase the number or extent of drainage-line and wetland crossings.
 - Would fragment habitat and ecological corridors to a greater degree.
 - Would require more construction activity and potentially more imported materials.
 - Would reduce the benefit of using existing disturbed road alignments.
 - Would increase long-term maintenance footprints and edge effects.
- **Dispersed farmworker housing layout — positive environmental impacts**
 - Could avoid creating one concentrated village node.
 - Could retain some existing settlement locations and avoid relocation-related construction in a new village area.
- **Dispersed farmworker housing layout — negative environmental impacts**
 - Would perpetuate scattered development and servicing impacts across the farms.
 - Would require duplicated or dispersed water, sanitation, access and electricity infrastructure.
 - Would increase the number of disturbed footprints across the landscape.
 - Would make wastewater, stormwater, waste, access and environmental compliance more difficult to manage.
 - Would reduce opportunities for consolidated rehabilitation of areas currently occupied or disturbed.
 - Would be less efficient from an environmental management and monitoring perspective.

<ul style="list-style-type: none"> • Alternative conservation layout with less formal conservation zoning — positive environmental impacts <ul style="list-style-type: none"> ○ Could retain more land under agricultural use and reduce administrative complexity. ○ Could allow more flexibility for individual landowners to manage their properties. • Alternative conservation layout with less formal conservation zoning — negative environmental impacts <ul style="list-style-type: none"> ○ Would provide weaker protection for sensitive natural areas. ○ Would reduce the extent of land formally committed to biodiversity conservation and rehabilitation. ○ Would increase the risk of future clearing, grazing, fencing, road construction or agricultural use in sensitive areas. ○ Would not secure the same level of protection for CBAs, ESAs, wetlands, watercourses, fynbos remnants and ecological corridors. ○ Would weaken the environmental benefit of the proposal compared with the preferred layout. ○ Would make long-term biodiversity management more dependent on voluntary landowner behaviour rather than enforceable zoning and HOA controls. 	
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:	
<ul style="list-style-type: none"> • Use of existing lawful water abstraction infrastructure – Existing abstraction works from the Maalgate River will be refurbished and used within verified existing lawful water-use entitlements, rather than creating a new bulk-water source. • Central water treatment, filtration and distribution system – Water will be pumped from the existing holding dam to a central treatment/filtration point, from where filtered water will be distributed to the individual farm portions and potable water supplied to the rural farmworker village. • On-site potable water treatment for the rural village – Water supplied to the farmworker village will be purified to potable standards on site, reducing reliance on municipal potable-water infrastructure. • Minimum on-farm water storage – Each farm will be required to provide at least a 10 kL storage tank, improving water security and allowing water to be managed at property level. • Rainwater harvesting on individual farms – Rainwater harvesting will be required for individual dwellings/farms to reduce demand on abstracted water and improve resource efficiency. • Direct use of farm storage for irrigation – Agricultural water can be distributed from individual farm storage tanks to irrigation areas, supporting small-scale agriculture without requiring complex municipal irrigation infrastructure. • On-site package sewage treatment plant for the rural farmworker village – Sewage from the village will be treated in a dedicated package plant located east of the village in a lower-lying area to allow gravity-fed reticulation as far as possible. • Reuse of treated sewage effluent for irrigation – Treated effluent from the village package plant will be reused for irrigation of communal or general areas under HOA management, reducing waste discharge and improving water-use efficiency. • Storage of treated effluent in a reservoir or off-channel dam – Treated effluent may be stored before irrigation reuse, allowing more controlled management of treated water and seasonal irrigation demand. • Regular effluent quality monitoring – Treated sewage effluent will be monitored to ensure compliance with required standards and reduce risks to groundwater, soils, watercourses and human health. • Individual on-site sanitation systems for farm portions – Each farm will be responsible for approved on-site sewage treatment, such as septic tanks with soakaways, conservancy tanks, artificial wetland/bio-filtration systems or mini-package plants, subject to municipal requirements. • Use of artificial wetland/bio-filtration systems where appropriate – Bio-filtration/artificial wetland systems provide an additional treatment option for individual farms and are suitable for a rural setting where carefully designed and maintained. • Solar photovoltaic systems for individual farms – Individual farms may continue to use Eskom supply where available or install their own solar PV systems, reducing pressure on conventional electricity supply and supporting energy resilience. • Combined Eskom and solar supply for the rural village – The rural village will be supplied through Eskom and/or solar, allowing a more flexible and resilient energy model. • Gravel farm roads with grass swales – Internal roads will largely remain gravel farm roads, with grass swales used for drainage. This retains rural character, reduces hard surfacing and supports infiltration. • Low-water crossings/drift crossings – Low-water crossings will be used where roads cross drainage lines, seepage areas or surface-flow paths, allowing stormwater to continue moving through the landscape with limited interruption. • Pipelines located within road reserves – Water pipelines and service routes will follow road reserves where possible, reducing the need for additional linear disturbance through agricultural, wetland or conservation areas. • Retention of existing stormwater drainage patterns – The stormwater design will continue to use the existing topography, catchment delineations and surface-flow routes, thereby avoiding major engineered diversion of runoff. • Stormwater attenuation through limited hard surfaces and farm dams – The limited development footprint, rainwater harvesting and use of existing dams will assist in managing the anticipated slight increase in runoff. • Private HOA-managed infrastructure – Roads, common services, wastewater infrastructure, conservation areas and communal facilities will be managed by the HOA, providing a formal mechanism for maintenance, monitoring and long-term compliance. 	

Provide a description of any other technology alternatives investigated.

Other than the preferred technology alternatives described above, no fundamentally different technology alternatives were considered to be reasonable or preferred, because the proposed development is located in a rural agricultural setting where full municipal bulk services are not available or not the most appropriate servicing response. The technology options were therefore considered mainly in relation to water supply, wastewater treatment, stormwater management, road surfacing, electricity supply and the siting of services within existing disturbed corridors.

- **Full municipal bulk water supply**
 - A technology alternative based on potable water being supplied entirely by George Municipality was not preferred. Distance for servicing makes this unviable and unsustainable.
 - The site already has existing lawful water-use entitlements and existing abstraction infrastructure from the Maalgate River system.
 - Using the existing lawful water allocation, together with treatment, filtration and rainwater harvesting, is more appropriate for the rural context and reduces reliance on municipal bulk water infrastructure – retaining municipal water for use in urban areas where the need is greater and the servicing costs lower.
- **New independent water source**
 - The development could theoretically have relied on new boreholes, new abstraction points or a new bulk water source.
 - This was not preferred because the farms already have verified existing lawful water uses and existing abstraction and storage infrastructure.
 - Creating a new water source would increase authorisation requirements, infrastructure duplication and potential environmental impacts.
- **No central treatment / each property fully independent**
 - An alternative in which each farm sourced, treated and managed all of its own water independently was not preferred.
 - This would result in fragmented infrastructure, less consistent water-quality management and less efficient monitoring.
 - The preferred approach provides central filtration and distribution of agricultural water, with potable treatment for the rural village and further treatment at individual farm level where required. Individual farms will be able to supplement with rainwater harvesting.
- **No rainwater harvesting**
 - A technology alternative without compulsory rainwater harvesting was not preferred.
 - Rainwater harvesting reduces pressure on abstracted water, improves household water resilience and assists in reducing stormwater runoff from roofed areas.
 - It is therefore retained as part of the preferred servicing response.
- **Conventional municipal sewer connection**
 - A sewer connection to a municipal wastewater treatment works was not preferred, as the site is rural and not located within an urban bulk sanitation network.
 - Extending municipal sewer infrastructure to the site would require additional pipelines, pump stations, servitudes and disturbance corridors.
 - The preferred option is on-site treatment, with a package plant for the rural farmworker village and individual approved on-site systems for the farm portions.
- **Conservancy tanks only**
 - A conservancy-tank-only option was considered less desirable for the development as a whole.
 - It would require regular tanker removal, create traffic and operational costs, and increase the risk of overflow or poor maintenance if not strictly managed.
 - Conservancy tanks may remain an option for individual farms where approved by the municipality, but they are not preferred as the primary servicing technology for the rural village.
- **Septic tanks and soakaways only**
 - Septic tanks and soakaways are already used on existing dwellings and may remain suitable for some individual farms subject to municipal requirements and site conditions.
 - However, this technology is not preferred as the sole servicing option for the rural village because of the concentration of units, potential groundwater and wetland sensitivity, and need for consistent effluent quality control.
 - A package plant with monitored effluent reuse is therefore preferred for the village.
- **Discharge of treated effluent to a watercourse**
 - Direct discharge of treated wastewater to watercourses, wetlands or the Maalgate River system was not preferred.
 - Such an option would increase downstream water-quality risks and would be less consistent with the catchment and estuary protection approach.
 - Reuse of treated effluent for irrigation, with storage and monitoring, is preferred and the sustainable option.
- **No reuse of treated effluent**
 - A disposal-only approach to treated effluent was not preferred.
 - Reuse for irrigation improves water efficiency, reduces waste, supports landscaped or communal areas and limits the need for discharge.
 - This approach is more appropriate for a rural agricultural development where treated water can be beneficially reused improving the sustainability and climate resilience of the project as a whole.
- **Fully surfaced internal roads**
 - A technology alternative based on formal tarred or paved internal estate roads was not preferred.

<ul style="list-style-type: none"> ○ Hard-surfaced roads would increase runoff, reduce infiltration, create a more urban visual character and increase the extent of hardened surfaces. ○ Gravel farm roads with grass swales are preferred because they retain the rural character and better support infiltration and stormwater management. ● New engineered stormwater network <ul style="list-style-type: none"> ○ A heavily engineered stormwater system with formal kerbs, channels and piped drainage was not preferred. ○ Such infrastructure would urbanise the site, concentrate flows and potentially increase erosion or downstream impacts. ○ The preferred approach retains existing catchment patterns and uses grass swales, low-water crossings, infiltration and existing drainage routes. This is in line with the SUDS system requirements. ● Culverted crossings only <ul style="list-style-type: none"> ○ A road-crossing technology based primarily on formal culverts was not preferred for all crossings. ○ Culverts may concentrate flow, alter beds and banks, and require more intrusive construction. ○ Low-water or drift-type crossings are preferred where appropriate because they allow surface and subsurface flow to continue more naturally across drainage lines and seep areas. ● Services outside road reserves <ul style="list-style-type: none"> ○ A servicing option in which pipelines and services were routed independently across the site was not preferred. ○ This would create additional disturbance corridors through agricultural, wetland, conservation and natural areas. ○ Locating pipelines within road reserves is preferred because it consolidates disturbance and simplifies long-term maintenance. ● Eskom-only electricity supply <ul style="list-style-type: none"> ○ An electricity supply model based only on Eskom was not preferred as the sole long-term approach. ○ While Eskom supply may continue where available, individual solar PV systems provide resilience, reduce demand on the grid and are more consistent with the sustainable rural development concept. ○ A combined Eskom and solar approach is therefore supported. ● Solar-only electricity supply <ul style="list-style-type: none"> ○ A fully solar-only system may be technically possible for some individual farms, but it was not adopted as the only development-wide technology. ○ Energy needs, affordability, reliability and implementation timing may differ between users. ○ The preferred approach allows flexibility through Eskom and/or solar PV. ● Centralised estate-wide energy system <ul style="list-style-type: none"> ○ A single centralised renewable-energy plant for the entire development was not identified as the preferred option. ○ Such a system would require additional land, infrastructure, ownership and maintenance arrangements. ○ Individual farm-level solar PV, together with existing Eskom supply where available, is a more flexible and incremental technology response. ● Summary <ul style="list-style-type: none"> ○ The other technology alternatives investigated were not preferred because they would either increase reliance on municipal bulk services, duplicate infrastructure, create additional disturbance corridors, increase groundwater or watercourse risks, urbanise the rural landscape, or reduce resilience and resource efficiency. ○ The preferred technology approach is therefore based on existing lawful water use, central filtration and distribution, potable treatment where required, rainwater harvesting, on-site wastewater treatment, treated-effluent reuse, gravel roads with grass swales, low-water crossings, services within road reserves, and flexible Eskom/solar electricity supply.
<p>Provide a motivation for the preferred technology alternative.</p>
<p>The preferred technology alternative is motivated by its suitability for a rural agricultural and conservation-based development where full reliance on municipal bulk services is neither necessary nor the most appropriate servicing model. The proposal makes use of existing lawful water-use entitlements, existing abstraction infrastructure, existing dams, existing roads and disturbed corridors, while supplementing these with water treatment, rainwater harvesting, on-site wastewater treatment, treated-effluent reuse, gravel roads with grass swales, low-water crossings and flexible Eskom/solar electricity supply.</p> <p>This technology approach is preferred because it reduces infrastructure duplication, limits new disturbance corridors, maintains the rural character of the site, supports efficient use of existing resources, reduces demand on municipal bulk water and sanitation services, and allows infrastructure to be privately managed and maintained through the HOA. It is also better aligned with the environmental sensitivities of the site because it retains existing drainage patterns, limits hardened surfaces, avoids direct discharge to watercourses, and incorporates monitoring and management measures to reduce risks to soil, groundwater, wetlands, watercourses and downstream receiving environments.</p>
<p>Provide a detailed motivation if no alternatives exist.</p>
<p>Technology alternatives have been considered.</p>
<p>List the positive and negative impacts that the technology alternatives will have on the environment.</p>
<ul style="list-style-type: none"> ● Preferred technology alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Uses the existing lawful Maalgate River water-use entitlement and existing abstraction infrastructure, avoiding the need to establish a new water source or new abstraction point.

- Refurbishes and reuses existing water infrastructure and dams, reducing infrastructure duplication and limiting new disturbance.
- Incorporates central filtration and treatment, improving control over water quality compared with fragmented unmanaged water-supply arrangements.
- Requires rainwater harvesting at all new dwellings, reducing pressure on abstracted water and helping to reduce roof-runoff volumes.
- Requires each farm to provide on-site water storage, improving water-use resilience and reducing demand peaks.
- Places bulk water pipelines within road reserves where possible, reducing additional disturbance corridors through conservation, wetland or agricultural areas.
- Uses a package sewage treatment plant for the rural farmworker village, allowing concentrated wastewater to be treated in a controlled and monitored system.
- Reuses treated effluent for irrigation, reducing waste discharge and improving water-use efficiency.
- Provides for regular treated-effluent monitoring, reducing risk to groundwater, soils, wetlands, watercourses and downstream receiving environments.
- Allows existing septic tanks and soakaways associated with old structures to be decommissioned over time, reducing the number of scattered sanitation risks on the farms.
- Uses individual on-site sewage systems for farms, subject to municipal requirements, which is appropriate to the rural setting and avoids long off-site sewer pipelines.
- Retains gravel farm roads with grass swales, reducing hardened surfaces, supporting infiltration and retaining the rural character of the site.
- Uses low-water crossings where roads interact with drainage lines or seepage areas, allowing overland flow to continue through the landscape.
- Retains existing stormwater catchment delineations and drainage patterns, reducing the need for major engineered stormwater diversion.
- Allows Eskom and/or solar PV supply, improving energy flexibility and reducing exclusive reliance on grid electricity where solar is implemented.
- Consolidates ongoing infrastructure maintenance under the HOA, improving long-term accountability for water, wastewater, roads and stormwater systems.
- **Preferred technology alternative – negative environmental impacts**
 - Continued abstraction from the Maalgate River system may affect aquatic and downstream ecological systems if not managed within licensed and verified lawful-use limits.
 - Refurbishment and operation of abstraction, pumping, treatment and distribution infrastructure may cause localised construction disturbance.
 - Central water-treatment infrastructure will create a localised utility footprint and require operational chemicals, energy and maintenance.
 - The package sewage treatment plant may create odour, noise, sludge-handling, overflow or malfunction risks if poorly operated.
 - Treated-effluent storage dams or reservoirs may create seepage, nutrient-loading, mosquito, odour or spill risks if not properly designed and monitored.
 - Reuse of treated effluent for irrigation may affect soils, groundwater or surface runoff if irrigation rates exceed plant uptake or if effluent quality is poor.
 - Individual on-site sewage systems may create cumulative groundwater or soil-contamination risks if site conditions, maintenance or municipal controls are inadequate.
 - The environmental performance of the preferred technology alternative depends on ongoing HOA management, monitoring, maintenance and compliance with WULA, NEMA and municipal conditions.
- **Municipal bulk water supply alternative – positive environmental impacts**
 - Would avoid direct reliance on abstraction from the Maalgate River by the development.
 - Could provide potable water through an established municipal treatment and compliance system.
 - Could reduce the need for some on-site water-treatment infrastructure.
- **Municipal bulk water supply alternative – negative environmental impacts**
 - Would require new or extended bulk infrastructure to a rural site, creating additional pipeline corridors, servitudes and construction disturbance.
 - Would increase pressure on municipal water resources and bulk service capacity to supply an area outside of the urban context putting pressure on the system and supply.
 - Would not optimise the existing lawful water-use entitlement and existing water infrastructure on the farms.
 - Could create a more urban-serviced development model, less consistent with the rural setting.
 - Would not necessarily reduce stormwater or water-efficiency impacts unless combined with rainwater harvesting and demand-management measures.
- **New independent water source alternative – positive environmental impacts**
 - Could diversify water supply and reduce dependence on existing abstraction infrastructure.
 - Could provide localised supply if technically feasible and authorised.
- **New independent water source alternative – negative environmental impacts**
 - Would duplicate infrastructure where existing lawful water uses and abstraction infrastructure already exist.
 - Could introduce new impacts on groundwater, surface water, wetlands or river systems.
 - Would require additional authorisations and specialist investigation.
 - Could increase cumulative pressure on catchment water resources.
 - Would create new disturbance footprints for boreholes, pumps, pipelines, access and maintenance areas.

- **No rainwater harvesting alternative – positive environmental impacts**
 - Would avoid installation and maintenance of tanks and associated small-scale plumbing infrastructure.
 - Would slightly reduce visual clutter associated with tanks if they are not well integrated.
- **No rainwater harvesting alternative – negative environmental impacts**
 - Would increase reliance on abstracted or treated water supplies.
 - Would reduce household water resilience during dry periods.
 - Would increase direct roof runoff into the stormwater system.
 - Would reduce the development's overall water-efficiency performance.
 - Would be less aligned with sustainable rural servicing principles.
- **Municipal sewer connection alternative – positive environmental impacts**
 - Would transfer wastewater treatment to an established municipal wastewater treatment system if capacity were available.
 - Could reduce on-site wastewater-treatment operational risks.
- **Municipal sewer connection alternative – negative environmental impacts**
 - Would require long sewer connections, pump stations and/or rising mains through a rural and environmentally sensitive landscape.
 - Would create additional construction disturbance, servitudes and maintenance corridors.
 - Would increase reliance on municipal bulk infrastructure.
 - Pump failures or pipe leaks could create pollution risks along the sewer route.
 - It would not allow beneficial reuse of treated effluent on site.
- **Conservancy-tank-only alternative – positive environmental impacts**
 - Avoids discharge to soil or groundwater if tanks are watertight and managed correctly.
 - Can be suitable for low-volume or site-specific uses where municipal approval is obtained.
- **Conservancy-tank-only alternative – negative environmental impacts**
 - Requires frequent tanker removal, increasing traffic, emissions, noise and road wear.
 - Creates overflow and pollution risks if tanks are not emptied timeously.
 - Has high operational risk where multiple dwellings are involved.
 - Does not provide water-reuse benefits.
 - Is less sustainable for a rural village-scale sanitation solution.
- **Septic tanks and soakaways only alternative – positive environmental impacts**
 - Uses simple, locally understood technology suitable for some low-density rural properties.
 - Avoids the need for a central treatment plant for each individual farm.
 - Has a relatively small built footprint where soil and groundwater conditions are suitable.
- **Septic tanks and soakaways only alternative – negative environmental impacts**
 - Is not preferred for the concentrated rural village because of cumulative loading and groundwater/wetland sensitivity.
 - May create nutrient, pathogen and groundwater-contamination risks if soils are unsuitable or systems are poorly maintained.
 - Does not allow the same level of effluent-quality monitoring as a package plant.
 - Does not provide controlled treated-effluent reuse.
 - Could perpetuate dispersed sanitation impacts across the site if used without strict controls.
- **Direct discharge of treated effluent to a watercourse alternative – positive environmental impacts**
 - Would avoid the need for irrigation reuse infrastructure and storage.
 - Could simplify wastewater disposal if authorised and if effluent quality were consistently compliant.
- **Direct discharge of treated effluent to a watercourse alternative – negative environmental impacts**
 - Increases risk to downstream water quality, wetlands, the Maalgate River and the coastal receiving environment.
 - Could contribute nutrients, pathogens or contaminants to aquatic systems if treatment performance fluctuates.
 - Would be less consistent with the catchment-sensitive and estuary-protection approach.
 - Would waste a potentially reusable water resource.
 - Would likely require stricter authorisation, monitoring and compliance controls.
- **Fully surfaced internal road alternative – positive environmental impacts**
 - Could reduce dust compared with gravel roads.
 - Could reduce some maintenance-related sediment generation if properly drained.
 - Could provide more durable access during wet periods.
- **Fully surfaced internal road alternative – negative environmental impacts**
 - Would increase hardened surfaces and stormwater runoff.
 - Would reduce infiltration and potentially concentrate flows.
 - Would introduce a more urban road character into the rural landscape.
 - Would require more construction material, earthworks and formal stormwater infrastructure.
 - Could increase visual impact and cumulative landscape transformation.

	<ul style="list-style-type: none"> • Formal piped stormwater system alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Could provide engineered control of runoff in specific high-risk areas. ○ Could reduce localised ponding or erosion where carefully designed. • Formal piped stormwater system alternative – negative environmental impacts <ul style="list-style-type: none"> ○ Would urbanise the drainage response and reduce reliance on natural overland flow. ○ Could concentrate runoff and increase downstream erosion. ○ Would require additional excavation, outlets, headwalls and maintenance structures. ○ Could alter natural drainage patterns and affect wetlands or seep systems. ○ Would reduce the benefit of shallow, diffuse, infiltration-based stormwater management. • Culverted crossing alternative for all watercourse crossings – positive environmental impacts <ul style="list-style-type: none"> ○ Could provide defined road access across drainage features. ○ Will be appropriate at selected crossings where hydraulic design requires it (eg linking to the existing culverts under the railway). • Culverted crossing alternative for all watercourse crossings – negative environmental impacts <ul style="list-style-type: none"> ○ Could concentrate flows and alter natural surface and subsurface movement. ○ May increase erosion, scour or sediment deposition at inlet and outlet points. ○ Requires more intrusive construction within drainage features. ○ May create blockages if not frequently maintained. ○ Would be less suitable than low-water crossings in seepage or diffuse-flow areas. • Eskom-only electricity supply alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Avoids installation of multiple private solar PV and battery systems. ○ Provides a standardised electricity supply where grid capacity exists. • Eskom-only electricity supply alternative – negative environmental impacts <ul style="list-style-type: none"> ○ Increases dependence on grid electricity. ○ Does not reduce operational energy demand through renewable generation. ○ May require additional electrical infrastructure, servitudes or upgrades. ○ Provides less energy resilience for a rural development. ○ Is less aligned with the sustainable servicing approach. • Solar-only electricity supply alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Reduces reliance on grid electricity and supports renewable energy use. ○ Can reduce operational carbon footprint where well designed. ○ Provides resilience during grid disruptions. • Solar-only electricity supply alternative – negative environmental impacts <ul style="list-style-type: none"> ○ May require battery storage, with associated fire, safety and end-of-life waste-management risks. ○ May not be equally feasible or affordable for all users. ○ Could create visual impacts if panels and batteries are poorly sited. ○ Requires maintenance and replacement over time. ○ May require backup generation if energy demand exceeds solar capacity. • Overall comparison <ul style="list-style-type: none"> ○ The preferred technology alternative has some unavoidable construction and operational risks, particularly related to water abstraction, wastewater treatment, roads, stormwater and long-term maintenance. ○ However, it is environmentally preferable because it uses existing lawful resources and infrastructure, limits new disturbance corridors, reduces hard surfacing, promotes rainwater harvesting, reuses treated effluent, avoids direct discharge to watercourses, and supports rural-scale infrastructure management through the HOA. ○ The less preferred technology alternatives generally either increase reliance on municipal bulk services, duplicate infrastructure, create additional linear disturbance, increase water-quality risks, urbanise the site, or reduce resource efficiency.
1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred operational alternative.	
<p>The preferred operational approach should focus on ensuring that the development functions as a managed rural agricultural and conservation estate, with operational controls that avoid sensitive areas, reduce ongoing disturbance, and secure long-term social, agricultural and environmental benefits.</p> <p>The preferred operational phase has been designed to avoid negative environmental impacts where possible, mitigate unavoidable impacts through enforceable management measures, and maximise the positive outcomes associated with agricultural use, conservation management, social upliftment and infrastructure efficiency.</p> <p>Operational impacts will be avoided primarily through the way in which the land uses are structured and controlled. More intensive day-to-day activities, including dwellings, small-scale agriculture, the rural farmworker village, roads, utilities and communal facilities, will be confined to defined development areas.</p> <p>Sensitive natural areas, watercourses, wetlands, drainage lines, ecological corridors, heritage resources and conservation portions will be protected through zoning, buffers, development-footprint restrictions and no-go / low-disturbance management rules. In particular, Eco Properties will be limited to a maximum developable area of 2 000 m² per farm, including all buildings and hard surfaces, ensuring that the majority of each property remains natural or available for rehabilitation.</p>	

Aquatic and hydrological impacts will be avoided and mitigated by retaining existing drainage patterns, keeping stormwater movement as diffuse and natural as possible, and avoiding unnecessary hard engineering. Gravel roads, grass swales, low-water crossings, rainwater harvesting and limited hard surfaces will help maintain infiltration and reduce concentrated runoff. Any road crossings, drainage-line works or water-use activities will be undertaken in accordance with the Water Use Licence requirements, specialist recommendations and the EMPr.

Water-resource impacts will be managed by operating within the validated and verified existing lawful water-use entitlement, using existing abstraction and storage infrastructure, requiring on-farm storage, and promoting rainwater harvesting. This avoids unnecessary reliance on new bulk-water sources and reduces pressure on municipal infrastructure. Agricultural water use will need to be managed by the relevant association or management body to ensure that allocations are used efficiently and remain within authorised limits.

Wastewater-related impacts will be mitigated through the use of a managed package sewage treatment plant for the rural farmworker village, individual approved on-site sanitation systems for the farms, reuse of treated effluent for irrigation, and regular effluent-quality monitoring. Direct discharge to watercourses should be avoided. The HOA or management body must be responsible for the operation, maintenance, monitoring and reporting associated with shared wastewater infrastructure to reduce risks of odour, overflow, nutrient enrichment, groundwater contamination or downstream pollution.

Biodiversity impacts during operation will be mitigated through active conservation management. This must include alien invasive plant control, rehabilitation of disturbed areas, protection of indigenous vegetation, restriction of clearing outside approved footprints, protection of wetlands and watercourse buffers, control of livestock access to sensitive aquatic features, management of fire risk, and maintenance of ecological corridors. These measures will reduce long-term edge effects, habitat degradation and fragmentation, while improving the condition of degraded natural areas.

Faunal impacts will be reduced by maintaining habitat corridors, protecting wetland and drainage-line areas, limiting lighting in conservation and eco-property areas, controlling domestic animals, managing vehicle speeds on internal roads, and preventing hunting, trapping or disturbance of fauna. Trails and recreational use must be managed so that they do not create informal paths, trampling, erosion or disturbance within sensitive habitats.

Development of a Conservation Management Plan (CMP) for the conservation areas will ensure coordinated conservation management and provision of adequate budget for long-term management. The potential for a Stewardship agreement with CapeNature should be explored.

Agricultural impacts will be managed by promoting appropriate rural agricultural activities on land suited to such use, including grazing, planted pastures, orchards, food gardens, equestrian agriculture and other small-scale farming activities. Erosion, encroachment into conservation areas, and livestock access to wetlands and watercourses must be controlled through HOA rules, farm management guidelines and the EMPr.

Visual, landscape and sense-of-place impacts will be mitigated through the implementation of the architectural, environmental and landscape guidelines. Buildings must remain modest in scale, use a rural agricultural vernacular, apply subdued colours and non-reflective materials, and be integrated with indigenous landscaping and visual buffers. Roads, trails and communal facilities must retain a rural character and avoid unnecessary hard surfacing or urban-style treatments.

Heritage impacts during operation will be avoided by retaining the historic werf precinct outside the development footprint, protecting graded structures, formalising and fencing cemetery areas where required, maintaining access to graves, and controlling activities near heritage-sensitive areas. Any future alterations to heritage structures must be subject to the necessary Heritage Western Cape approvals, and chance-find procedures must remain applicable for any future ground disturbance.

Positive operational impacts will be maximised through the long-term governance structure of the HOA / management body. This structure should be responsible for maintaining private roads, stormwater systems, conservation areas, open spaces, wastewater infrastructure, communal facilities, alien invasive plant control, landscape compliance and implementation of the EMPr. A functioning management body is therefore central to ensuring that the development's environmental benefits are realised over time.

The proposal will also maximise social and economic benefits by formalising accommodation for the existing ESTA beneficiary families, retaining the school, protecting cemetery areas, creating communal agricultural and recreational spaces, and supporting employment linked to farming, estate management, conservation rehabilitation, alien clearing, landscaping, infrastructure maintenance, security and domestic services. These benefits should be strengthened by prioritising local employment and skills development where feasible.

In summary, the preferred operational alternative avoids impacts by directing development away from sensitive areas and limiting development footprints; mitigates unavoidable impacts through water, stormwater, wastewater, biodiversity, agricultural, heritage, visual and traffic management controls; and maximises positive impacts through conservation zoning, rehabilitation, agricultural continuity, social upliftment, use of existing infrastructure and long-term HOA/EMPr governance. Subject to effective implementation and enforcement of these measures, the operational phase is expected to provide a more sustainable long-term outcome than the existing fragmented agricultural and settlement pattern.

Provide a description of any other operational alternatives investigated.

Other than the preferred operational model, the operational alternatives considered were largely conceptual and relate to different ways in which the development could be managed after implementation. These alternatives were not preferred because they would either reduce environmental control, increase servicing risks, weaken long-term conservation management, or fail to address the existing social and land-use conditions on the properties.

- **Status quo / existing operational model**
 - This would involve continued operation of the farms broadly as they currently function, with existing agricultural activities, scattered farmworker occupation, existing farm roads, individual sanitation arrangements, existing water-use infrastructure, existing lack of alien species control and limited coordinated environmental management.
 - This alternative is not preferred because it would not formalise the rural village, rationalise services, secure conservation management, rehabilitate unnecessary roads, or provide a coordinated HOA/EMPr-based management structure.
- **Individual landowner management without a strong HOA**
 - Under this alternative, each future property owner would be largely responsible for managing their own roads, services, vegetation, stormwater, alien clearing and development controls.
 - This is not preferred because environmental outcomes would be inconsistent and difficult to enforce, particularly where conservation areas, watercourses, wetlands, roads and services require coordinated management across property boundaries.
- **Agriculture-only operational model**
 - This would retain the land primarily under agricultural operation, with less emphasis on conservation zoning, eco-property restrictions, communal open space and biodiversity rehabilitation.
 - It is not preferred because it would not adequately protect sensitive biodiversity areas, CBAs, ESAs, watercourses, wetlands and natural vegetation remnants from ongoing agricultural or grazing-related impacts.
- **Commercial farming operational model**
 - This would involve operating the land as a more conventional commercial agricultural unit, potentially focusing on grazing, planted pastures or permanent crops where feasible.
 - It is not preferred because specialist input indicates that large-scale commercial agriculture is constrained by soil suitability, water availability and financial viability, and it would not address the ESTA village, conservation or long-term biodiversity management objectives.
- **Dispersed farmworker settlement operational model**
 - This would allow the existing ESTA beneficiary families to remain in dispersed nodes across the farms rather than consolidating them into a planned rural village.
 - It is not preferred because it would perpetuate scattered servicing impacts, make water and sanitation management less efficient, and reduce opportunities for coordinated housing, communal facilities and community upliftment.
- **Municipal-services-dependent operational model**
 - This would involve greater reliance on municipal water, sanitation, road and waste-service infrastructure.
 - It is not preferred because the site is rural, existing lawful water-use infrastructure is available, and extending municipal bulk services would create additional infrastructure corridors and increase pressure on municipal systems.
- **Private estate operation with limited agricultural activity**
 - This would operate the development mainly as rural residential or lifestyle estate properties, with agriculture being secondary or nominal.
 - It is not preferred because it would weaken the agricultural character of the proposal, reduce productive rural land use, and be less consistent with the intended rural agricultural farmstead model.
- **High-intensity tourism/resort operational model**
 - This would operate the land more like the previous Lagoon Bay-type estate, with more intensive residential, leisure, tourism, golf, lodge or resort-related uses.
 - It is not preferred because it would have greater operational impacts relating to traffic, water demand, wastewater generation, lighting, noise, visual change, biodiversity disturbance, result in urban ingress into the rural area and pressure on the rural coastal landscape.
- **Centralised management without community/agricultural components**
 - This would focus mainly on estate management and conservation, but without adequately integrating the ESTA community, small-scale farming, communal agricultural areas and rural livelihood opportunities.
 - It is not preferred because it would fail to maximise the social upliftment, tenure formalisation and local livelihood benefits of the proposal.
- **Conservation-only operational model**
 - This would place a stronger emphasis on conservation and rehabilitation, with limited or no new agricultural farmstead development.
 - It is not preferred because it would not address the existing agricultural land-use rights, ESTA accommodation needs, infrastructure rationalisation or socio-economic objectives of the proposal.
- **Summary**
 - The alternative operational models were not preferred because they either retained the existing fragmented conditions, weakened conservation control, increased servicing and compliance risks, reduced agricultural functionality, or failed to address the established ESTA community.
 - The preferred operational model is therefore a managed rural agricultural and conservation estate, supported by an HOA, EMPr, design guidelines, WULA conditions, specialist recommendations and municipal controls. This model provides the best mechanism to avoid and mitigate operational impacts while maximising conservation, agricultural, infrastructure and social benefits.

Provide a motivation for the preferred operational alternative.
<p>The preferred operational alternative is motivated by the need to ensure that the development functions as a coordinated, managed rural agricultural and conservation estate, rather than as a fragmented collection of privately managed farms. This model allows the HOA / management body to take responsibility for shared roads, stormwater systems, water and wastewater infrastructure, conservation areas, open spaces, alien invasive plant control, rehabilitation, design compliance and implementation of the EMPr.</p> <p>It is preferred because it provides the best mechanism to avoid impacts on sensitive areas, mitigate unavoidable operational impacts, and maximise long-term benefits such as agricultural continuity, biodiversity restoration, efficient use of existing infrastructure, formal accommodation for the ESTA beneficiaries, protection of community and heritage resources, and sustained local employment opportunities. It is therefore more environmentally and socially appropriate than the status quo or an unmanaged individual landowner model.</p>
Provide a detailed motivation if no alternatives exist.
Alternatives have been considered
List the positive and negative impacts that the operational alternatives will have on the environment.
<ul style="list-style-type: none"> • Preferred operational alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Ongoing HOA/EMPr management provides coordinated control of roads, stormwater, services, conservation areas and open spaces. ○ Conservation areas can be actively managed through alien clearing, rehabilitation, erosion control and protection of natural vegetation. ○ Operational water use can be kept within verified lawful allocations, with rainwater harvesting reducing demand. ○ Treated effluent reuse reduces wastewater discharge risk and supports irrigation of managed areas. ○ Centralised village servicing reduces dispersed sanitation and infrastructure impacts. ○ Controlled access, speed limits, lighting management and domestic-animal controls can reduce disturbance to fauna and sensitive areas. ○ Design and landscape controls help maintain rural character and reduce visual impact. ○ Local employment in farming, maintenance, conservation and estate management supports long-term land stewardship. • Preferred operational alternative – negative environmental impacts <ul style="list-style-type: none"> ○ Increased daily human activity, vehicles, lighting and domestic animals may disturb fauna and conservation areas. ○ Ongoing agricultural, equestrian and recreational use may cause localised soil compaction, erosion, nutrient loading or vegetation disturbance. ○ Wastewater infrastructure may pose odour, overflow, seepage or water-quality risks if poorly maintained. ○ Abstraction from the Maalgate River system may affect aquatic resources if not managed within authorised limits. ○ Gravel roads may generate dust and sediment if not maintained. ○ Conservation outcomes depend on consistent HOA enforcement and owner compliance. • Status quo / existing operational model – positive environmental impacts <ul style="list-style-type: none"> ○ Avoids new operational intensification associated with the proposed estate. ○ Maintains current land-use patterns in the short term. ○ Avoids new village-related traffic, lighting and service infrastructure. • Status quo / existing operational model – negative environmental impacts <ul style="list-style-type: none"> ○ Scattered occupation and servicing impacts would continue. ○ No coordinated conservation, alien-clearing or rehabilitation programme would be secured. ○ Sensitive areas would remain more vulnerable to unmanaged grazing, informal access and ad hoc disturbance. ○ Existing road, drainage and sanitation issues would remain unresolved. ○ No single management body would be responsible for environmental compliance. • Individual landowner management alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Allows site-specific management by individual owners. ○ May reduce the need for centralised management infrastructure. • Individual landowner management alternative – negative environmental impacts <ul style="list-style-type: none"> ○ Environmental control would be inconsistent across properties. ○ Cumulative impacts on wetlands, watercourses, conservation areas and roads would be harder to manage. ○ Alien clearing, rehabilitation, stormwater and wastewater controls may be unevenly implemented. ○ Enforcement of development footprints and conservation restrictions would be weaker. • Agriculture-only / commercial farming operational alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Retains a predominantly agricultural land-use character. ○ Avoids some operational impacts linked to rural residential and recreational estate use. • Agriculture-only / commercial farming operational alternative – negative environmental impacts <ul style="list-style-type: none"> ○ May perpetuate grazing, cultivation, drainage alteration and livestock pressure in sensitive areas. ○ Provides weaker conservation management for CBAs, ESAs, wetlands and threatened vegetation. ○ Does not secure the same biodiversity rehabilitation or alien-clearing commitments. ○ May not be viable long term, increasing risk of unmanaged or piecemeal land-use change. • High-intensity tourism/resort operational alternative – positive environmental impacts <ul style="list-style-type: none"> ○ Could provide centralised estate-level environmental control if strictly managed.

<ul style="list-style-type: none"> • High-intensity tourism/resort operational alternative – negative environmental impacts <ul style="list-style-type: none"> ○ Would generate substantially more traffic, water demand, wastewater, lighting and noise. ○ Would increase pressure on visual character, sense of place and biodiversity corridors. ○ Resort or leisure operations would create greater cumulative disturbance to fauna, wetlands and natural vegetation. ○ More intensive landscaping and maintenance could increase water, fertiliser and chemical-use risks. 	
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.	
<p>The option of not implementing the activity is not preferred because it would retain the existing fragmented cadastral and land-use pattern without resolving the current social, agricultural, infrastructure and environmental management issues on the farms. The existing ESTA beneficiary families would remain in scattered occupation without a planned serviced rural village, sensitive biodiversity areas would not receive the proposed conservation zoning and rehabilitation commitments, and existing road, stormwater, sanitation, alien invasive plant and access arrangements would remain largely unmanaged.</p> <p>Although the no-go option would avoid short-term construction disturbance, it would not secure the long-term benefits of the preferred proposal, including formal conservation management, continued agricultural use on suitable land, rationalised infrastructure, improved services, protection of community and heritage resources, and a coordinated HOA/EMPr management framework. On balance, the preferred activity provides a more sustainable and responsive outcome than retaining the current status quo.</p>	
1.7.	Provide an 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.
<p>No further reasonable or feasible alternatives have been identified beyond the preferred alternative and the no-go/status quo alternative, because the proposal has already been refined to incorporate the key avoidance, mitigation and enhancement measures available for this site. The preferred alternative is itself the outcome of an iterative process that used specialist input, biodiversity and aquatic sensitivity mapping, heritage constraints, agricultural viability, engineering design and social considerations to avoid negative impacts where possible, mitigate unavoidable impacts and maximise positive outcomes.</p> <p>The main alternatives to avoid negative impacts have already been incorporated into the proposal. These include excluding the land north of the N2 from the NEMA application, retaining agriculture on historically transformed land, placing sensitive natural areas under Open Space Zone III / conservation zoning, applying split zoning where appropriate, limiting eco-property development footprints to 2 000 m², retaining existing farm roads where feasible, locating pipelines within road reserves, using low-water crossings, retaining existing drainage patterns, avoiding direct discharge of treated effluent to watercourses, and excluding or protecting sensitive heritage features such as the historic werf precinct and burial grounds.</p> <p>Unavoidable impacts, such as limited vegetation clearance, road upgrades, service installation, watercourse crossings, wastewater management, stormwater changes and increased operational activity, will be mitigated through the EMPr, WULA requirements, specialist recommendations, municipal controls, HOA rules, design guidelines, effluent monitoring, alien invasive plant control, rehabilitation, stormwater management, erosion control, livestock restrictions in sensitive areas, and heritage chance-find procedures. These measures are considered appropriate because they directly address the residual impacts associated with the proposed NEMA-listed activities.</p> <p>Positive impacts are maximised through formal conservation zoning and rehabilitation of sensitive areas, continued agricultural use on suitable land, formal accommodation of existing ESTA beneficiaries in a serviced rural village, retention of the Hoogekraal Primary School, protection of cemetery areas, use of existing lawful water resources and infrastructure, reuse of treated effluent, road rationalisation, closure and rehabilitation of unnecessary roads, and long-term management through the HOA and EMPr.</p> <p>A materially different alternative would either fail to address the existing ESTA tenure obligations, cadastral fragmentation, agricultural viability constraints and infrastructure context, or would result in greater environmental impacts through additional disturbance, increased servicing requirements, weaker conservation protection or more intensive land use. For this reason, no additional reasonable or feasible alternatives exist to further avoid, mitigate or enhance impacts beyond the preferred alternative as currently designed and the no-go alternative assessed as the baseline.</p>	
1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.
<p>Following consideration of the site context, environmental sensitivities, existing land-use pattern, infrastructure availability, social obligations, specialist findings and the no-go alternative, the preferred alternative is the implementation of the proposed Hoogekraal Coastal Farmsteads development on the southern portions of Farm Hoogekraal No. 238 and Farm Buffelsdrift No. 227, George. The preferred location is the application area situated south of the N2 National Road, west of the Maalgate River, east of Morrison Road and north of the Indian Ocean. The farm portions north of the N2 are excluded from the NEMA application and will remain agricultural.</p> <p>The preferred property and site alternative is therefore the existing southern Hoogekraal / Buffelsdrift rural agricultural landholding, as this is the area where the existing agricultural activities, farmworker occupation, water infrastructure, road network, school, cemeteries and environmentally sensitive features occur. No alternative off-site property would address the same cadastral, social, agricultural, infrastructure and environmental management issues.</p> <p>The preferred activity alternative is the consolidation, rezoning and subdivision of the application area into a low-density rural agricultural and conservation-based development, including agricultural farms, conservation areas, split-zoned properties, eco-properties, a rural farmworker village for existing ESTA beneficiaries, private open space, equestrian and recreational facilities, utility infrastructure, internal private roads and associated services.</p>	

The preferred design and layout alternative is the biodiversity- and constraint-led layout that retains agriculture on historically transformed and suitable land, assigns sensitive natural areas to Open Space Zone III / Nature Conservation Area or conservation portions of split-zoned properties, limits eco-property development footprints to 2 000 m² per farm, retains the existing school and cemetery areas, and consolidates the existing farmworker occupation into a planned rural village.

The preferred technology alternative is the rural servicing model that uses existing lawful water-use entitlements, existing abstraction and dam infrastructure, central water treatment and distribution, rainwater harvesting, on-site sanitation, a package wastewater treatment plant for the rural village, treated-effluent reuse, gravel roads with grass swales, low-water crossings, pipelines within road reserves and flexible Eskom/solar electricity supply.

The preferred operational alternative is a coordinated HOA/EMPr-managed rural agricultural and conservation estate, where shared roads, services, stormwater systems, conservation areas, open spaces, wastewater infrastructure, alien invasive plant control, rehabilitation, design controls and environmental compliance are managed collectively over the long term.

The no-go alternative is not preferred because it would retain the existing fragmented cadastral pattern, scattered ESTA occupation, limited conservation protection, ad hoc servicing arrangements, road and access complexities, agricultural viability constraints and lack of coordinated long-term environmental management.

The preferred alternatives are therefore considered to provide the most balanced and sustainable outcome, as they retain agricultural use where appropriate, protect sensitive biodiversity and aquatic features, formalise existing social occupation, optimise existing infrastructure, protect heritage and community resources, and provide an enforceable management framework for the site.

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).

No-go map to be formulated from the SDP where all areas indicated in dark green, which include watercourses, wetlands and their buffers, are defined as "conservation areas" and are considered no-go with the exception of where specific services are indicated passing through these areas and the designated footprints (yellow circles) where future footprint disturbance will occur.



During the identification and refinement of alternatives, the following **no-go areas** were identified and used to guide the preferred layout:

- **Farm portions north of the N2 National Road**
These areas are excluded from the NEMA application and will remain agricultural. They are not part of the proposed listed activities or development footprint.
- **Properties of non-participating landowners**
Landowners who did not wish to be included in the proposed development have been excluded from the application area. Their properties will remain privately owned and operated, with servitude access retained where required.
- **Conservation-zoned areas / Open Space Zone III areas**

Areas identified for Open Space Zone III / Nature Conservation Area are treated as no-go or low-disturbance areas for conventional development. These areas are intended for biodiversity protection, rehabilitation, alien invasive plant control and ecological connectivity. Only the designated footprint zones may be disturbed subject to the EMPr compliance.

- **Conservation portions of split-zoned properties**
Where properties are split-zoned between agriculture and conservation, the conservation portions are no-go areas for homesteads, hard surfaces, agricultural infrastructure and general disturbance. Development must be located within the agricultural or identified developable portions only.
- **Eco-property areas outside the 2 000 m² development footprint**
On Eco Properties, only the approved 2 000 m² development envelope may be disturbed subject to EMPr compliance. The remaining area must be retained as natural or rehabilitated landscape and treated as a no-go area for further built development, clearing or hard surfacing.
- **Wetlands, seep areas, drainage lines and watercourses**
Aquatic features identified by the aquatic specialist are no-go areas except where essential and authorised infrastructure crossings are required. These features and their buffers must be avoided, protected and managed to maintain hydrological and ecological functioning.
- **Aquatic buffer areas**
Buffers of approximately 35–42 m around watercourses and wetlands, where applicable, are treated as no-go or controlled-use areas. Development, clearing, earthworks, livestock access and infrastructure should be avoided unless specifically assessed and authorised.
- **Areas of Critically Endangered Garden Route Granite Fynbos and high biodiversity sensitivity**
Remaining natural fynbos, forest and thicket habitat, CBAs, ESAs and habitat for species of conservation concern have influenced the layout and are to be avoided where possible. Where included in properties, they are subject to conservation zoning, footprint restrictions and rehabilitation requirements.
- **Ecological corridors and habitat linkages**
Areas required to maintain connectivity between natural vegetation, wetlands, drainage systems and the Maalgate River corridor are to be kept free of unnecessary development and fragmentation. No fencing within these areas other than existing boundary fencing.
- **Historic Hoogekraal Farm werf precinct**
The historic werf precinct has been excluded from the development footprint and will remain unchanged. It is treated as a heritage no-go area for new subdivision-related development, roads, services or built form.
- **Burial grounds and cemetery areas**
Identified graveyard and cemetery areas are no-go areas for development and earthworks. They must be protected, formalised or fenced where required, and access must be maintained.
- **Graded heritage structures and their immediate settings**
Structures identified as having local heritage value must be retained and protected. Any alteration requires the necessary heritage approvals, and these areas have influenced the placement of development and infrastructure.
- **Archaeologically sensitive areas, including coastal cliffs, cave areas and areas near the Maalgate River**
These areas are treated cautiously, with avoidance, monitoring and chance-find procedures required. Sea-cut caves and cliff-associated areas should not be disturbed without appropriate specialist input.
- **Unnecessary existing roads proposed for closure and rehabilitation**
Roads that are not required for long-term access will become no-go areas for continued vehicular use once closed and rehabilitated. This reduces fragmentation and restores agricultural or natural land cover.
- **Steeper, visually exposed or landscape-sensitive areas**
Areas with higher visual sensitivity or greater potential to affect rural coastal character have influenced the placement and design of development. Built form in these areas is avoided where possible or strictly controlled through low-profile design, subdued materials and indigenous landscaping.

In summary, the no-go areas identified during the alternatives process include land outside the application area, non-participating properties, conservation zones, aquatic systems and buffers, high biodiversity areas, heritage resources, burial grounds, ecological corridors and areas where unnecessary road disturbance can be rehabilitated. These no-go areas have directly influenced the preferred alternative by directing development toward transformed agricultural land, limiting development footprints in sensitive areas, protecting watercourses and wetlands, safeguarding heritage resources, and ensuring that the proposal remains a low-density rural agricultural and conservation-based development.

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.

The methodology used to identify, assess and rank potential environmental impacts and risks associated with the proposed development is based on a structured impact assessment process that considers both the **unmitigated** and **mitigated** significance of each impact. The assessment applies to all relevant phases of the proposal, including planning/design, construction, operation and, where relevant, decommissioning or rehabilitation.

The nature of each impact is first described as either **positive, negative or neutral**, and as either **direct, indirect or cumulative**.

Direct impacts are those that arise immediately from the activity, such as vegetation clearance, road construction or works within watercourses.

Indirect impacts are secondary effects, such as erosion, alien plant spread, visual change, or downstream water-quality effects.

Cumulative impacts are assessed in relation to the combined effect of the proposal together with existing and foreseeable activities in the surrounding area.

Each impact is then assessed according to the following criteria:

- **Extent** – the spatial scale of the impact, ranging from site-specific or localised impacts to impacts that may affect the broader catchment, municipal area, region or beyond.
- **Duration** – the length of time over which the impact is expected to occur, ranging from temporary or short-term construction impacts to medium-term, long-term or permanent impacts.
- **Intensity / magnitude** – the degree of change to the affected environmental, social or heritage feature, considering the sensitivity, value and existing condition of the receiving environment.
- **Probability** – the likelihood that the impact or risk will occur, ranging from unlikely to definite.
- **Consequence** – the combined effect of extent, duration and intensity, indicating the seriousness of the impact if it occurs.
- **Significance** – the overall importance of the impact, derived from consequence and probability, and ranked as low, medium, high or very high.
- **Reversibility** – the degree to which the affected environment can return to its pre-impact condition, either naturally or through rehabilitation. Impacts may be fully reversible, partially reversible or irreversible.
- **Irreplaceable loss of resources** – the degree to which the impact may result in permanent loss of resources that cannot be replaced or restored, such as threatened vegetation, wetlands, heritage resources, ecological corridors, agricultural potential or scarce water resources.
- **Confidence** – the level of certainty in the assessment, based on available desktop information, site verification, specialist studies, engineering input and professional judgement.

The consequence of each impact is determined by considering the relationship between the **extent, duration and intensity** of the impact.

The significance rating is then determined by combining the consequence rating with the **probability** of occurrence. This provides a transparent basis for ranking impacts and distinguishing between impacts that are minor and manageable, and those that may require avoidance, redesign, authorisation conditions or further specialist mitigation.

The assessment also considers the **degree to which impacts can be avoided, minimised, rehabilitated or compensated for**, in line with the mitigation hierarchy.

Avoidance is prioritised where impacts affect sensitive biodiversity, aquatic, heritage or social resources.

Where avoidance is not possible, it is necessary to minimise or reduce the impact, mitigation measures are identified to reduce the extent, duration, intensity or probability of the impact.

Residual impacts are then assessed after mitigation to determine whether they remain acceptable.

For this proposal, the methodology is applied to the key environmental and social receptors identified through the assessment process, including indigenous vegetation, Critically Endangered Garden Route Granite Fynbos, CBAs and ESAs, wetlands and watercourses, the Maalgate River catchment, fauna habitat, agricultural land, heritage resources, visual character, traffic, services, wastewater, stormwater, existing residents and surrounding land users.

Impacts are ranked both **before mitigation** and **after mitigation**. This allows the BAR to demonstrate how the preferred alternative, specialist recommendations, EMPr, WULA requirements, heritage conditions, HOA rules and design guidelines reduce the significance of negative impacts and enhance positive impacts. Where impacts remain of medium or higher significance after mitigation, these are highlighted as key residual impacts requiring specific authorisation conditions, monitoring or long-term management.

The impact assessment also specifically considers whether an impact may cause an **irreversible or irreplaceable loss of resources**. This is particularly relevant where the proposal may affect threatened ecosystems, wetlands, watercourses, ecological corridors, heritage resources or agricultural land capability. Where such resources are present, the assessment gives priority to avoiding direct impact, restricting development footprints, applying buffers, retaining conservation areas, implementing rehabilitation and ensuring long-term management through the EMPr and HOA.

In summary, the methodology provides a consistent and transparent basis for identifying and ranking impacts according to their nature, extent, duration, intensity, probability, consequence, significance, reversibility and potential to cause irreplaceable loss of resources. It also demonstrates how the preferred alternative has been refined to avoid sensitive areas where possible, mitigate unavoidable impacts, and maximise positive outcomes such as conservation zoning, rehabilitation, social formalisation, agricultural continuity and improved long-term environmental management.

Seven rating scales will be considered when assessing potential impacts. These include:

- extent;
- duration;
- intensity;
- status of impact;
- probability;
- degree of confidence; and
- significance.

In assigning significance ratings to potential impacts before and after mitigation the following approach presented below is to be adhered to:

1. The core criteria for determining significance ratings are "extent", "duration" and "intensity". The preliminary significance ratings for combinations of these three criteria are given.
2. The status of an impact is used to describe whether the impact will have a negative, positive or neutral effect on the surrounding environment. An impact may therefore be negative, positive (or referred to as a benefit) or neutral.
3. Describe the impact in terms of the probability of the impact occurring and the degree of confidence in the impact predictions, based on the availability of information and knowledge.
4. Additional criteria to be considered, which could "increase" the significance rating if deemed justified, with motivation, are the following:
 - Permanent / irreversible impacts (as distinct from long-term, reversible impacts);
 - Potentially substantial cumulative effects; and
 - High level of risk or uncertainty, with potentially substantial negative consequences.
5. Additional criteria to be considered, which could "decrease" the significance rating if justified, with motivation, is the following:
 - Improbable impact, where confidence level in prediction is high.
6. When assigning significance ratings to impacts after mitigation:
 - First, consider probable changes in intensity, extent and duration of the impact after mitigation, assuming effective implementation of mitigation measures, leading to a revised significance rating; and
 - Then moderate the significance rating after taking into account the likelihood of proposed mitigation measures being effectively implemented. Consider:
 - Any potentially significant risks or uncertainties associated with the effectiveness of mitigation measures;
 - The technical and financial ability of the proponent to implement the measure; and
 - The commitment of the proponent to implementing the measure, or guarantee over time that the measures would be implemented.
7. The cumulative impacts of a project should also be considered. "Cumulative impacts" refer to the impact of an activity that may become significant when added to the existing activities currently taking place within the surrounding environment.
8. Where applicable, assess the degree to which an impact may cause irreplaceable loss of a resource. A resource assists in the functioning of human or natural systems, i.e. specific vegetation, minerals, water, agricultural land, etc.

A. Significance

The significance ratings are based on largely objective criteria and inform decision-making at a project level as opposed to a local community level. In some instances, therefore, whilst the significance rating of potential impacts might be "low" or "very low", the importance of these impacts to local communities or individuals might be extremely high. The importance which I&APs attach to impacts must be taken into consideration, and recommendations should be made as to ways of avoiding or minimising these negative impacts through project design, selection of appropriate alternatives and / or management.

The relationship between the significance ratings after mitigation and decision-making can be broadly defined as follows (see overleaf): substance

Significance rating	Effect on decision-making
VERY LOW; LOW	Will not have an influence on the decision to proceed with the proposed project, provided that recommended measures to mitigate negative impacts are implemented.
MEDIUM	Should influence the decision to proceed with the proposed project, provided that recommended measures to mitigate negative impacts are implemented.
HIGH; VERY HIGH	Would strongly influence the decision to proceed with the proposed project.

B. Extent

"Extent" defines the physical extent or spatial scale of the impact.

Rating	Description
LOCAL	Extending only as far as the activity, limited to the site and its immediate surroundings. Specialist studies to specify extent.
REGIONAL	Southern Cape. Specialist studies to specify extent.
NATIONAL	South Africa
INTERNATIONAL	

C. Duration

"Duration" gives an indication of how long the impact would occur.

Rating	Description
SHORT TERM	0 - 5 years
MEDIUM TERM	5 - 15 years
LONG TERM	Where the impact will cease after the operational life of the activity, either because of natural processes or by human intervention.
PERMANENT	Where mitigation either by natural processes or by human intervention will not occur in such a way or in such time span that the impact can be considered transient.

D. Intensity

"Intensity" establishes whether the impact would be destructive or benign.

Rating	Description
ZERO TO VERY LOW	Where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected.
LOW	Where the impact affects the environment in such a way that natural, cultural and social functions and processes continue, albeit in a slightly modified way.
MEDIUM	Where the affected environment is altered, but natural, cultural and social functions and processes continue, albeit in a modified way.
HIGH	Where natural, cultural and social functions or processes are altered to the extent that it will temporarily or permanently cease.

E. Loss of resources

"Loss of resource" refers to the degree to which a resource is permanently affected by the activity, i.e. the degree to which a resource is irreplaceable.

Rating	Description
LOW	Where the activity results in a loss of a particular resource but where the natural, cultural and social functions and processes are not affected.
MEDIUM	Where the loss of a resource occurs, but natural, cultural and social functions and processes continue, albeit in a modified way.
HIGH	Where the activity results in an irreplaceable loss of a resource.

F. Status of impact

The status of an impact is used to describe whether the impact would have a negative, positive or zero effect on the affected environment. An impact may therefore be negative, positive (or referred to as a benefit) or neutral.

G. Probability

"Probability" describes the likelihood of the impact occurring.

Rating	Description
IMPROBABLE	Where the possibility of the impact to materialise is very low either because of design or historic experience.
PROBABLE	Where there is a distinct possibility that the impact will occur.
HIGHLY PROBABLE	Where it is most likely that the impact will occur.
DEFINITE	Where the impact will occur regardless of any prevention measures.

H. Degree of confidence

This indicates the degree of confidence in the impact predictions, based on the availability of information and knowledge.

Rating	Description
HIGH	Greater than 70% sure of impact prediction.
MEDIUM	Between 35% and 70% sure of impact prediction.
LOW	Less than 35% sure of impact prediction.

I. Significance

"Significance" attempts to evaluate the importance of a particular impact, and in doing so incorporates the above three scales (i.e. extent, duration and intensity).

Rating	Description
VERY HIGH	Impacts could be EITHER: of high intensity at a regional level and endure in the long term; OR of high intensity at a national level in the medium term; OR of medium intensity at a national level in the long term.
HIGH	Impacts could be EITHER: of high intensity at a regional level and endure in the medium term; OR of high intensity at a national level in the short term; OR of medium intensity at a national level in the medium term; OR of low intensity at a national level in the long term; OR of high intensity at a local level in the long term; OR of medium intensity at a regional level in the long term.
MEDIUM	Impacts could be EITHER: of high intensity at a local level and endure in the medium term; OR of medium intensity at a regional level in the medium term; OR of high intensity at a regional level in the short term; OR of medium intensity at a national level in the short term; OR of medium intensity at a local level in the long term; OR of low intensity at a national level in the medium term; OR of low intensity at a regional level in the long term.
LOW	Impacts could be EITHER: of low intensity at a regional level and endure in the medium term; OR of low intensity at a national level in the short term; OR of high intensity at a local level and endure in the short term; OR of medium intensity at a regional level in the short term; OR of low intensity at a local level in the long term; OR of medium intensity at a local level and endure in the medium term.
VERY LOW	Impacts could be EITHER: of low intensity at a local level and endure in the medium term; OR of low intensity at a regional level and endure in the short term; OR of low to medium intensity at a local level and endure in the short term.
INSIGNIFICANT	Impacts with: Zero to very low intensity with any combination of extent and duration.
UNKNOWN	In certain cases it may not be possible to determine the significance of an impact.

J. Degree to which impact can be mitigated

This indicates the degree to which an impact can be reduced / enhanced.

Rating	Description
NONE	No change in impact after mitigation.
VERY LOW	Where the significance rating stays the same, but where mitigation will reduce the intensity of the impact.
LOW	Where the significance rating drops by one level, after mitigation.
MEDIUM	Where the significance rating drops by two to three levels, after mitigation.
HIGH	Where the significance rating drops by more than three levels, after mitigation.

K. Reversibility of an impact

This refers to the degree to which an impact can be reversed.

Rating	Description
IRREVERSIBLE	Where the impact is permanent.
PARTIALLY REVERSIBLE	Where the impact can be partially reversed.
FULLY REVERSIBLE	Where the impact can be completely reversed.

Determination and ranking of potential impacts is based on years of experience working on similar developments across the same area as well as applying sound environmental knowledge informed by available information on site, vegetation, development type, current condition and other relevant factors that could/ will influence such a development

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.

Summary of impacts identified by the EAP and Specialists

1. Loss/disturbance of indigenous vegetation and Critically Endangered Garden Route Granite Fynbos
2. Impacts on terrestrial biodiversity, CBAs/ESAs and ecological corridors
3. Impacts on wetlands, seep areas, drainage lines and watercourses
4. Wastewater and treated-effluent reuse impacts
5. Soil disturbance, erosion and sedimentation
6. Agricultural land-use change and agricultural potential
7. Faunal disturbance and habitat fragmentation
8. Visual, landscape character and sense-of-place impacts
9. Heritage, archaeological and burial-ground impacts
10. Traffic, access and road-safety impacts
11. Construction-phase dust, noise, waste and nuisance impacts
12. Socio-economic and community impacts
13. Long-term operational management and compliance risk
14. Water-use impacts associated with abstraction and storage
15. Formal conservation zoning of currently unmanaged natural areas
16. Rehabilitation and ecological improvement of degraded natural areas
17. Alien invasive plant control within conservation areas
18. Protection and management of CBAs, ESAs and ecological corridors
19. Protection of wetlands, seep areas, drainage lines and watercourse buffers
20. Improved long-term environmental governance through HOA/EMPr management
21. Reduced future disturbance compared with continued unconstrained agricultural use
22. Improved conservation contribution to the broader Maalgate River and coastal catchment
23. Improved agricultural management of currently farmed areas
24. Diversification of agricultural activities on existing farmed land
25. Improved water-use efficiency for agricultural activities
26. Protection of sensitive areas by containing agriculture within existing farmed areas
27. Increased agricultural employment and land-based stewardship

1. Loss/disturbance of indigenous vegetation and Critically Endangered Garden Route Granite Fynbos

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Negative; direct loss or disturbance of indigenous vegetation for dwellings, certain roads, services, utility infrastructure.
Extent of impact	Site-specific to local.
Consequence of impact	Medium where natural vegetation or Critically Endangered fynbos is affected.
Probability of occurrence	Definite where approved footprints overlap vegetation; possible for accidental disturbance.
Irreplaceable loss of resources	Medium-high, because remaining Garden Route Granite Fynbos remnants are scarce and conservation-important.
Reversibility	Low to medium; rehabilitation possible in disturbed areas, but mature indigenous vegetation and threatened habitat are not easily replaced.
Indirect impacts	Edge effects, alien invasion, habitat degradation and potential increased disturbance pressure.
Cumulative impact prior to mitigation	Medium, considering historical agricultural transformation and current disturbed nature of the area which has already impacted and added to the regional loss of threatened vegetation.
Significance prior to mitigation	Medium-high.
Degree to which impact can be avoided	Medium; sensitive areas can be avoided through conservation zoning and footprint control.
Degree to which impact can be managed	High, through demarcation, EMPr controls, HOA rules and alien clearing.
Degree to which impact can be mitigated	Medium; impacts can be reduced but not fully eliminated where clearing occurs.
Proposed mitigation	Avoid high-sensitivity vegetation where possible; confine clearing to approved footprints; demarcate no-go areas; implement alien invasive plant control; rehabilitate disturbed areas with locally appropriate indigenous species; prohibit clearing outside approved envelopes.
Residual impacts	Limited permanent vegetation loss within approved development footprints.
Cumulative impacts post mitigation	Medium to low-medium if conservation zoning and rehabilitation are implemented effectively.
Significance after mitigation	Medium - Low.

2. Impacts on terrestrial biodiversity, CBAs/ESAs and ecological corridors

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Negative; direct and indirect disturbance to biodiversity-priority areas and ecological support functions.
Extent of impact	Site-specific to local ecological network.
Consequence of impact	Medium before mitigation because the site contains CBAs, ESAs and ecological linkages however work within these areas is extremely limited.
Probability of occurrence	Probable without layout controls.
Irreplaceable loss of resources	Medium where corridors or biodiversity-priority areas are fragmented.
Reversibility	Medium; ecological function can be partly restored but fragmentation may persist.
Indirect impacts	Reduced habitat connectivity, faunal movement disruption, increased edge effects and alien spread.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium through zoning, buffers and layout refinement which limits work within these areas to the minimum.
Degree to which impact can be managed	High through HOA/EMPr conservation management.
Degree to which impact can be mitigated	Medium-high with rehabilitation and corridor protection.
Proposed mitigation	Retain conservation areas; protect CBA/ESA functions; maintain ecological corridors; restrict development in conservation portions; place trails sensitively; control fencing, lighting, domestic animals and alien plants.
Residual impacts	Ongoing edge effects from nearby development and human activity.
Cumulative impacts post mitigation	Low.
Significance after mitigation	Low.

3. Impacts on wetlands, seep areas, drainage lines and watercourses

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Negative; disturbance to aquatic systems from crossings, roads, services, stormwater and nearby land uses.
Extent of impact	Site-specific, with potential local downstream effects toward the Maalgate River and coastal receiving environment.
Consequence of impact	Medium if beds, banks, seep areas or wetland buffers are disturbed without control.
Probability of occurrence	Probable where crossings and infrastructure intersect aquatic features.
Irreplaceable loss of resources	Medium, as wetland and watercourse functions are difficult to replace.
Reversibility	Medium to low; avoidance and rehabilitation possible
Indirect impacts	Erosion, sedimentation, altered flow, water-quality decline and habitat degradation.
Cumulative impact prior to mitigation	Medium, given existing historic disturbance and degraded aquatic condition and limited work within these areas.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium; crossings may be unavoidable but can be limited.
Degree to which impact can be managed	High through buffers, WULA conditions and EMPr controls.
Degree to which impact can be mitigated	Medium-high with appropriate design and rehabilitation.
Proposed mitigation	Avoid aquatic features and buffers where possible; use existing crossings; design low-water crossings to maintain flow; obtain WULA approval; implement buffers; control livestock access; prevent dumping and pollution; rehabilitate disturbed aquatic edges.
Residual impacts	Localised disturbance at authorised crossings and service points.
Cumulative impacts post mitigation	Medium - Low.
Significance after mitigation	Medium - Low.

4. Wastewater and treated-effluent reuse impacts

Assessment criterion	Description
Project phase	Operational phase
Nature of impact	Negative risk from package plant failure, seepage, odour, overflow or inappropriate irrigation; positive where treated effluent is reused beneficially.
Extent of impact	Site-specific, with possible local groundwater or surface-water implications.
Consequence of impact	Medium before mitigation.
Probability of occurrence	Possible.
Irreplaceable loss of resources	Medium if watercourses, wetlands or groundwater are contaminated.
Reversibility	Medium; contamination can be difficult to reverse if persistent.
Indirect impacts	Nutrient enrichment, odour nuisance, groundwater contamination and downstream water-quality impacts.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium by avoiding direct discharge to watercourses.
Degree to which impact can be managed	High through HOA operation and monitoring.
Degree to which impact can be mitigated	High if systems are correctly designed and maintained.
Proposed mitigation	Use a properly designed package plant for the village; reuse treated effluent for irrigation only within authorised limits; monitor effluent quality; maintain systems; require approved on-site sanitation for individual farms; prevent discharge to wetlands or watercourses.
Residual impacts	Operational risk associated with wastewater infrastructure.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium.

5. Soil disturbance, erosion and sedimentation

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Negative; soil disturbance from construction, roads, services, earthworks, trails and agricultural activities.
Extent of impact	Site-specific.
Consequence of impact	Medium.
Probability of occurrence	Probable during construction.
Irreplaceable loss of resources	Low to medium; higher in erodible or wetland-linked areas.
Reversibility	Medium-high if stabilised quickly.
Indirect impacts	Sedimentation of watercourses, loss of topsoil and reduced rehabilitation success.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium.
Degree to which impact can be managed	High.
Degree to which impact can be mitigated	High.
Proposed mitigation	Limit earthworks; strip and stockpile topsoil; stabilise exposed soils; install erosion controls; rehabilitate disturbed areas; avoid work during heavy rainfall; maintain roads and swales.
Residual impacts	Localised soil disturbance in development areas.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium.

6. Agricultural land-use change and agricultural potential

Assessment criterion	Description
Project phase	Operational phase
Nature of impact	Mixed; negative through conversion of some agricultural land to other uses, positive through retention and diversification of agricultural use.

Extent of impact	Site-specific to local agricultural landscape.
Consequence of impact	Medium before mitigation.
Probability of occurrence	Definite.
Irreplaceable loss of resources	Low to medium, as highest-potential areas are limited and agriculture is retained on suitable land.
Reversibility	Medium; zoning and subdivision changes are long-term, but some land can remain productive.
Indirect impacts	Change in rural land-use pattern and agricultural employment profile.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium by retaining agriculture on suitable land.
Degree to which impact can be managed	High.
Degree to which impact can be mitigated	Medium-high.
Proposed mitigation	Retain agricultural zoning/use on transformed and suitable areas; promote small-scale farming, grazing, orchards, food gardens and equestrian agriculture; prevent encroachment into conservation areas; manage erosion and water use.
Residual impacts	Permanent change from conventional agricultural landholding to mixed rural/agricultural/conservation estate.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium, with positive socio-economic/agricultural diversification benefits.

7. Faunal disturbance and habitat fragmentation

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Neutral – limited change; disturbance to fauna from clearing, roads, human activity, lighting, domestic animals and habitat fragmentation. Existing impacts within the area with no management or controls in place. Positive through conservation management which can improve the current status.
Extent of impact	Site-specific to local ecological network.
Consequence of impact	Medium.
Probability of occurrence	Probable.
Irreplaceable loss of resources	Medium where species of conservation concern or habitat corridors are affected.
Reversibility	Medium; habitat can recover if corridors remain functional.
Indirect impacts	Displacement, road mortality, reduced movement and breeding disturbance. Control of illegal hunting through conservation management
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium through avoidance of habitat corridors and sensitive areas.
Degree to which impact can be managed	High.
Degree to which impact can be mitigated	Medium-high.
Proposed mitigation	Retain corridors; control domestic animals; manage lighting; limit clearing; maintain speed limits; prohibit hunting/trapping; rehabilitate disturbed areas; manage trails and fencing to reduce movement barriers.
Residual impacts	Ongoing disturbance from rural residential and agricultural activity.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium.

8. Visual, landscape character and sense-of-place impacts

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Negative visual change from new buildings, roads, village infrastructure and equestrian facilities;

	Positive where degraded areas are rehabilitated and rural design controls are applied. Damaged buildings are removed, informal structures removed, heritage buildings have potential to be restored under HWC permits
Extent of impact	Local, including views from roads, neighbouring properties and elevated viewpoints.
Consequence of impact	Medium before mitigation.
Probability of occurrence	Definite.
Irreplaceable loss of resources	Low-medium, linked to rural coastal landscape character.
Reversibility	Low to medium; built form is long-term, but landscaping can soften impacts.
Indirect impacts	Perceived rural character change and improved scenic quality through control.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Low to medium; visual change cannot be fully avoided.
Degree to which impact can be managed	High through design controls.
Degree to which impact can be mitigated	High.
Proposed mitigation	Apply architectural and landscape guidelines; use low-profile buildings, subdued colours, non-reflective materials and agricultural vernacular; retain vegetation; establish indigenous buffers; limit earthworks and hard surfaces.
Residual impacts	Permanent but softened visual change.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium.

9. Heritage, archaeological and burial-ground impacts

Assessment criterion	Description
Project phase	Construction phase
Nature of impact	Negative risk of disturbance to heritage structures, burial grounds, cultural landscape and unknown archaeological resources.
Extent of impact	Site-specific.
Consequence of impact	High if graves or significant heritage resources are disturbed.
Probability of occurrence	Possible, reduced by known avoidance areas.
Irreplaceable loss of resources	Low – no loss is proposed through avoidance of heritage resources.
Reversibility	Low; heritage loss is often irreversible.
Indirect impacts	Loss of cultural landscape value, community concern and reduced heritage integrity.
Cumulative impact prior to mitigation	Medium
Significance prior to mitigation	Medium
Degree to which impact can be avoided	High for known heritage resources.
Degree to which impact can be managed	High.
Degree to which impact can be mitigated	Medium-high; unknown finds remain a risk. Known finds are to be avoided and protected.
Proposed mitigation	Exclude the Hoogekraal werf precinct; retain graded structures; fence/protect cemetery areas; maintain access to graves; implement chance-find procedures; obtain HWC approvals for alterations; monitor sensitive earthworks.
Residual impacts	Low risk of chance finds during future ground disturbance.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low.

10. Traffic, access and road-safety impacts

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Negative; minor increased trips, construction traffic and operational traffic on Morrison Road and internal roads.
Extent of impact	Local road network.
Consequence of impact	Medium.
Probability of occurrence	Definite.
Irreplaceable loss of resources	Low.

Reversibility	Medium; traffic arrangements can be managed and upgraded.
Indirect impacts	Dust, noise, wildlife disturbance, safety risks and road maintenance needs.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Low; access is required.
Degree to which impact can be managed	High.
Degree to which impact can be mitigated	High.
Proposed mitigation	Provide dedicated right-turn lanes at Morrison Road accesses; maintain private roads; use speed controls; manage construction traffic; retain servitude access; use existing roads where possible.
Residual impacts	Increased traffic compared with current baseline.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium.

11. Construction-phase dust, noise, waste and nuisance impacts

Assessment criterion	Description
Project phase	Construction phase
Nature of impact	Negative; temporary nuisance from construction activities.
Extent of impact	Site-specific to immediately surrounding receptors.
Consequence of impact	Medium before mitigation.
Probability of occurrence	Definite during construction – however few receptors as the area is rural.
Irreplaceable loss of resources	Low.
Reversibility	High; impacts are generally temporary.
Indirect impacts	Disturbance to residents, fauna and road users; litter and pollution risks.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Low; construction is required.
Degree to which impact can be managed	High.
Degree to which impact can be mitigated	High.
Proposed mitigation	Implement EMP; restrict working hours; suppress dust; maintain vehicles; manage waste; provide spill kits; demarcate work areas; control noise; rehabilitate disturbed areas.
Residual impacts	Temporary low-level nuisance during construction.
Cumulative impacts post mitigation	Low.
Significance after mitigation	Low.

12. Socio-economic and community impacts

Assessment criterion	Description
Project phase	Construction and operational phases
Nature of impact	Positive and negative; positive through formalised ESTA village, employment and services; negative through temporary disruption and possible construction nuisance.
Extent of impact	Site-specific to local municipal economy.
Consequence of impact	Positive medium-high; negative low-medium.
Probability of occurrence	Probable to definite.
Irreplaceable loss of resources	Low for negative impacts; positive contribution to social stability and tenure formalisation.
Reversibility	Medium; social changes are long-term.
Indirect impacts	Local employment, procurement, improved services, community cohesion, possible job-seeker influx.
Cumulative impact prior to mitigation	Positive medium; negative low-medium.
Significance prior to mitigation	Positive medium-high; negative low-medium.
Degree to which impact can be avoided	Negative impacts partly avoidable through communication and construction management.
Degree to which impact can be managed	High.

Degree to which impact can be mitigated	High.
Proposed mitigation	Formalise village; retain school and cemeteries; provide services; prioritise local employment where feasible; communicate with residents; manage construction disruption; maintain access.
Residual impacts	Long-term change in settlement structure; improved formal services and tenure security.
Cumulative impacts post mitigation	Positive medium-high.
Significance after mitigation	Positive medium-high.

13. Long-term operational management and compliance risk

Assessment criterion	Description
Project phase	Operational phase
Nature of impact	Negative risk if HOA, EMPr, WULA, heritage and design controls are not implemented; Positive if implemented effectively.
Extent of impact	Site-wide.
Consequence of impact	Medium if controls fail.
Probability of occurrence	Possible.
Irreplaceable loss of resources	Medium where non-compliance affects conservation, watercourses or heritage resources.
Reversibility	Medium; some impacts reversible, but unauthorised clearing or heritage damage may not be.
Indirect impacts	Incremental encroachment, alien invasion, water-quality decline, visual degradation and cumulative habitat disturbance.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium through strong legal and management structures.
Degree to which impact can be managed	High if HOA and authorities enforce conditions.
Degree to which impact can be mitigated	High with clear rules, monitoring and corrective action.
Proposed mitigation	Establish binding HOA rules; include EMPr obligations in property agreements; enforce development envelopes; require monitoring, reporting and corrective action; maintain alien-clearing, stormwater, wastewater and conservation programmes.
Residual impacts	Ongoing dependence on effective governance and owner compliance.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium.

14. Water-use impacts associated with abstraction and storage

Assessment criterion	Description
Project phase	Operational phase
Nature of impact	No change – Existing Lawful Use Negative if water use exceeds lawful limits or affects riverine functioning; neutral to positive where existing lawful use is efficiently managed.
Extent of impact	Local to catchment scale.
Consequence of impact	Medium before mitigation.
Probability of occurrence	Possible, depending on operational compliance.
Irreplaceable loss of resources	Medium if downstream aquatic systems are affected.
Reversibility	Medium; reduced abstraction can restore some flow effects.
Indirect impacts	Reduced downstream flows, aquatic stress and estuarine water-quality/function effects.
Cumulative impact prior to mitigation	Medium.
Significance prior to mitigation	Medium.
Degree to which impact can be avoided	Medium by operating within lawful allocations.
Degree to which impact can be managed	High through metering, allocation control and WULA conditions.
Degree to which impact can be mitigated	High.

Proposed mitigation	Use verified existing lawful allocations only; meter abstraction and distribution; maintain infrastructure; implement rainwater harvesting and water-efficiency measures; comply with WULA conditions.
Residual impacts	Continued lawful abstraction from the Maalgate River system.
Cumulative impacts post mitigation	Low-medium.
Significance after mitigation	Low-medium.

15. Formal conservation zoning of currently unmanaged natural areas

Assessment criterion	Description
Nature of impact	Positive; conversion of sensitive or natural areas from general agricultural zoning/use to Open Space Zone III / Nature Conservation Area or conservation portions within split-zoned properties.
Extent of impact	Site-wide, with local ecological benefit.
Consequence of impact	Medium-high positive, as approximately 182.3239 ha will be placed under conservation-oriented zoning or management.
Probability of occurrence	Definite if the rezoning and subdivision are approved and implemented.
Degree to which impact may cause irreplaceable loss of resources	None; the impact reduces the risk of irreplaceable biodiversity loss.
Degree to which impact can be reversed	Low reversibility in planning terms once conservation zoning is approved, but this is positive as it secures long-term protection.
Indirect impacts	Improved protection of habitat, reduced future agricultural encroachment, improved ecological connectivity and more coherent land management.
Cumulative impact prior to mitigation	Positive medium, because the site currently contains biodiversity-priority areas that have no protection status or management
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable; this is a positive impact and should not be avoided.
Degree to which impact can be managed	High, through zoning conditions, HOA rules, EMPr requirements and conservation management obligations.
Degree to which impact can be mitigated	Not applicable; mitigation should focus on securing and enhancing the positive impact.
Proposed mitigation/enhancement	Secure conservation zoning; include conservation restrictions in title/HOA rules; demarcate conservation areas; prohibit unauthorised clearing, grazing, building and hard surfacing.
Residual impacts	Long-term positive conservation protection of currently unmanaged or weakly managed areas.
Cumulative impacts post mitigation	Positive high, as conservation areas become part of a managed site-wide ecological network.
Significance rating after mitigation	Positive high.

16. Rehabilitation and ecological improvement of degraded natural areas

Assessment criterion	Description
Nature of impact	Positive; degraded or disturbed natural areas can be rehabilitated through active restoration, alien clearing and erosion control.
Extent of impact	Site-specific to local.
Consequence of impact	Medium positive, increasing to medium-high where rehabilitation improves CBAs, ESAs, wetlands or ecological corridors.
Probability of occurrence	Probable, provided rehabilitation is implemented and maintained.
Degree to which impact may cause irreplaceable loss of resources	None; the impact supports recovery of threatened or degraded resources.
Degree to which impact can be reversed	Reversible only if management stops; continued rehabilitation is required to maintain benefits.
Indirect impacts	Improved habitat condition, improved faunal use, reduced erosion, reduced sedimentation and improved ecological resilience.
Cumulative impact prior to mitigation	Positive medium where rehabilitation replaces ongoing neglect or unmanaged degradation.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable; the impact should be actively promoted.
Degree to which impact can be managed	High, through phased rehabilitation plans, monitoring and HOA/EMPr implementation.
Degree to which impact can be mitigated	Not applicable; enhancement measures are required.
Proposed mitigation/enhancement	Prepare and implement a rehabilitation plan; stabilise disturbed soils; replant with locally appropriate indigenous species; monitor establishment; prevent re-disturbance.
Residual impacts	Net improvement in ecological condition over time, although recovery may be gradual.
Cumulative impacts post mitigation	Positive medium-high.
Significance rating after mitigation	Positive medium-high.

17. Alien invasive plant control within conservation areas

Assessment criterion	Description
Nature of impact	Positive; removal and ongoing control of alien invasive plants within conservation, wetland, riparian and degraded natural areas.
Extent of impact	Site-wide, with local catchment benefits.
Consequence of impact	Medium-high positive, particularly where alien infestation currently affects fynbos, thicket, drainage lines or wetland edges.
Probability of occurrence	Probable to definite if included as a binding HOA/EMPr obligation.
Degree to which impact may cause irreplaceable loss of resources	None; alien clearing reduces risk to indigenous vegetation, water resources and habitat integrity.
Degree to which impact can be reversed	Benefits may reverse if follow-up clearing is not maintained.
Indirect impacts	Increased indigenous recruitment, improved habitat quality, reduced fire intensity risk, improved water availability and reduced spread into neighbouring areas.
Cumulative impact prior to mitigation	Positive medium, due to existing alien invasion pressure across the landscape.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable.
Degree to which impact can be managed	High through an alien invasive species management plan.
Degree to which impact can be mitigated	Not applicable; continued control enhances the benefit.
Proposed mitigation/enhancement	Implement an alien invasive plant control plan; prioritise wetlands, watercourses, fynbos remnants and road edges; require follow-up clearing; rehabilitate cleared areas with indigenous species.
Residual impacts	Long-term reduction in alien invasive cover if maintenance is sustained.
Cumulative impacts post mitigation	Positive high.
Significance rating after mitigation	Positive high.

18. Protection and management of CBAs, ESAs and ecological corridors

Assessment criterion	Description
Nature of impact	Positive; formal designation and management of biodiversity-priority areas and ecological support areas.
Extent of impact	Site-wide, with local landscape connectivity benefits.
Consequence of impact	Medium-high positive, as CBA/ESA functions will be recognised in the layout and managed rather than remaining incidental within agricultural land.
Probability of occurrence	Definite if conservation zoning, split zoning and management controls are implemented.
Degree to which impact may cause irreplaceable loss of resources	None; the impact reduces the likelihood of irreplaceable ecological loss.
Degree to which impact can be reversed	Low reversibility if secured through zoning and title/HOA controls; this is beneficial.
Indirect impacts	Improved faunal movement, reduced habitat fragmentation, protection of natural vegetation patches and improved ecological process functioning.
Cumulative impact prior to mitigation	Positive medium, given historical fragmentation and transformation of the landscape.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable.
Degree to which impact can be managed	High through conservation zoning, buffers, no-go areas and long-term monitoring.
Degree to which impact can be mitigated	Not applicable; enhancement should secure corridor functionality.
Proposed mitigation/enhancement	Maintain ecological corridors; restrict fencing and disturbance; manage trails; control domestic animals and lighting; prohibit additional clearing in conservation portions.
Residual impacts	Improved long-term ecological connectivity and reduced fragmentation risk.
Cumulative impacts post mitigation	Positive medium-high to high.
Significance rating after mitigation	Positive high.

19. Protection of wetlands, seep areas, drainage lines and watercourse buffers

Assessment criterion	Description
Nature of impact	Positive; aquatic features and buffers will be recognised, protected and managed through the layout, EMPr and WULA process.
Extent of impact	Site-specific, with local downstream benefit to the Maalgate River and coastal receiving environment.
Consequence of impact	Medium-high positive, particularly where aquatic systems are currently affected by grazing, alien vegetation, erosion or unmanaged road crossings.
Probability of occurrence	Probable to definite if WULA, EMPr and HOA requirements are implemented.
Degree to which impact may cause irreplaceable loss of resources	None; protection reduces risk to wetland and watercourse functioning.

Degree to which impact can be reversed	Benefits may reduce if buffers are encroached upon or if maintenance is not sustained.
Indirect impacts	Improved water quality, reduced sedimentation, improved hydrological functioning, improved habitat for moisture-dependent species and downstream estuarine protection.
Cumulative impact prior to mitigation	Positive medium.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable.
Degree to which impact can be managed	High through buffer demarcation, WULA conditions and aquatic rehabilitation.
Degree to which impact can be mitigated	Not applicable; controls enhance the positive impact.
Proposed mitigation/enhancement	Demarcate buffers; restrict livestock access; rehabilitate wetland edges; manage stormwater diffusely; maintain low-water crossings; prohibit dumping, infilling and unauthorised works.
Residual impacts	Improved aquatic protection, with localised residual disturbance only at authorised crossings.
Cumulative impacts post mitigation	Positive medium-high.
Significance rating after mitigation	Positive medium-high.

20. Improved long-term environmental governance through HOA/EMPr management

Assessment criterion	Description
Nature of impact	Positive; currently unmanaged or inconsistently managed areas will become subject to formal HOA, EMPr and specialist management controls.
Extent of impact	Site-wide.
Consequence of impact	High positive if the HOA and EMPr are effectively implemented.
Probability of occurrence	Probable, subject to approval conditions and enforcement.
Degree to which impact may cause irreplaceable loss of resources	None; the impact reduces the risk of irreplaceable loss through management and compliance.
Degree to which impact can be reversed	Benefits may be reduced if governance fails, but controls can be reinstated through enforcement.
Indirect impacts	Improved compliance, reduced ad hoc disturbance, better monitoring, clearer owner responsibilities and more consistent implementation of rehabilitation and alien clearing.
Cumulative impact prior to mitigation	Positive medium, because current management is fragmented across multiple farm portions.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable.
Degree to which impact can be managed	High through binding HOA rules, title conditions and approval conditions.
Degree to which impact can be mitigated	Not applicable; monitoring and enforcement enhance the benefit.
Proposed mitigation/enhancement	Include EMPr obligations in HOA rules; appoint responsible management body; require annual inspections; enforce no-go areas; keep records of alien clearing, rehabilitation and infrastructure maintenance.
Residual impacts	Long-term coordinated environmental management across the estate.
Cumulative impacts post mitigation	Positive high.
Significance rating after mitigation	Positive high.

21. Reduced future disturbance compared with continued unconstrained agricultural use

Assessment criterion	Description
Nature of impact	Positive; conservation zoning and footprint controls reduce the potential for future clearing, grazing, cultivation or infrastructure expansion in sensitive areas.
Extent of impact	Site-specific to local.
Consequence of impact	Medium-high positive.
Probability of occurrence	Probable to definite if controls are legally secured.
Degree to which impact may cause irreplaceable loss of resources	None; the impact reduces the likelihood of irreplaceable biodiversity and aquatic loss.
Degree to which impact can be reversed	Low reversibility if secured through zoning and management rules; this supports long-term protection.
Indirect impacts	Reduced cumulative vegetation loss, reduced livestock pressure, reduced erosion and improved ecological stability.
Cumulative impact prior to mitigation	Positive medium.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable.
Degree to which impact can be managed	High.
Degree to which impact can be mitigated	Not applicable.

Proposed mitigation/enhancement	Prohibit agricultural expansion into conservation areas; restrict clearing; manage grazing; demarcate conservation portions; monitor owner compliance.
Residual impacts	Long-term reduction in risk of future disturbance to currently unmanaged sensitive areas.
Cumulative impacts post mitigation	Positive medium-high.
Significance rating after mitigation	Positive medium-high.

22. Improved conservation contribution to the broader Maalgate River and coastal catchment

Assessment criterion	Description
Nature of impact	Positive; protection and rehabilitation of terrestrial and aquatic features will support catchment functioning and downstream ecological condition.
Extent of impact	Local to catchment scale.
Consequence of impact	Medium positive, increasing where aquatic buffers and alien clearing improve hydrological function.
Probability of occurrence	Probable if conservation and stormwater measures are implemented.
Degree to which impact may cause irreplaceable loss of resources	None; the impact supports protection of downstream resources.
Degree to which impact can be reversed	Benefits may decline without ongoing management.
Indirect impacts	Reduced sediment loads, improved water quality, improved infiltration, better buffering of wetlands and watercourses, and reduced pressure on downstream estuarine systems.
Cumulative impact prior to mitigation	Positive medium.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable.
Degree to which impact can be managed	High through catchment-sensitive stormwater, aquatic buffers and rehabilitation.
Degree to which impact can be mitigated	Not applicable; enhancement is required.
Proposed mitigation/enhancement	Maintain natural drainage routes; protect buffers; implement erosion control; clear alien plants; reuse treated effluent responsibly; monitor watercourse condition.
Residual impacts	Improved catchment support function, subject to continued management.
Cumulative impacts post mitigation	Positive medium-high.
Significance rating after mitigation	Positive medium-high.

23. Improved agricultural management of currently farmed areas

Assessment criterion	Description
Nature of impact	Positive; the proposal will retain existing farmed and historically transformed areas in agricultural use, but within a more structured and managed agricultural framework.
Extent of impact	Site-specific, with local agricultural and land-use management benefits.
Consequence of impact	Medium positive, as approximately 264.0785 ha will remain available for agricultural use and will be managed more deliberately than under the current fragmented arrangement.
Probability of occurrence	Definite, if the proposed subdivision, agricultural zoning and HOA/farm management controls are approved and implemented.
Degree to which impact may cause irreplaceable loss of resources	None; the impact supports continued productive use of already farmed land and reduces pressure to expand agriculture into sensitive natural areas.
Degree to which impact can be reversed	Medium; agricultural management practices can change over time, but the retention of agricultural land use provides a long-term positive planning outcome.
Indirect impacts	Improved land stewardship, reduced ad hoc land-use change, better control of grazing/cultivation areas, improved soil and water management, and reduced pressure on conservation areas.
Cumulative impact prior to mitigation	Positive medium, as the current farming areas are already transformed but not necessarily managed under a coordinated estate-wide framework.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable; this positive impact should be retained and strengthened.
Degree to which impact can be managed	High, through HOA rules, farm management guidelines, water allocation controls, agricultural use restrictions and EMP requirements.
Degree to which impact can be mitigated	Not applicable; enhancement measures are required to secure the benefit.
Proposed mitigation/enhancement	Retain agricultural use on historically farmed/transformed land; prevent encroachment into conservation areas; manage grazing intensity; require soil conservation measures; promote water-efficient irrigation; maintain farm roads and drainage; encourage suitable small-scale agricultural activities.
Residual impacts	Long-term retention of agricultural productivity and rural land-use character on suitable portions of the site.

Cumulative impacts post mitigation	Positive medium-high, if coordinated agricultural management prevents further degradation and supports sustainable land use.
Significance rating after mitigation	Positive medium-high.

24. Diversification of agricultural activities on existing farmed land

Assessment criterion	Description
Nature of impact	Positive; the proposal allows existing farmed areas to shift from limited grazing and pasture use toward a more diverse pattern of lifestyle farming, grazing, planted pastures, orchards, food gardens, equestrian agriculture and selected high-value crops where suitable.
Extent of impact	Site-specific to local agricultural economy.
Consequence of impact	Medium positive, as diversification can improve agricultural resilience and reduce dependence on one marginal farming model.
Probability of occurrence	Probable, as individual agri-properties are intended to support varied small-scale agricultural uses within water and land capability constraints.
Degree to which impact may cause irreplaceable loss of resources	None, provided diversified agriculture remains within existing transformed areas and does not encroach into conservation or aquatic buffer areas.
Degree to which impact can be reversed	Medium-high; farming activities can be adapted or changed over time in response to market, water and soil constraints.
Indirect impacts	Increased agricultural activity, improved local livelihood opportunities, better utilisation of transformed land, and reduced risk of abandonment or unmanaged land degradation.
Cumulative impact prior to mitigation	Positive medium.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable; the diversification benefit should be encouraged.
Degree to which impact can be managed	High, through agricultural guidelines, water-use controls, municipal approvals and HOA oversight.
Degree to which impact can be mitigated	Not applicable; enhancement measures are required.
Proposed mitigation/enhancement	Encourage crops and activities suited to soil, slope and water availability; avoid high-input agriculture in unsuitable areas; promote orchards, vegetable gardens, grazing, planted pastures and equestrian uses only where appropriate; require erosion and nutrient-management controls.
Residual impacts	A more varied and resilient small-scale agricultural landscape.
Cumulative impacts post mitigation	Positive medium-high.
Significance rating after mitigation	Positive medium-high.

25. Improved water-use efficiency for agricultural activities

Assessment criterion	Description
Nature of impact	Positive; agricultural water use will be linked to verified existing lawful water-use entitlements, supplemented by on-farm storage and rainwater harvesting.
Extent of impact	Site-specific, with local catchment relevance.
Consequence of impact	Medium positive, as water use can be more efficiently allocated and monitored than under fragmented farm arrangements.
Probability of occurrence	Probable to definite, subject to WULA requirements and implementation of the proposed water-distribution system.
Degree to which impact may cause irreplaceable loss of resources	None, provided water use remains within authorised limits; the impact reduces unnecessary pressure on water resources.
Degree to which impact can be reversed	High; water allocations and irrigation practices can be adjusted if monitoring indicates a need.
Indirect impacts	Reduced pressure on municipal water, improved agricultural water security, better drought resilience and reduced over-abstraction risk.
Cumulative impact prior to mitigation	Positive medium.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable; water-efficiency benefits should be maximised.
Degree to which impact can be managed	High, through metering, allocation controls, rainwater harvesting, farm storage and WULA compliance.
Degree to which impact can be mitigated	Not applicable; enhancement and monitoring are required.
Proposed mitigation/enhancement	Meter water abstraction and distribution; retain use within verified lawful allocations; require rainwater harvesting; provide minimum on-farm storage; promote efficient irrigation systems; prohibit irrigation expansion beyond authorised limits.
Residual impacts	Continued agricultural water use, but within a more controlled and efficient management framework.
Cumulative impacts post mitigation	Positive medium-high.

Significance rating after mitigation	Positive medium-high.
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26. Protection of sensitive areas by containing agriculture within existing farmed areas

Assessment criterion	Description
Nature of impact	Positive; agricultural activity will be focused on existing farmed/transformed areas, reducing the likelihood of future expansion into conservation areas, wetlands, fynbos remnants or ecological corridors.
Extent of impact	Site-wide, with local biodiversity and aquatic benefits.
Consequence of impact	Medium-high positive, because the agricultural/conservation split provides a clearer boundary between productive land and sensitive areas.
Probability of occurrence	Probable to definite, subject to enforcement of zoning, no-go areas and HOA/EMPr controls.
Degree to which impact may cause irreplaceable loss of resources	None; this impact reduces the risk of irreplaceable loss of threatened vegetation, wetland function and ecological connectivity.
Degree to which impact can be reversed	Low in a positive sense if secured through zoning and title/HOA controls, because the protective land-use distinction should remain long term.
Indirect impacts	Reduced habitat fragmentation, lower livestock pressure on wetlands, reduced alien spread from disturbed areas, and stronger ecological corridor protection.
Cumulative impact prior to mitigation	Positive medium-high.
Significance rating prior to mitigation	Positive medium-high.
Degree to which impact can be avoided	Not applicable; this is a positive impact.
Degree to which impact can be managed	High, through zoning, demarcation, no-go controls and owner obligations.
Degree to which impact can be mitigated	Not applicable; enhancement measures should secure the benefit.
Proposed mitigation/enhancement	Clearly demarcate agricultural and conservation areas; split zoning to protect the conservation areas, prohibit cultivation, grazing expansion, structures and roads in conservation portions; require owner induction; monitor boundaries; enforce HOA and EMPr restrictions.
Residual impacts	Long-term containment of farming to suitable transformed areas, with reduced pressure on sensitive biodiversity and aquatic features.
Cumulative impacts post mitigation	Positive high.
Significance rating after mitigation	Positive high.

27. Increased agricultural employment and land-based stewardship

Assessment criterion	Description
Nature of impact	Positive; continued and diversified agricultural use can support employment, maintenance, small-scale production, equestrian activities and land stewardship on currently farmed areas.
Extent of impact	Site-specific to local community/economy.
Consequence of impact	Medium positive, with potential local livelihood benefits.
Probability of occurrence	Probable, especially where small-scale farming, equestrian uses, landscaping, maintenance and food gardens are implemented.
Degree to which impact may cause irreplaceable loss of resources	None; the impact supports productive use of transformed land and ongoing management presence.
Degree to which impact can be reversed	Medium; employment and stewardship benefits depend on continued active agricultural use and estate management.
Indirect impacts	Skills development, local procurement, household food production, improved land maintenance and stronger accountability for farmed areas.
Cumulative impact prior to mitigation	Positive medium.
Significance rating prior to mitigation	Positive medium.
Degree to which impact can be avoided	Not applicable; positive impact should be maximised.
Degree to which impact can be managed	High, through local employment commitments, farm management plans and HOA oversight.
Degree to which impact can be mitigated	Not applicable; enhancement measures are required.
Proposed mitigation/enhancement	Prioritise local labour where feasible; support small-scale farming and food gardens; encourage training in sustainable agriculture, alien clearing, erosion control and irrigation management; maintain agricultural use as an active component of the estate.
Residual impacts	Long-term positive contribution to rural livelihoods and active land stewardship.
Cumulative impacts post mitigation	Positive medium-high.
Significance rating after mitigation	Positive medium-high.

Not anticipated that there will be decommissioning of the proposed land uses – ongoing maintenance will be required.

DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

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.	
No.	Impact	Overall significance after mitigation / enhancement
1	Loss/disturbance of indigenous vegetation and Critically Endangered Garden Route Granite Fynbos	Medium – Low negative
2	Impacts on terrestrial biodiversity, CBAs/ESAs and ecological corridors	Low negative
3	Impacts on wetlands, seep areas, drainage lines and watercourses	Medium – Low negative
4	Wastewater and treated-effluent reuse impacts	Low-medium negative
5	Soil disturbance, erosion and sedimentation	Low-medium negative
6	Agricultural land-use change and agricultural potential	Low-medium negative, with positive socio-economic/agricultural diversification benefits
7	Faunal disturbance and habitat fragmentation	Low-medium negative
8	Visual, landscape character and sense-of-place impacts	Low-medium negative
9	Heritage, archaeological and burial-ground impacts	Low negative
10	Traffic, access and road-safety impacts	Low-medium negative
11	Construction-phase dust, noise, waste and nuisance impacts	Low negative
12	Socio-economic and community impacts	Positive medium-high negative
13	Long-term operational management and compliance risk	Low-medium negative
14	Water-use impacts associated with abstraction and storage	Low-medium negative
15	Formal conservation zoning of currently unmanaged natural areas	Positive high
16	Rehabilitation and ecological improvement of degraded natural areas	Positive medium-high
17	Alien invasive plant control within conservation areas	Positive high
18	Protection and management of CBAs, ESAs and ecological corridors	Positive high
19	Protection of wetlands, seep areas, drainage lines and watercourse buffers	Positive medium-high
20	Improved long-term environmental governance through HOA/EMPr management	Positive high
21	Reduced future disturbance compared with continued unconstrained agricultural use	Positive medium-high
22	Improved conservation contribution to the broader Maalgate River and coastal catchment	Positive medium-high

23	Improved agricultural management of currently farmed areas	Positive medium-high
24	Diversification of agricultural activities on existing farmed land	Positive medium-high
25	Improved water-use efficiency for agricultural activities	Positive medium-high
26	Protection of sensitive areas by containing agriculture within existing farmed areas	Positive high
27	Increased agricultural employment and land-based stewardship	Positive medium-high

The findings, recommendations and mitigation measures from the specialist assessments have materially shaped the proposal by changing it from a simple agricultural subdivision into a more constrained, conservation-led rural development model. In particular, the biodiversity, aquatic, heritage, agricultural, visual, engineering and socio-economic inputs have influenced the final layout, land-use split, servicing approach, road alignments, development footprints and long-term management requirements.

The biodiversity and terrestrial ecology findings identified areas of very high ecological sensitivity, including Critically Endangered Garden Route Granite Fynbos, natural fynbos, forest and thicket patches, CBAs, ESAs, ecological corridors and habitat for species of conservation concern. In response, the proposal directs more intensive use to historically transformed agricultural areas and places more sensitive natural areas under Open Space Zone III / Nature Conservation Area zoning, split zoning or low-impact eco-property management. The 2 000 m² development-footprint restriction on Eco Properties, together with no-go areas, alien invasive plant control and rehabilitation requirements, is a direct response to these findings.

The aquatic assessment identified wetlands, seep areas, drainage lines, watercourses and hydrological links to the Maalgate River and coastal receiving environment. These findings have influenced the layout by requiring aquatic buffers, avoidance of watercourses where possible, use of existing crossings, low-water crossing designs, retention of natural drainage patterns, grass swales, limited hard surfacing, stormwater infiltration measures and authorisation through the WULA process. The proposal therefore seeks to maintain hydrological functioning while limiting erosion, sedimentation and downstream water-quality impacts.

The agricultural assessments influenced the proposal by confirming that conventional large-scale commercial agriculture is limited by soil, water and viability constraints, but that continued small-scale and lifestyle agriculture remains appropriate on historically farmed and transformed areas. This has resulted in the retention of approximately 264 ha for agricultural use, while directing conservation zoning to areas that are less suitable for farming or more environmentally sensitive. The proposal therefore retains the agricultural character of the land while reducing pressure to expand farming into sensitive natural areas.

The heritage findings influenced the proposal by requiring the protection of culturally and historically significant resources. The historic Hoogekraal werf precinct is excluded from development, graded structures are to be retained, cemetery and burial-ground areas must be protected and access maintained, and chance-find procedures and monitoring must apply in archaeologically sensitive areas. These requirements have influenced both the layout and the operational management framework.

The visual and landscape recommendations have influenced the design response by requiring a low-density rural farmstead character rather than an urban or resort-style layout. Building footprints, massing, roof forms, colours, materials, landscaping, green buffers and indigenous planting are controlled through architectural and landscape guidelines. These measures are intended to reduce visual intrusion, protect rural coastal character and maintain the sense of place.

Engineering and servicing recommendations have influenced the proposal by prioritising existing infrastructure and disturbed corridors. Existing farm roads are largely retained, unnecessary roads are to be closed and rehabilitated, pipelines are located within road reserves where possible, access is taken from Morrison Road with recommended right-turn lanes, existing lawful water-use infrastructure is reused, rainwater harvesting is required, wastewater is treated on site, and treated effluent is reused for irrigation subject to monitoring.

The socio-economic findings have influenced the proposal by confirming the need to formalise the existing ESTA beneficiary community within the application area. This has resulted in the inclusion of a planned rural farmworker village for approximately 110 families, retention of the existing school, protection of cemetery areas, provision of communal agricultural and recreational areas, and opportunities for local employment through farming, construction, conservation management, maintenance and estate operations.

Overall, the specialist findings and mitigation measures have influenced the proposal by embedding avoidance, minimisation, rehabilitation and long-term management into the development design. The final proposal therefore reflects a constrained and managed rural development model that retains agriculture on suitable land, protects sensitive biodiversity and aquatic systems, safeguards heritage resources, limits visual impacts, optimises existing infrastructure, formalises existing community needs and secures implementation through the EMPr, WULA conditions, HOA rules, design guidelines and specialist recommendations.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr	
	<ul style="list-style-type: none"> • Demarcation before construction – All no-go areas must be clearly demarcated on site before any clearing, earthworks or construction begins, using visible fencing, danger tape, stakes or signage as appropriate. • No-go areas shown on approved plans – All conservation areas, aquatic buffers, heritage areas, cemeteries, high-sensitivity biodiversity areas and excluded properties must be clearly shown on the final SDP, biodiversity overlay map and construction drawings. 	

- **Environmental induction** – All contractors, subcontractors, machine operators and site staff must receive induction training explaining the location, purpose and restrictions applicable to no-go areas.
- **No unauthorised access** – No vehicles, machinery, workers, stockpiles, laydown areas, ablution facilities, construction camps or temporary roads may be placed within no-go areas.
- **No vegetation clearing** – Indigenous vegetation within no-go areas may not be cleared, trimmed, damaged or disturbed unless specifically authorised and supervised in accordance with specialist recommendations.
- **Aquatic buffer protection** – Wetlands, seeps, drainage lines, watercourses and their buffer areas must be avoided, except for authorised crossings or works assessed through the NEMA and WULA processes.
- **Controlled watercourse crossings** – Where crossings are unavoidable, works must be limited to the approved footprint, undertaken during suitable weather conditions, and designed to maintain surface and subsurface flow.
- **Erosion and sediment control** – Silt fences, berms, sediment traps, stabilised access points and prompt rehabilitation must be used near aquatic no-go areas to prevent sediment entering wetlands and watercourses.
- **Stormwater management** – Stormwater must be managed so that runoff is not concentrated into no-go areas; natural drainage patterns must be retained as far as possible.
- **No dumping or discharge** – No soil, rubble, wastewater, cement wash water, hydrocarbons, chemicals or litter may be disposed of in no-go areas or where runoff could enter them.
- **Alien invasive plant control** – Alien invasive species within and adjacent to no-go areas must be controlled through an approved alien clearing programme, with follow-up clearing and rehabilitation.
- **Rehabilitation of disturbed edges** – Any disturbed edges next to no-go areas must be stabilised, reshaped if necessary, and revegetated with locally appropriate indigenous species.
- **Livestock exclusion from sensitive areas** – Livestock must be excluded from wetlands, seep areas, drainage lines and sensitive conservation areas unless specialist-approved controlled grazing is specifically allowed.
- **Domestic animal control** – Dogs, cats and other domestic animals must be controlled to prevent disturbance to fauna, nesting areas, conservation areas and wetland habitats.
- **Fire management** – Firebreaks and fuel management must be planned so that they do not unnecessarily damage conservation no-go areas, wetlands, fynbos remnants or heritage resources.
- **Protection of conservation zoning** – Conservation-zoned areas and conservation portions of split-zoned properties must be managed for biodiversity protection, rehabilitation and ecological connectivity, not for additional development or agricultural expansion.
- **Eco-property footprint control** – Development on eco-properties must remain within the approved 2 000 m² development envelope; the balance of each property must be treated as a no-go area for further hard surfacing, clearing or built development.
- **Heritage exclusion zones** – The historic Hoogekraal werf precinct, burial grounds, cemeteries, graded structures and archaeologically sensitive areas must be avoided and protected during all phases.
- **Cemetery protection and access** – Cemetery and graveyard areas must be fenced or otherwise protected where required, with continued controlled access maintained for families and relevant community members.
- **Chance-find procedure** – If archaeological material, graves, human remains, artefacts or other heritage resources are uncovered, work must stop immediately and Heritage Western Cape must be notified.
- **Specialist supervision where required** – Works near aquatic, biodiversity or heritage no-go areas must be supervised by the ECO and, where required, the relevant specialist.
- **Clear signage** – No-go areas must be marked with clear signage indicating that the area is protected and that entry, clearing, dumping and disturbance are prohibited.
- **Monitoring by ECO** – The ECO must inspect no-go areas regularly during construction to confirm that demarcation remains intact and that no encroachment has occurred.
- **Incident reporting** – Any accidental disturbance, spill, unauthorised access or damage within a no-go area must be reported immediately and remedied in accordance with the EMPr and specialist advice.
- **Long-term HOA management** – After construction, the HOA / management body must remain responsible for enforcement of no-go restrictions, alien clearing, rehabilitation, access control, signage and monitoring.
- **Owner obligations** – Sale agreements, HOA rules and architectural/environmental guidelines must inform future owners of the no-go areas and the restrictions applicable to them.
- **No incremental encroachment** – Future owners may not extend gardens, fences, paddocks, trails, structures, roads or service infrastructure into no-go areas without the required environmental, water-use and planning approvals.
- **Trail control** – Hiking, horse-riding and recreational trails must avoid sensitive no-go areas unless specifically approved, and informal paths must be closed and rehabilitated.
- **Lighting control** – Lighting adjacent to conservation and aquatic no-go areas must be downward-facing, low-glare and limited to what is required for safety.
- **Ongoing rehabilitation monitoring** – Rehabilitated no-go edges and closed roads must be monitored until vegetation cover is established and erosion is controlled.
- **Conservation Management Plan (CMP)** – the development of a CMP for the farmstead area that covers the coordinated management of the conservation areas.

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.
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At this stage, no specialist recommendations have been identified that will not be followed. The proposed development has been refined to respond to the specialist findings and recommendations, including the biodiversity, aquatic, agricultural, heritage, visual, engineering and socio-economic inputs. The key recommendations have either been incorporated into the

preferred layout, servicing approach, mitigation measures, EMPr, WULA process, HOA management framework, architectural and landscape guidelines, or will be implemented as conditions of approval where required.

The proposal has specifically incorporated specialist recommendations relating to the avoidance and protection of sensitive biodiversity areas, conservation zoning, restriction of development footprints on Eco Properties, protection of wetlands and watercourses, use of aquatic buffers, low-water crossings, alien invasive plant control, rehabilitation, retention of agricultural use on suitable transformed areas, use of existing lawful water-use infrastructure, on-site wastewater treatment and treated-effluent monitoring, retention and protection of heritage resources, cemetery protection, chance-find procedures, visual buffering and rural architectural controls.

Any recommendations that still require confirmation, refinement or implementation through parallel processes will not be disregarded, but will be addressed through the relevant approval or management mechanism. This includes final WULA requirements, final Heritage Western Cape comment, authority comments, detailed engineering design, final biodiversity overlay mapping, HOA rules and the EMPr. Where final authority conditions differ from or add to specialist recommendations, the stricter or more protective requirement should be incorporated into the final EMPr and implemented by the applicant/HOA.

Should any specialist recommendation be found to be impractical or not feasible during detailed design or implementation, this must be clearly motivated in the BAR and EMPr, supported by written input from the relevant specialist where necessary, and must demonstrate that an equivalent or more protective mitigation measure will be implemented. At present, however, no known specialist recommendation is proposed to be excluded or ignored.

Specialist recommendation not followed	Reason / motivation
None identified at this stage.	All available specialist recommendations have either been incorporated into the proposal or will be addressed through the EMPr, WULA, heritage process, HOA rules, detailed engineering design, final authority conditions and long-term management obligations.
Any future recommendation found to be impractical during detailed design.	Must be justified in writing, confirmed with the relevant specialist where required, and replaced with an equivalent or more protective mitigation measure.

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

The proposed development will affect the surrounding community both positively and negatively, but the overall intention is to improve existing rural conditions while managing construction and operational impacts.

The main positive impact will be on the existing farmworker community, as approximately 110 ESTA beneficiary families will be accommodated in a planned rural village with formal housing, services, communal agricultural/recreational areas, and continued access to the existing school and cemetery areas. The proposal may also create local employment during construction and operation through farming, equestrian activities, estate maintenance, conservation management, alien clearing, landscaping, security and domestic services.

Potential negative impacts on the surrounding community include temporary construction-related dust, noise, traffic and disturbance, as well as longer-term changes to the rural character, visual setting and traffic movement in the area. These impacts have influenced the proposal by requiring a low-density rural layout, use of existing roads where possible, access upgrades on Morrison Road, architectural and landscape controls, on-site wastewater treatment, stormwater management, and long-term HOA/EMPr management.

Overall, the proposal is expected to bring social and economic benefits to the existing resident community and local area, while potential nuisance, visual, traffic and servicing impacts will need to be controlled through the mitigation measures, specialist recommendations and approval conditions.

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.

Climate change risks have been considered in the proposal because the site is located within a rural coastal catchment that is sensitive to changes in rainfall, storm intensity, water availability, fire risk, biodiversity resilience and downstream aquatic functioning.

The proposed activity may be influenced by climate change through more intense rainfall events, longer dry periods, increased pressure on water resources, higher erosion risk, increased wildfire risk, shifts in vegetation condition, and greater stress on wetlands, watercourses and the Maalgate River system.

These potential risks have influenced the proposal in the following ways:

- **Water security:** The proposal uses existing lawful water-use entitlements, existing abstraction and dam infrastructure, minimum on-farm storage and compulsory rainwater harvesting. This improves resilience during dry periods and reduces reliance on municipal bulk water.
- **Stormwater resilience:** The development retains existing catchment delineations and natural drainage patterns, uses grass swales, low-water crossings, limited hard surfaces and infiltration-based stormwater management. This helps accommodate more intense rainfall events without concentrating runoff or increasing erosion.

- Reduced hard surfacing: Eco-property development footprints are limited to 2 000 m² per farm, including buildings and hard surfaces. This maintains permeability, reduces runoff and supports groundwater recharge and natural hydrological functioning.
- Protection of wetlands and watercourses: Aquatic buffers, WULA authorisation, low-impact crossings, livestock restrictions, alien clearing and rehabilitation measures are included to maintain the ecological function of wetlands, seeps, drainage lines and watercourses under changing climatic conditions.
- Biodiversity resilience: Conservation zoning, split zoning, ecological corridor protection, rehabilitation and invasive alien plant control will help improve the resilience of remaining natural vegetation and habitat areas to climate-related stress.
- Fire management: The mix of rural residential, agricultural and conservation areas will require coordinated fire-risk management, including appropriate firebreak planning, alien vegetation control, emergency access, and HOA/EMPr-based operational controls.
- Wastewater and water-quality protection: On-site wastewater treatment, treated-effluent monitoring and irrigation reuse reduce the risk of uncontrolled discharge, which is particularly important during high-rainfall events or periods of reduced dilution in watercourses.
- Agricultural adaptation: The proposal retains agriculture on suitable transformed areas but allows more diversified small-scale and lifestyle farming, which is more adaptable to changing water availability, soil conditions and climate variability than reliance on a single conventional farming model.
- Long-term governance: The HOA, EMPr, WULA conditions, design guidelines and specialist recommendations provide a framework for ongoing monitoring, maintenance and adaptive management as climate risks change over time.

In summary, climate change has influenced the proposed activity by requiring a lower-impact and more resilient rural development model that protects water resources, maintains natural drainage, limits hard surfaces, conserves biodiversity, supports agricultural adaptation, and provides long-term management controls.

While climate-related risks cannot be eliminated, the proposal has addressed them through water efficiency, stormwater design, conservation zoning, rehabilitation, fire-risk management, on-site services and adaptive HOA/EMPr governance.

Summary of climate change mitigation measures

- Retain a low-density development form to limit land transformation, hard surfacing and infrastructure intensity.
- Limit Eco Property development footprints to 2 000 m² per farm, reducing runoff, heat absorption, vegetation loss and long-term disturbance.
- Retain existing drainage patterns and catchment delineations so that stormwater continues to move through the landscape naturally.
- Use grass swales, low-water crossings and infiltration-based stormwater controls to reduce erosion, peak runoff and downstream sedimentation.
- Require rainwater harvesting at all new dwellings to improve water resilience and reduce pressure on abstracted water.
- Use existing lawful water entitlements and existing abstraction/storage infrastructure rather than creating new water sources or relying on municipal bulk supply.
- Provide on-farm water storage to improve resilience during dry periods.
- Reuse treated effluent for irrigation to reduce freshwater demand and avoid unnecessary wastewater discharge.
- Treat wastewater on site and monitor effluent quality to protect groundwater, wetlands, watercourses and downstream receiving environments.
- Conserve and rehabilitate sensitive natural areas, including fynbos, wetlands, watercourses, ecological corridors and conservation-zoned areas, to improve ecosystem resilience.
- Implement alien invasive plant control, which assists with biodiversity recovery, water-resource protection and fire-risk reduction.
- Use indigenous and locally appropriate landscaping to reduce irrigation needs and support ecological resilience.
- Encourage solar PV and energy-efficient design to reduce reliance on grid electricity.
- Maintain gravel roads and rural-scale infrastructure to reduce hard surfacing and preserve permeability.
- Implement coordinated fire-risk management through alien clearing, appropriate firebreaks, emergency access and HOA/EMPr controls.
- Use HOA and EMPr governance for adaptive management, allowing stormwater, water use, fire management, rehabilitation and infrastructure maintenance to respond to changing climate risks over time.

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.
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No conflicting recommendations at this stage

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.
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The findings and recommendations of the different specialist studies have been integrated using the mitigation hierarchy, namely to first avoid impacts where possible, then minimise and manage unavoidable impacts, and finally rehabilitate disturbed areas and secure long-term management. The specialist inputs were not considered separately, but were combined to inform the preferred layout, zoning, servicing strategy, infrastructure design and EMPr requirements.

The biodiversity and terrestrial ecology findings identified Critically Endangered Garden Route Granite Fynbos, CBAs, ESAs, natural fynbos, forest/thicket habitat, ecological corridors and potential habitat for species of conservation concern. These findings were integrated into the layout by directing development toward historically transformed areas, placing sensitive areas under Open Space Zone III / Nature Conservation Area zoning or conservation portions of split-zoned properties, limiting Eco Property development footprints to 2 000 m², and requiring no-go areas, alien invasive plant control, rehabilitation and protection of remaining indigenous vegetation.

The aquatic specialist findings identified wetlands, seep areas, drainage lines, watercourses and hydrological links to the Maalgate River and downstream coastal environment. These recommendations have been integrated by retaining natural drainage patterns, using existing roads and crossings where possible, applying aquatic buffers, designing low-water crossings, placing pipelines within road reserves, limiting hard surfaces, requiring grass swales and infiltration-based stormwater controls, and ensuring that relevant water uses are assessed through the WULA process.

The agricultural and socio-economic findings were integrated by retaining the more suitable and historically farmed areas for continued agriculture, while recognising that conventional large-scale commercial agriculture is constrained by soil, water and viability limitations. This informed the retention of approximately 264 ha for agricultural use, the promotion of small-scale/lifestyle agriculture and equestrian uses, and the allocation of less suitable or more sensitive areas to conservation management.

The engineering and services recommendations were integrated by using existing lawful water-use infrastructure, existing dams, existing farm roads and disturbed corridors as far as possible. The preferred mitigation measures therefore include rainwater harvesting, on-farm storage, central filtration and treatment, on-site wastewater treatment for the farm village, treated-effluent reuse, effluent-quality monitoring, gravel roads, grass swales and HOA-managed infrastructure.

The heritage and visual findings were also incorporated into the mitigation approach. The historic Hoogekraal werf precinct is excluded from development, graded structures are to be retained, cemetery areas protected and access maintained, and chance-find procedures applied during earthworks. Visual mitigation has been integrated through a low-density rural farmstead layout, architectural guidelines, subdued materials, indigenous landscaping, visual buffers, limited building footprints and retention of rural coastal character.

The planning specialist captured the requirements for agriculture and conservation into the appropriate zonings.

Overall, the specialist recommendations have resulted in a more constrained and environmentally responsive proposal. The most appropriate mitigation measures are therefore those that secure the specialist-driven layout controls, protect no-go areas, retain and rehabilitate sensitive features, manage watercourses and stormwater, control wastewater risks, protect heritage resources, maintain agricultural use on suitable land, and ensure long-term implementation through the EMPr, WULA conditions, HOA rules, design guidelines and approval conditions.

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

The mitigation hierarchy has been applied by first avoiding sensitive environmental and heritage features wherever possible, including wetlands, watercourses, high-sensitivity biodiversity areas, conservation-worthy vegetation, ecological corridors, the historic werf precinct and cemetery areas.

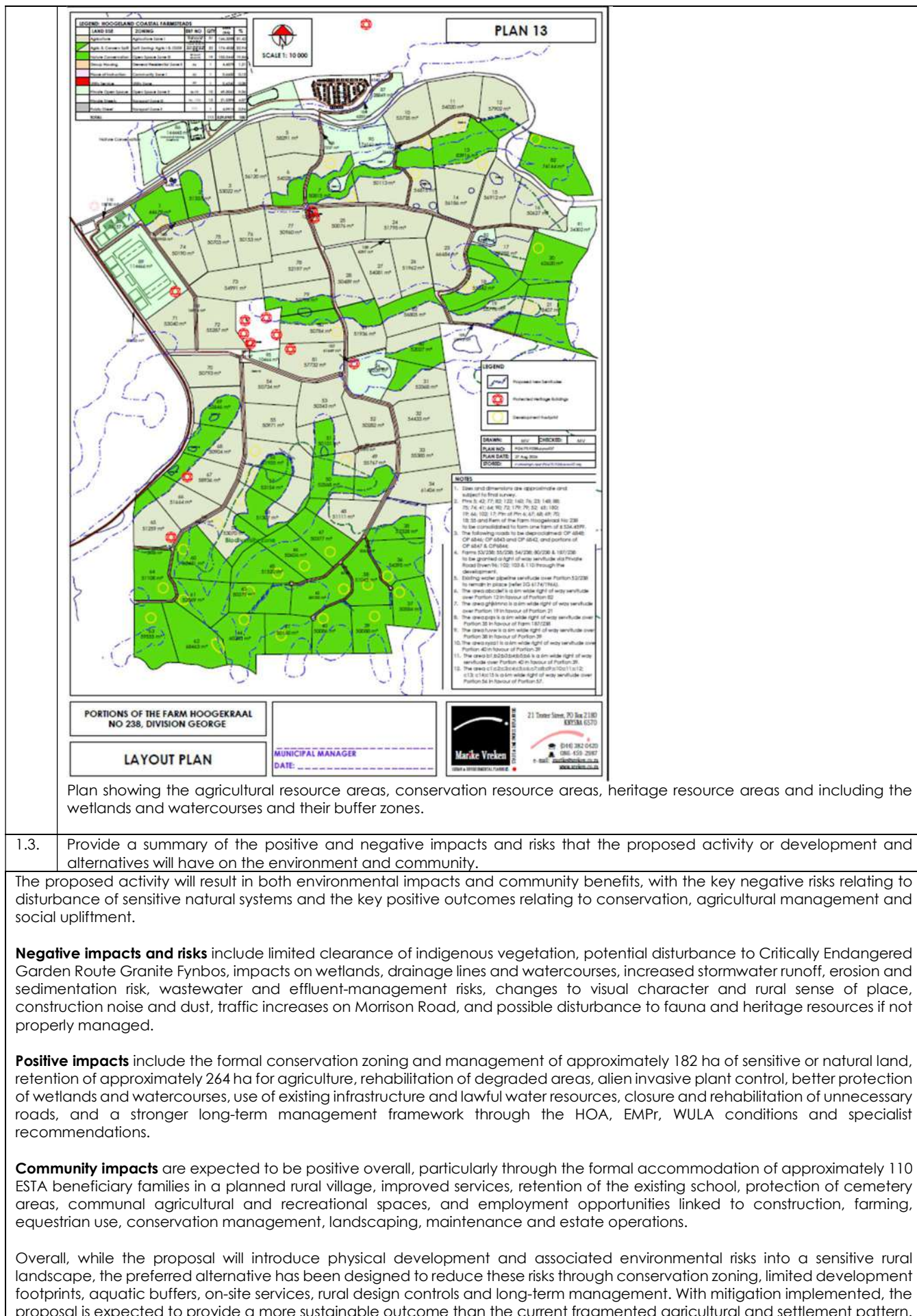
Where impacts could not be completely avoided, the proposal was minimised through a low-density rural layout, split zoning, conservation zoning, limited development footprints, use of existing roads, pipelines within road reserves, and retention of natural drainage patterns.

Unavoidable impacts will be mitigated and managed through the EMPr, WULA requirements, specialist recommendations, aquatic buffers, erosion and stormwater controls, alien invasive plant management, rehabilitation, effluent monitoring, heritage chance-find procedures, visual design guidelines and HOA management. Positive impacts are maximised by securing conservation areas, retaining agriculture on suitable land, formalising the ESTA village, protecting community and heritage resources, and improving long-term environmental governance.

Overall, the preferred alternative is considered the best practicable environmental option because it avoids the most sensitive areas, reduces unavoidable impacts to manageable levels, and creates long-term conservation, agricultural, social and infrastructure benefits compared with the no-go/status quo alternative.

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.
<p>The mitigation hierarchy has been used to identify the best practicable environmental option by first avoiding sensitive areas wherever possible, then reducing and managing unavoidable impacts, and finally securing rehabilitation and long-term environmental management.</p> <p>The preferred alternative has been developed through application of the mitigation hierarchy, namely avoidance, minimisation, rehabilitation and ongoing management. This process has ensured that the proposal is not simply based on cadastral or development objectives, but has been refined in response to the environmental, social, heritage, agricultural and engineering constraints identified by the specialist studies.</p> <p>Avoidance was applied first. The proposed development has been directed away from the most sensitive areas where feasible, including wetlands, watercourses, seep areas, drainage lines, high-sensitivity biodiversity areas, remaining natural vegetation, ecological corridors, heritage resources and burial grounds. Sensitive portions of the site have been allocated to Open Space Zone III / Nature Conservation Area or conservation components within split-zoned properties. The historic Hoogekraal werf precinct is excluded from development, and known cemetery areas are protected.</p> <p>Where impacts could not be completely avoided, the proposal was modified to minimise their extent and intensity. This includes limiting Eco Property development footprints to 2 000 m² per farm, using existing farm roads and disturbed corridors as far as possible, locating pipelines within road reserves, retaining natural drainage patterns, using gravel roads with grass swales, and designing low-water crossings where roads intersect drainage lines or seep areas. The development also avoids a high-density or resort-style layout and instead adopts a low-density rural agricultural and conservation-based form.</p> <p>Unavoidable impacts will be mitigated through specialist-recommended measures and approval conditions. These include aquatic buffers, WULA authorisation, stormwater controls, erosion and sediment management, alien invasive plant control, rehabilitation of disturbed areas, protection of indigenous vegetation, control of livestock access to wetlands and watercourses, effluent monitoring, no-go area demarcation, heritage chance-find procedures and construction-phase EMPr controls.</p> <p>Positive impacts are maximised by retaining approximately 264 ha in agricultural use, placing approximately 182 ha under conservation-oriented zoning or management, formalising the existing ESTA farmworker community into a planned rural village, retaining the existing school, protecting cemetery areas, using existing lawful water infrastructure, and establishing long-term HOA/EMPr governance for roads, services, conservation areas, stormwater, wastewater and rehabilitation.</p> <p>Through this process, the preferred alternative represents the best practicable environmental option because it provides a balanced outcome: it retains productive rural land use, protects and restores sensitive biodiversity and aquatic systems, addresses existing social and tenure obligations, optimises existing infrastructure, safeguards heritage resources, and reduces environmental impacts to manageable levels. The no-go alternative would avoid short-term construction impacts, but would not secure these long-term conservation, social, infrastructure and management benefits.</p>	
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)



Plan showing the agricultural resource areas, conservation resource areas, heritage resource areas and including the wetlands and watercourses and their buffer zones.

- 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.

The proposed activity will result in both environmental impacts and community benefits, with the key negative risks relating to disturbance of sensitive natural systems and the key positive outcomes relating to conservation, agricultural management and social upliftment.

Negative impacts and risks include limited clearance of indigenous vegetation, potential disturbance to Critically Endangered Garden Route Granite Fynbos, impacts on wetlands, drainage lines and watercourses, increased stormwater runoff, erosion and sedimentation risk, wastewater and effluent-management risks, changes to visual character and rural sense of place, construction noise and dust, traffic increases on Morrison Road, and possible disturbance to fauna and heritage resources if not properly managed.

Positive impacts include the formal conservation zoning and management of approximately 182 ha of sensitive or natural land, retention of approximately 264 ha for agriculture, rehabilitation of degraded areas, alien invasive plant control, better protection of wetlands and watercourses, use of existing infrastructure and lawful water resources, closure and rehabilitation of unnecessary roads, and a stronger long-term management framework through the HOA, EMPr, WULA conditions and specialist recommendations.

Community impacts are expected to be positive overall, particularly through the formal accommodation of approximately 110 ESTA beneficiary families in a planned rural village, improved services, retention of the existing school, protection of cemetery areas, communal agricultural and recreational spaces, and employment opportunities linked to construction, farming, equestrian use, conservation management, landscaping, maintenance and estate operations.

Overall, while the proposal will introduce physical development and associated environmental risks into a sensitive rural landscape, the preferred alternative has been designed to reduce these risks through conservation zoning, limited development footprints, aquatic buffers, on-site services, rural design controls and long-term management. With mitigation implemented, the proposal is expected to provide a more sustainable outcome than the current fragmented agricultural and settlement pattern.

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
Impact management outcomes for the proposed activity	
<ul style="list-style-type: none"> Sensitive biodiversity areas are avoided and protected All areas mapped or verified as high biodiversity sensitivity, including remaining indigenous vegetation, Critically Endangered Garden Route Granite Fynbos, CBAs, ESAs, forest/thicket patches and ecological corridors, must be retained, demarcated and managed as no-go or low-disturbance areas unless specifically authorised. Conservation areas are secured and actively managed Areas zoned or identified for Open Space Zone III / Nature Conservation Area and conservation portions of split-zoned properties must be managed for biodiversity protection, rehabilitation, ecological connectivity and alien invasive plant control. Development footprints are contained All buildings, hard surfaces, services and associated disturbance must remain within approved development envelopes. Eco Properties must be limited to the approved 2 000 m² developable area per farm, including all buildings and hard surfaces. Indigenous vegetation clearing is minimised and controlled No clearing may occur outside approved footprints. Clearing must be preceded by demarcation, ECO inspection and any required search-and-rescue or specialist input. Disturbed areas must be rehabilitated with locally appropriate indigenous species. Wetlands, seep areas, drainage lines and watercourses are protected Aquatic features and buffers must be treated as no-go areas, except for authorised crossings or infrastructure. Beds, banks, seepage areas and drainage features must not be altered without environmental and water-use authorisation. Hydrological functioning is maintained Existing drainage patterns, catchment delineations and overland flow routes must be retained as far as possible. Stormwater must be managed diffusely through grass swales, low-water crossings, infiltration measures, limited hard surfacing and erosion-control structures. Watercourse crossings are low-impact and authorised Existing crossings must be used where possible. Any new or upgraded crossings must be designed to maintain surface and subsurface flow, minimise erosion and sedimentation, and comply with the WULA and EMPr requirements. Water resources are used efficiently and lawfully Water abstraction and distribution must remain within verified lawful water-use entitlements and any WULA conditions. Rainwater harvesting and on-farm storage must be implemented to reduce pressure on the Maalgate River system and improve resilience. Wastewater is safely treated and reused The rural farmworker village package plant must be properly operated and maintained by the HOA or responsible management body. Treated effluent must comply with applicable quality standards, be monitored regularly, and be reused for irrigation only in accordance with approval conditions. Pollution of soil, groundwater and surface water is prevented No sewage, hydrocarbons, cement wash water, chemicals, waste, sediment-laden runoff or contaminated stormwater may enter wetlands, watercourses, drainage lines, groundwater or conservation areas. Soils are protected and erosion is prevented Earthworks must be limited to approved areas. Topsoil must be stripped, stockpiled and reused. Exposed soils, road edges, drainage areas and disturbed slopes must be stabilised and rehabilitated as soon as possible. Agricultural use is retained on suitable transformed land Agricultural activities must be directed to historically farmed or suitable areas and managed to prevent overgrazing, erosion, nutrient runoff, chemical pollution or encroachment into conservation areas and aquatic buffers. Faunal habitat and movement corridors are maintained Ecological corridors, wetland margins, drainage lines and natural vegetation patches must remain connected. Domestic animals, lighting, fencing, trail use and vehicle speeds must be controlled to reduce disturbance to fauna. Alien invasive plants are controlled An alien invasive plant management programme must be implemented across conservation areas, wetland/riparian areas, road reserves, disturbed areas and property edges, with follow-up clearing and rehabilitation. Heritage resources are protected The Hoogekraal werf precinct, graded structures, burial grounds, cemeteries and archaeologically sensitive areas must be avoided and protected. Any alterations to heritage structures must obtain the required approvals, and chance-find procedures must apply to all earthworks. Visual and landscape character is maintained Buildings, roads, utilities, communal facilities and landscaping must comply with the architectural, environmental and landscape guidelines. Development must retain a low-density rural agricultural character, use subdued materials and colours, and incorporate indigenous landscaping and visual buffers. Construction disturbance is minimised Construction noise, dust, traffic, waste, laydown areas, lighting, access and working hours must be managed to avoid unnecessary disturbance to existing residents, neighbouring properties, fauna, heritage areas and sensitive environmental features. 	

	<ul style="list-style-type: none"> • Traffic and access impacts are managed Access must be obtained from Morrison Road as approved, with required road safety upgrades implemented. Internal private roads must be maintained by the HOA, and servitude access rights must be protected. • Community and social outcomes are secured The farmworker village, school, cemeteries, communal agricultural areas and recreational spaces must be implemented and managed in a way that supports the existing ESTA beneficiary community and maintains access to important community and heritage resources. • Climate resilience is incorporated into long-term management The development must retain natural drainage, limit hard surfaces, harvest rainwater, reuse treated effluent, control alien plants, manage fire risk and protect ecological corridors to improve resilience to drought, intense rainfall, erosion and biodiversity stress. • Operational governance is effective and enforceable The HOA / management body must be responsible for implementing and enforcing the EMPr, WULA conditions, design guidelines, no-go areas, conservation management, wastewater operation, stormwater maintenance, alien clearing, rehabilitation and owner compliance. • Monitoring, reporting and corrective action are implemented The ECO and/or HOA must monitor compliance during construction and operation, keep records, report incidents, and implement corrective measures where non-compliance, erosion, pollution, alien regrowth, vegetation damage or encroachment into no-go areas occurs.
2.2.	<p>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.</p> <p>The following aspects are conditional to the findings of the EAP and specialist assessments and should be included as conditions of the Environmental Authorisation:</p> <ul style="list-style-type: none"> • Implementation of the EMPr The approved EMPr must be implemented for all phases of the development, including pre-construction, construction and operation. The EMPr must incorporate all relevant specialist mitigation measures, monitoring requirements, no-go areas, method statements and rehabilitation obligations. • Final layout must remain consistent with the assessed layout The development must be implemented substantially in accordance with the assessed site development plan, including the agricultural areas, conservation areas, split-zoned properties, eco-properties, rural farmworker village, school site, utility areas, roads and private open spaces. Any material layout change must be screened by the EAP and relevant specialists and, if required, submitted to the competent authority. • Conservation areas must be legally secured and managed All areas identified for Open Space Zone III / Nature Conservation Area, conservation portions of split-zoned properties and no-go areas must be retained for conservation, rehabilitation and low-impact management. These areas may not be cleared, cultivated, developed or used for infrastructure unless specifically authorised. • Eco-property development footprint restriction Development on each Eco Property must be limited to the approved 2 000 m² development envelope, including all buildings, hard surfaces, pools, patios and associated infrastructure. The driveway to the footprint from the internal road is to be limited in width to 3m. The remainder of each Eco Property must be retained as natural or rehabilitated landscape. • No unauthorised vegetation clearance Indigenous vegetation clearing must be limited to the authorised footprints only. No clearing may occur in conservation areas, aquatic buffers, ecological corridors or other demarcated no-go areas unless specifically authorised and supervised in terms of the EMPr. • Biodiversity management and rehabilitation A conservation management & rehabilitation plan must be implemented, including alien invasive plant control, protection of remaining indigenous vegetation, rehabilitation of disturbed areas, locally appropriate indigenous planting, follow-up maintenance and monitoring. • Protection of CBAs, ESAs and ecological corridors Development must not compromise the ecological functioning of mapped or verified CBAs, ESAs, threatened vegetation remnants, ecological corridors, forest/thicket patches or habitat for species of conservation concern. Corridors must remain permeable and free of unnecessary fencing, lighting, clearing and disturbance. • Aquatic buffers and watercourse protection Wetlands, seep areas, drainage lines, watercourses and associated buffers must be treated as no-go areas, except for approved crossings and infrastructure. Buffers must be clearly mapped, demarcated and managed in accordance with the aquatic specialist recommendations and WULA conditions. • Watercourse crossings and stormwater structures Any new or upgraded watercourse or drainage-line crossing must be limited to the approved footprint, designed to maintain surface and subsurface flow, minimise erosion and sedimentation, and comply with the EMPr and WULA requirements. • National Water Act authorisation The applicant must obtain all required water-use authorisations before undertaking any listed water uses, including impeding or diverting flow, altering beds or banks, road crossings, and irrigation with treated effluent. The conditions of the water-use authorisation must be incorporated into the EMPr. • Water use must remain within lawful allocations Water abstraction and distribution must remain within the verified existing lawful water-use entitlement and any authorisation limits. Metering, monitoring and allocation controls must be implemented by the responsible management body.

- **Rainwater harvesting and water storage**
Rainwater harvesting must be implemented for all new dwellings, and each farm must provide the required minimum on-site water storage. Water-efficiency measures must be included in the design and operation of the development.
- **Wastewater treatment and effluent reuse**
The rural farmworker village must be serviced by the approved package wastewater treatment plant. Treated effluent may only be reused for irrigation in accordance with the relevant authorisations, quality standards and monitoring requirements. Direct discharge to wetlands, watercourses or drainage lines must not occur.
- **Monitoring and maintenance of sanitation systems**
The HOA or responsible management body must operate, maintain and monitor the village wastewater treatment plant. Individual farms must use municipal-approved on-site sanitation systems, and these must be designed, installed and maintained to prevent groundwater, soil or surface-water contamination.
- **Stormwater management**
The development must retain existing catchment delineations and natural drainage patterns as far as possible. Stormwater must be managed through grass swales, low-water crossings, infiltration-based measures, rainwater harvesting, limited hard surfaces and erosion control.
- **Erosion and sediment control**
Erosion-control measures must be implemented during construction and operation, particularly near roads, drainage lines, wetlands, disturbed slopes and exposed soils. Disturbed areas must be stabilised and rehabilitated as soon as possible.
- **Road layout and access conditions**
Existing farm roads must be used where feasible, unnecessary roads must be closed and rehabilitated, and all internal roads must be maintained by the HOA. Access must be taken from Morrison Road, and the required right-turn lanes and access upgrades recommended by the traffic assessment must be implemented at the developer's cost.
- **Services within existing disturbed corridors**
Water pipelines and other linear service infrastructure must be located within road reserves or existing disturbed corridors as far as possible to avoid additional disturbance to conservation areas, wetlands, watercourses and agricultural land.
- **Heritage resources must be protected**
The historic Hoogekraal werf precinct must remain excluded from the development footprint. Graded heritage structures must be retained, burial grounds and cemeteries must be protected and access maintained. Any alterations to heritage structures must obtain the necessary approval from Heritage Western Cape.
- **Chance-find procedure**
A heritage chance-find protocol must be included in the EMPr. If archaeological material, graves, human remains, artefacts or other heritage resources are uncovered, work must stop immediately in the affected area and Heritage Western Cape must be notified.
- **Sea-cut caves / coastal heritage sensitivity**
If required by the heritage authority, the recommended survey of sea-cut caves and coastal cliff features must be completed before any activity that could affect these areas. Any additional conservation management requirements must be incorporated into the EMPr.
- **Visual and landscape controls**
The architectural, environmental and landscape guidelines must be binding on all owners. Buildings must retain a rural agricultural character, use subdued non-reflective materials and colours, minimise earthworks, and include indigenous landscaping and visual buffers where required.
- **N2 / Morrison Road visual buffering**
Indigenous green buffers and landscape screening must be implemented where required by the visual specialist, especially along visually exposed edges such as the N2, Morrison Road and sensitive viewpoints.
- **Faunal protection**
The EMPr must include measures to reduce faunal disturbance, including speed control, domestic animal control, sensitive lighting design, protection of habitat corridors, no hunting or trapping, and management of trails and fencing to avoid unnecessary barriers to movement.
- **Agricultural management controls**
Agricultural activity must be directed to suitable and historically transformed areas. Grazing, cultivation, irrigation, fertiliser use and livestock access must be managed to avoid erosion, nutrient runoff, overgrazing and encroachment into conservation areas or aquatic buffers.
- **Fire management**
A fire-management approach must be implemented, including alien clearing, emergency access, appropriate firebreak planning and coordination between the HOA, landowners and relevant fire authorities. Firebreaks must avoid unnecessary damage to sensitive biodiversity and aquatic areas.
- **Construction-phase controls**
Construction activities must be managed to control dust, noise, traffic, waste, spills, cement wash water, hazardous materials, working hours, laydown areas and contractor access. No construction camp, stockpile or temporary works may be located in no-go areas.
- **Appointment of ECO**
An independent ECO must be appointed before construction starts to monitor compliance with the EMPr, specialist recommendations, no-go areas, rehabilitation requirements and authorisation conditions.
- **Specialist input during implementation**
Where works occur near sensitive biodiversity, aquatic or heritage areas, the relevant specialist must be consulted or appointed to advise on demarcation, method statements, rehabilitation, monitoring or corrective action.
- **HOA / management body obligations**

The HOA or management body must be established and must be legally responsible for shared infrastructure, private roads, wastewater treatment, stormwater systems, conservation areas, open spaces, alien clearing, rehabilitation, design controls, monitoring and enforcement of owner compliance.

- **Conditions must be carried into land-use approvals and owner rules**

Environmental obligations must be included in the HOA constitution, property rules, design guidelines, sale agreements, title conditions or other binding mechanisms so that future owners are aware of, and bound by, the environmental restrictions.

- **Monitoring, reporting and corrective action**

The applicant/HOA must keep records of compliance monitoring, water use, effluent quality, alien clearing, rehabilitation, incidents and corrective actions. Any non-compliance, pollution event, unauthorised clearing or encroachment into no-go areas must be reported and remedied immediately.

- **Authority comments and permits must be complied with**

Final comments and conditions from Heritage Western Cape, DWS, CapeNature, George Municipality, WCG Transport and any other relevant authority must be incorporated into the final EMPr and complied with before and during implementation.

- **No commencement before required approvals**

No listed activity may commence until Environmental Authorisation has been granted, the EMPr is approved, and all other required permits, licences, service confirmations, land-use approvals and water-use authorisations relevant to that activity are in place.

Terrestrial biodiversity specialist specifically required the following mitigation measures:

- **Use sensitive biodiversity receptors as exclusion zones** during project design.
- **Include buffer zones around sensitive habitats** where appropriate, depending on the nature of proposed activities.
- **Avoid very high sensitivity areas**, especially:
 - Critical Biodiversity Areas (CBAs);
 - natural fynbos, forest, thicket and ecotone habitats;
 - habitats likely to support threatened plant and animal Species of Conservation Concern.
- **Adjust the development layout** to avoid CBAs and known or likely habitat of threatened species.
- **Minimise soil disturbance, runoff and vegetation clearing**, especially within or near sensitive habitat buffers.
- **Apply construction best-practice measures** to limit disturbance during implementation.
- **Develop and implement an Alien Invasive Species Management Plan** both before and after construction.
- **Rehabilitate disturbed areas** through phased ecological restoration.
- **Use indigenous/native species for replanting** in rehabilitation areas.
- **Implement erosion control measures** in disturbed or vulnerable areas.
- **Monitor rehabilitation and mitigation outcomes** over the long term.
- **Apply adaptive management**, using monitoring results to adjust management actions where required.
- **Undertake detailed field surveys once a draft layout is available**, especially in proposed infrastructure footprints within natural areas.
- **Search suitable habitat for threatened plant species**, even where no infrastructure is proposed, to inform broader ecological management.
- **Collect baseline data across all main habitat types** — forest, thicket, fynbos and secondary vegetation.
- **Use camera traps to confirm key animal SCC**, particularly Knysna Warbler and Sensitive species 13 in thicket/forest habitat.

Overall, the report prioritises **avoidance first**, then **minimisation**, followed by **rehabilitation/restoration and monitoring** where disturbance cannot be fully avoided.

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.
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Based on the assessment and the specialist findings, the proposal can be **supported for authorisation**, provided that the Environmental Authorisation is made subject to strict conditions securing the assessed layout, the EMPr, specialist mitigation, WULA requirements, heritage controls and long-term HOA/management obligations.

It is the EAP's reasoned opinion that the proposed Hoogeland Coastal Farmsteads development should be authorised, subject to the implementation of the mitigation measures and conditions identified in the BAR, specialist assessments and EMPr. The proposal represents a lower-impact and more balanced alternative to both the previous intensive Lagoon Bay-type development and the no-go/status quo alternative. It retains a substantial agricultural component, secures conservation management over sensitive areas, formalises accommodation for existing ESTA beneficiary families, protects community and heritage resources, and makes use of existing infrastructure and lawful water-use entitlements where possible.

The assessment has identified potential negative impacts associated with indigenous vegetation clearance, disturbance of Critically Endangered Garden Route Granite Fynbos, impacts on CBAs/ESAs, wetlands and watercourses, stormwater runoff, erosion, wastewater management, traffic, visual change, heritage sensitivity and construction-phase disturbance. However, these impacts are capable of being avoided, reduced and managed through the preferred layout, conservation zoning, development footprint controls, aquatic buffers, use of existing roads and service corridors, low-water crossings, on-site wastewater treatment, treated-effluent monitoring, alien invasive plant control, rehabilitation, architectural guidelines, heritage protection measures and long-term HOA/EMPr governance.

Importantly, the proposal also provides positive environmental and social outcomes. Approximately 182.3239 ha will be placed under conservation-oriented zoning or management, approximately 264.0785 ha will remain available for agriculture, and the existing farmworker community will be accommodated in a planned rural village with formal services and communal spaces. The no-go alternative would avoid short-term construction impacts, but would not resolve the current fragmented cadastral pattern, scattered ESTA occupation, limited conservation protection, ad hoc servicing, road/access complexities or lack of coordinated long-term environmental management.

On balance, the preferred alternative is considered to represent the best practicable environmental option for the site, provided the authorisation includes enforceable conditions to ensure that the mitigation hierarchy is implemented and that the environmental, social and heritage benefits are secured over the long term.

Recommended conditions of authorisation

- The development must be implemented substantially in accordance with the assessed and approved site development plan, including the agricultural areas, conservation areas, split-zoned portions, Eco Property development envelopes, rural farmworker village, school site, utility areas, private open spaces and road layout.
- The approved EMPr must be implemented for all phases of the development and must include all specialist mitigation measures, no-go areas, rehabilitation requirements, monitoring obligations and method statements.
- An independent ECO must be appointed before commencement of construction and must monitor compliance with the Environmental Authorisation, EMPr and specialist requirements.
- No development, clearing, earthworks, stockpiling, laydown areas or construction access may occur within demarcated no-go areas.
- All Open Space Zone III / Nature Conservation Area portions and conservation portions of split-zoned properties must be retained and managed for biodiversity protection, rehabilitation, alien invasive plant control and ecological connectivity.
- Eco Properties must be limited to the approved 2 000 m² developable area per farm, including all buildings, hard surfaces, patios, pools and associated infrastructure. Driveways to the footprint are to be limited to 3m width. No fencing beyond the footprint.
- Indigenous vegetation clearing must be limited to the authorised footprint only, and no clearing may occur in conservation areas, aquatic buffers or ecological corridors unless specifically authorised.
- A biodiversity management and rehabilitation plan must be implemented, including alien invasive plant control, locally appropriate indigenous revegetation, monitoring and follow-up maintenance.
- Wetlands, seep areas, drainage lines, watercourses and associated buffers must be protected and treated as no-go areas, except for authorised crossings or infrastructure.
- All watercourse crossings and stormwater structures must be designed to maintain surface and subsurface flow, minimise erosion and sedimentation, and comply with the aquatic specialist recommendations.
- All required authorisations in terms of the National Water Act must be obtained before any relevant water uses commence, including abstraction, storage, impeding or diverting flow, altering beds or banks, watercourse crossings and irrigation with treated effluent.
- Water abstraction and distribution must remain within verified lawful water-use entitlements and any WULA conditions, with metering and monitoring implemented.
- Rainwater harvesting and on-farm water storage must be implemented as part of the water-efficiency measures.
- The rural farmworker village must be serviced by the approved package wastewater treatment plant, operated and maintained by the HOA or responsible management body.
- Treated effluent may only be reused for irrigation in accordance with the relevant authorisations and quality standards, and must be monitored regularly.
- Direct discharge of untreated or inadequately treated wastewater to wetlands, drainage lines, watercourses or the Maalgate River system must be prohibited.
- Stormwater must be managed through retention of natural drainage patterns, grass swales, low-water crossings, limited hard surfacing, rainwater harvesting and erosion-control measures.
- Existing farm roads must be used where feasible; unnecessary roads must be closed and rehabilitated; and all internal roads must be maintained by the HOA.
- The required Morrison Road access upgrades, including dedicated right-turn lanes where recommended by the Traffic Impact Assessment, must be implemented at the developer's cost before occupation or as otherwise agreed with the roads authority.
- Water pipelines and other linear services must be located within road reserves or existing disturbed corridors as far as possible.
- The historic Hoogekraal werf precinct must remain excluded from development.
- All graded structures on the properties must be retained, and cemetery/burial-ground areas must be protected with continued access maintained.
- Any alteration to heritage structures must require the necessary Heritage Western Cape approval.
- A heritage chance-find protocol must be implemented during all earthworks, and work must stop immediately if archaeological material, graves, human remains or heritage artefacts are uncovered.
- Architectural, environmental and landscape guidelines must be binding on all owners and must require low-density rural design, subdued colours, non-reflective materials, indigenous landscaping, visual buffering and limited earthworks.
- Faunal protection measures must be implemented, including domestic animal control, sensitive lighting, speed controls, protection of corridors, and prohibition of hunting, trapping or collection of fauna.
- Agricultural activities must be confined to suitable agricultural areas and managed to prevent overgrazing, erosion, nutrient runoff, chemical pollution and encroachment into conservation areas or aquatic buffers.

	<ul style="list-style-type: none"> • A fire-management approach must be implemented, including alien clearing, emergency access, appropriate firebreak planning and coordination with relevant fire authorities. • The existing Hoogekraal Primary School must be retained and formalised as part of the approved layout. • The rural farmworker village for the existing ESTA beneficiary families must be implemented in accordance with the approved layout and service arrangements. • The HOA / management body must be established before transfer or occupation of properties and must be legally responsible for shared infrastructure, private roads, stormwater systems, wastewater treatment, conservation areas, open spaces, rehabilitation, alien clearing, monitoring and enforcement of owner compliance. • Environmental obligations must be included in HOA rules, sale agreements, title conditions or other binding mechanisms applicable to future owners. • Final comments and conditions from Heritage Western Cape, DWS, CapeNature, George Municipality, WCG Transport and any other relevant authority must be incorporated into the final EMPr and complied with. • No listed activity may commence until Environmental Authorisation has been granted and all other required permits, licences, land-use approvals and water-use authorisations relevant to that activity are in place.
2.4.	<p>Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.</p>
	<p>The assessment and proposed mitigation measures are based on the information available at the time of compiling the BAR, including the preferred layout, planning application, engineering inputs, specialist assessments, desktop datasets, site verification and public/authority inputs received to date. While the available information is considered sufficient to inform the assessment and reasoned opinion, the following assumptions, uncertainties and gaps in knowledge are relevant and must be recognised.</p> <p>Specialist findings through the pre-application and application phase will still inform the proposed layout.</p> <p>HWC comment on the HIA will need to be included into the SDP and EMPr</p> <p>BOCMA comment on the WULA will need to inform the SDP and management.</p> <p>DEADP authority comments will inform the SDP and process going forwards.</p> <p>Assumptions</p> <ul style="list-style-type: none"> • The assessed layout, including the agricultural portions, conservation areas, split-zoned properties, Eco Property development envelopes, rural farmworker village, school site, roads, utilities and open spaces, will not materially change without further EAP and specialist review. • The proposed development will be implemented substantially in accordance with the approved SDP, EMPr, specialist recommendations, HOA rules, architectural/landscape guidelines and authorisation conditions. • The existing lawful water uses verified through the NWA process are available for the proposed development and will be used within the verified and authorised limits. • The WULA process will confirm the acceptability of the water uses required for abstraction, storage, crossings, stormwater infrastructure and treated-effluent irrigation. • Wastewater treatment systems, including the village package plant and individual on-site systems, will be correctly designed, approved, operated, monitored and maintained. • Conservation areas, no-go areas, aquatic buffers, heritage resources and development envelopes will be legally secured and enforceable through approval conditions, HOA rules, title conditions or similar mechanisms. • Existing farmworker families with ESTA tenure rights will be accommodated in the proposed rural village as described, and the existing school and cemetery areas will be retained and protected. • Future owners will comply with building, agricultural, environmental, water-use, heritage and HOA requirements. <p>Uncertainties</p> <ul style="list-style-type: none"> • Final comments and conditions from relevant authorities, including DWS, Heritage Western Cape, CapeNature, George Municipality and roads authorities, may require refinement of mitigation measures or management obligations. • The final WULA conditions may affect the detailed design and operation of water abstraction, storage, road crossings, stormwater systems and treated-effluent reuse. • The precise extent and condition of some aquatic features, seep areas, drainage lines and buffers may require confirmation during detailed design and before construction. • Seasonal variation may affect the visibility and detectability of some plant species, wetland indicators and fauna, particularly species of conservation concern. • The actual extent of indigenous vegetation clearance will depend on final micro-siting of buildings, roads, services and construction working areas. • The performance of rehabilitation, alien invasive plant control and ecological restoration will depend on long-term funding, follow-up maintenance, weather conditions and owner/HOA compliance. • Long-term agricultural use of individual properties may vary depending on owner choices, water availability, soil suitability and economic conditions. • The operational performance of on-site sanitation and treated-effluent reuse systems will depend on correct maintenance and monitoring. • Visual impacts will vary depending on final building design, material choices, landscaping success and the timing of vegetation establishment.

- Climate change may increase uncertainty regarding rainfall intensity, drought frequency, fire risk, water availability, erosion and the resilience of wetland, watercourse and biodiversity systems.

Gaps in knowledge

- Final detailed engineering designs for all roads, crossings, water infrastructure, stormwater systems, wastewater infrastructure and service routes still need to be completed.
- Final confirmation of all linear infrastructure footprints, construction working areas, laydown areas and temporary access routes may still be required.
- Final mapped no-go areas, aquatic buffers, conservation management areas and development envelopes must be included on the approved SDP and biodiversity overlay map.
- Final HWC comment and any required additional heritage work, including any further assessment of sea-cut caves or archaeologically sensitive coastal/cliff areas, must still be confirmed where applicable.
- Final DWS/WULA requirements must still be incorporated into the EMPr once issued.
- Detailed owner-level farm management plans may still be required to guide grazing, cultivation, irrigation, fertiliser use, livestock control and soil conservation.
- The final alien invasive plant management and rehabilitation programme may require further site-specific detail, including priorities, phasing, methods, monitoring and follow-up responsibilities.
- The final operational governance arrangements for the HOA / management body, including monitoring, enforcement, funding and reporting mechanisms, must be secured before implementation.
- The final list of participating landowners, servitude arrangements and access rights must be confirmed in the planning and legal approvals.
- Public participation and authority review may identify additional issues that must be addressed before final decision-making.

Implications for mitigation and decision-making

None of the identified assumptions, uncertainties or gaps are considered fatal to the assessment, provided they are addressed through the final EMPr, specialist input, detailed design, authority conditions and approval processes. The mitigation measures proposed are therefore precautionary and adaptive. They rely on securing the approved layout, avoiding sensitive areas, limiting development footprints, obtaining all required water-use and heritage approvals, implementing construction and operational monitoring, and ensuring long-term HOA/EMPr compliance. Where uncertainty remains, the more conservative or environmentally protective approach should be applied.

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.
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EA should be valid for the duration of the project

Commencement within 2 years of the EA being issued.

10 years for all services to be implemented and rehabilitation completed.

Homes within the disturbance footprints to be constructed and rehabilitation completed within 10 years of the date of the EA.

Operational phase management to be covered by the CMP& OEMP

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.

Water demand has been specifically considered in the planning of the Hoogeland Coastal Farmsteads development. The existing farms have an existing lawful water-use entitlement of approximately **2 054 kL/day**, while the estimated total water demand for the proposed development is approximately **783 kL/day**. The proposed demand is therefore substantially below the verified lawful entitlement, indicating that the development can be serviced within the existing lawful water-resource allocation, subject to the requirements of the National Water Act process and any Water Use Licence conditions.

The proposal improves water-demand management by making use of the existing abstraction infrastructure from the Maalgate River and the existing central dam infrastructure, rather than creating a new water source or relying on municipal bulk water supply. Water will be abstracted within the verified lawful use, pumped to an existing holding dam, and then transferred to a central treatment, filtration and distribution point. Filtered water will be distributed to the individual farms, while water supplied to the farmworker village will be further treated to potable standards.

Each 5 ha farm will receive a controlled agricultural water allocation, currently proposed as a minimum of **7 kL/day per farm**, and each farm must provide at least **10 kL of on-site water storage**. This allows water use to be managed at farm level, reduces peak demand, and improves climate resilience during dry periods. Individual farm owners will also be required to implement **rainwater harvesting**, which will supplement the allocated water supply, reduce pressure on abstracted water, and reduce direct roof runoff into the stormwater system.

Climate resilience has also been considered through the stormwater design. The proposal retains the existing catchment delineations and natural drainage patterns, so that stormwater continues to move through the landscape toward existing drainage lines, the Maalgate River and the ocean. Hardened surfaces will be limited, particularly on Eco Properties where development is restricted to **2 000 m² per farm**, representing only approximately **4% of a 5 ha property**. Gravel roads, grass swales, low-water crossings and infiltration-based stormwater measures will reduce concentrated runoff, erosion and sedimentation during more intense rainfall events.

Water recycling is addressed through the proposed wastewater strategy. The rural farmworker village will be serviced by an on-site package sewage treatment plant. Sewage will be treated to the required standard to allow the treated sewage effluent to be reused for irrigation of general or communal areas under the management of the HOA. Treated effluent may be stored in a reservoir or off-channel dam before reuse, allowing irrigation to be managed according to demand and seasonal conditions. Regular effluent-quality monitoring will be required to ensure that treated effluent complies with applicable standards and does not pose a risk to groundwater, soils, wetlands, watercourses or downstream receiving environments.

Individual farms will manage sewage on site through approved systems such as septic tanks and soakaways, conservancy tanks, artificial wetland/bio-filtration systems or mini-package plants, as agreed with the local authority. The existing scattered septic tank systems associated with older structures are expected to be decommissioned over time as old structures are demolished and new homes are constructed. This will reduce the number of unmanaged or ageing sanitation points across the site.

The proposal also supports climate resilience by encouraging solar PV, passive design, indigenous landscaping, alien invasive plant control, retention of wetlands and watercourses, and rehabilitation of conservation areas. These measures reduce long-term resource demand, improve catchment functioning, support infiltration, reduce fire and erosion risks, and improve the resilience of biodiversity and agricultural areas under changing climate conditions.

In summary, water demand and climate resilience have been addressed by keeping total demand below the existing lawful entitlement, using existing water infrastructure, controlling farm-level allocations, requiring rainwater harvesting and on-site storage, limiting hardened surfaces, retaining natural drainage patterns, using low-impact stormwater systems, treating wastewater on site, reusing treated effluent for irrigation, monitoring effluent quality, and managing services through the HOA and WULA/EMPr requirements. These measures reduce water demand, improve recycling and provide a more resilient rural servicing model for the proposed development.

4. Waste

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

The waste management approach should follow the waste hierarchy by prioritising **avoidance and reduction**, then **reuse**, then **recycling**, with disposal to landfill used only as a last resort.

Reduce

- Construction materials must be ordered accurately to avoid excess, off-cuts and unnecessary packaging.
- Existing roads, disturbed areas and service corridors must be reused as far as possible to reduce clearing, excavation and construction waste.
- Contractors must minimise waste generation through good housekeeping, careful storage of materials and prevention of damage to reusable materials.
- Bulk purchasing and returnable packaging should be used where feasible to reduce packaging waste.
- Soil disturbance must be limited to approved footprints so that unnecessary spoil generation is avoided.
- Hazardous substances, fuels and chemicals must be stored and handled carefully to prevent contaminated waste and spill clean-up materials.
- Operational waste from farms, the rural village, communal facilities and HOA-managed areas must be minimised through owner education and estate rules.

Reuse

- Topsoil stripped from development areas must be stockpiled separately and reused for rehabilitation, landscaping and stabilisation.
- Clean excavated material should be reused on site for backfilling, road shaping, erosion repair or landscaping where suitable.
- Existing road material should be reused during road upgrades where technically feasible.
- Demolition material from redundant structures should be reused where safe and appropriate, or made available for beneficial reuse.
- Treated sewage effluent from the farmworker village package plant must be reused for irrigation of communal or general areas, subject to quality monitoring and authorisation conditions.
- Cleared alien plant biomass may be chipped and reused as mulch where appropriate, provided this will not spread invasive seed or plant material.
- Organic garden and agricultural waste should be composted where feasible and reused in gardens, orchards, food gardens or rehabilitation areas.

Recycle

- Separate waste streams must be provided during construction and operation for recyclable materials such as paper, cardboard, glass, cans, plastics, scrap metal and clean timber.

- Contractors must use appointed recycling service providers where available and keep records of waste removed from site.
- The rural village, communal facilities and HOA-managed areas should include clearly marked recycling collection points.
- Building rubble that cannot be reused on site should be sent to an approved recycling facility where available.
- Used oil, batteries, light bulbs, electronic waste, paint containers and other hazardous or special wastes must be separated and disposed of through approved recycling or hazardous-waste channels.
- Agricultural waste such as fertiliser bags, chemical containers, irrigation piping and packaging must be collected separately and managed through appropriate supplier return or recycling programmes where available.

Disposal and control measures

- Only waste that cannot be reduced, reused or recycled may be disposed of at a licensed municipal landfill or approved waste facility.
- No waste may be buried, burnt or dumped on the farms, in conservation areas, wetlands, watercourses, drainage lines, buffers or road reserves.
- Waste storage areas must be secure, weatherproof where necessary, and located outside no-go areas and away from watercourses.
- Waste bins must be animal-proof and collected regularly to prevent litter, odour, pests and windblown waste.
- Hazardous waste must be stored in banded, labelled containers and removed by suitably authorised service providers.
- Cement wash water, hydrocarbons, chemicals and contaminated water may not be discharged to soil, stormwater systems, wetlands or watercourses.
- The ECO must monitor construction waste management, and the HOA must be responsible for operational waste management rules, recycling systems and long-term compliance.

Waste management for the proposed development will be based on the principles of reduce, reuse and recycle. Waste generation will be minimised through careful construction planning, use of existing infrastructure, accurate material ordering and responsible housekeeping. Reusable materials such as topsoil, clean spoil, road material, demolition material, organic waste and treated effluent will be beneficially reused where feasible. Recyclable materials will be separated at source and removed to appropriate recycling facilities. Only residual waste that cannot be reused or recycled will be disposed of at a licensed facility. No dumping, burning or burial of waste will be permitted, and all hazardous waste will be stored and disposed of in accordance with legal requirements. These measures will reduce landfill demand, prevent pollution, protect wetlands and watercourses, and support a cleaner and more sustainable rural development.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.
<p>Energy efficiency measures for the proposed development</p> <ul style="list-style-type: none"> • Solar PV encouraged or required where feasible – Individual farms may use rooftop or suitably located solar photovoltaic systems to reduce reliance on Eskom and improve energy resilience. • Combined Eskom and solar supply – The rural farmworker village and individual farms may use Eskom supply together with solar energy, allowing a flexible and resilient energy model. • Passive building design – Buildings should be designed to reduce heating and cooling demand through appropriate orientation, shading, natural ventilation, insulation and window placement. • Energy-efficient lighting – LED lighting should be used for dwellings, communal facilities, roads, security areas and operational infrastructure. • External lighting controls – Outdoor lighting should be low-glare, downward-facing, movement-sensitive where appropriate, and limited to what is required for safety and security to reduce energy use and disturbance to fauna. • Efficient appliances and fittings – New dwellings, communal buildings and HOA-managed facilities should use energy efficient appliances, pumps, geysers and electrical fittings where feasible. • Solar water heating / heat pumps – Hot-water systems should make use of solar water heaters or heat pumps where practical to reduce electricity demand. • Efficient water pumping systems – Pumps used for abstraction, treatment, distribution, irrigation and wastewater management should be appropriately sized and energy-efficient. • Smart irrigation scheduling – Irrigation should be timed and managed to reduce unnecessary pumping, evaporation losses and energy demand. • Use of local and durable materials – Locally sourced, recycled or durable building materials should be used where feasible to reduce embodied energy and transport-related emissions. • Low-density rural layout – The limited development footprint and retention of large natural/agricultural areas reduce the overall energy intensity of the development. • Gravel roads and limited hard infrastructure – Retaining rural-scale infrastructure avoids unnecessary energy and material inputs associated with urban-style roads and services. • HOA energy management – The HOA should promote efficient energy use, maintain shared infrastructure, encourage solar installation, and include energy-efficiency requirements in design guidelines. • Climate-resilient design guidelines – Architectural and landscape guidelines should require low-impact, resource efficient design that reduces long-term operational energy demand. 	

Energy efficiency will be promoted through a rural, low-density development model that limits hard infrastructure and encourages resource-efficient building design. Individual farms and the rural farmworker village may use Eskom supply in combination with solar PV, with rooftop solar, solar water heating or heat pumps, LED lighting, passive design, natural ventilation, insulation and energy-efficient appliances encouraged through the architectural and HOA design guidelines. Shared infrastructure such as pumps, water treatment and wastewater systems must be appropriately sized and energy-efficient. External lighting must be limited, downward-facing and low-glare to reduce electricity demand and avoid unnecessary disturbance to fauna and rural character. These measures will reduce operational energy demand, improve resilience to electricity supply disruptions and support the climate-resilience objectives of the proposed rural development.

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

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

I....., ID numberin 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, EAP Registration number 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;

Signature of the EAP:

Date:

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP

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

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

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):

Property owner list for consent to undertake NEMA application

Property	Owner	Size (ha)	21 digit SG code	SG Diagram
1. Remainder of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	46,4954	C02700000000023800000	SG 30/1886
2. Portion 5 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	29,5737	C02700000000023800005	SG 595/1886
3. Remainder of Portion 6 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	58,1224	C02700000000023800006	SG 1616/1896
4. Portion 17 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	23,9249	C02700000000023800017	SG 1022/1908
5. Portion 18 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	6,6304	C02700000000023800018	SG 6590/1958
6. Portion 19 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	2,2535	C02700000000023800019	SG 6589/1958
7. Portion 23 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	8,5653	C02700000000023800023	SG 1612/1919
8. Portion 41 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	31,263	C02700000000023800041	SG 4506/1925
9. Portion 42 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	6,9674	C02700000000023800042	SG 4505/1925
10. Portion 52 of the Farm Hoogekraal No 238, Division George	Pelgrimskraal Trust No 452/99	50,4855	C02700000000023800052	A3609/1924
11. Remainder of Portion 64 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	10,3716	C02700000000023800064	SG 8374/1947
12. Remainder of Portion 65 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	9,0611	C02700000000023800065	SG 8375/1947
13. Portion 66 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	15,6191	C02700000000023800066	SG 8376/1947
14. Remainder of Portion 67 of the Farm Hoogekraal No 238, Division George	Pierre Johan Du Toit	18,7278	C02700000000023800067	SG 8377/1947
15. Remainder of Portion 68 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	18,0155	C02700000000023800068	SG 8378/1947
16. Portion 69 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	31,5989	C02700000000023800069	SG 8379/1947

Property	Owner	Size (ha)	21 digit SG code	SG Diagram
17. Portion 70 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	42,1196	C02700000000023800070	SG 8380/1947
18. Portion 72 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	1,3619	C02700000000023800072	SG 8382/1947
19. Portion 74 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	6,3038	C02700000000023800074	SG 8384/1947
20. Portion 75 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	20,9442	C02700000000023800075	SG 8385/1947
21. Portion 76 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	6,8181	C02700000000023800076	SG 8386/1947
22. Portion 77 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	11,58	C02700000000023800077	SG 8387/47
23. Portion 79 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	10,8128	C02700000000023800079	SG 8389/1947
24. Remainder of 82 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	11,87	C02700000000023800082	SG 8392/47
25. Remainder of Portion 85 of the Farm Hoogekraal No 238, Division George	Mentone Eduan Botha	1,7131	C02700000000023800085	SG 7323-1949
26. Portion 88 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	24,3209	C02700000000023800088	SG 1605/1961
27. Remainder of Portion 90 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	3,6465	C02700000000023800090	SG 1607/61
28. Portion 102 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	24,1751	C02700000000023800102	SG 10494/1970
29. Portion 122 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	5,02	C02700000000023800122	SG 41824/80
30. Portion 148 Farm Hoogekraal No 238, Division George	Marilyn Goosen	0,7984	C02700000000023800148	SG 8223/1992
31. Portion 160 of the Farm Hoogekraal No 238, Division George	Rendeals Twenty CC	15,1417	C02700000000023800160	SG 2092/2002
32. Remainder of Portion 168 of the Farm Hoogekraal No 238, Division George	Mentone Eduan Botha	3,3744	C02700000000023800168	SG 3695-2002
33. Remainder of Portion 178 of the Farm Hoogekraal No 238, Division George	Pierre Johan Du Toit	15,4717	C02700000000023800178	SG 4492/2004

Property		Owner	Size (ha)	21 digit SG code	SG Diagram
34.	Remainder of Portion 179 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	13,9646	C02700000000023800179	SG 679/2005
35.	Portion 180 of the Farm Hoogekraal No 238, Division George	Attwood Property Developments(Pty)Ltd	4,1673	C02700000000023800180	SG 680/2005
36.	Remainder of Portion 5 of the Farm Buffelsdrift No 227, GEO	Attwood Property Developments(Pty)Ltd	23,0978	C02700000000027700005	SG 1638/1896
37.	Ptn 9 of the Farm Buffelsdrift No 227, GEO	Attwood Property Developments(Pty)Ltd	88,6511	C02700000000027700009	SG 4501/1925



20/11/07
By Munisipaliteit
navrae - Is nie
nodig om naam te
verander - Akte kantoor
sal veranderings
wys
oorspronklike

Absa Trust

PO Box 1032, SANLAMHOF, 7532 RSA
Ground Floor, Absa Building
14 Strand Road, Bellville 7530

Tel +27 021 9153100
Fax +27 021 9153143
Swift Address: ABSA ZA JJ
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Swift-Adres: ABSA ZA JJ
<http://www.absa.co.za>

MEV M GOOSEN
POSBUS 2483
GEORGE
6530

ONS VERW: NOLEEN DU PLESSIS
DATUM: 31/10/2007
TEL. 021 915 3126
FAKS. 021 915 3143
E-POS: noleendp@absa.co.za

GEAGTE MEVROU

BOEDEL WYLE: H GOOSEN (NP) 26684

Ons vorige korrespondensie verwys.

Ons bevestig hiermee dat die vaste eiendom op 24 Oktober 2007 in u naam geregistreer is.

Die oorspronklike titelakte sal mettertyd deur ons prokureurs aan u per aangetekende pos gestuur word. Ons vestig graag u aandag daarop dat dit egter ongeveer drie maande duur alvorens die titelakte deur die Aktekantoor vrygestel word.

Bevestig hiermee dat die bestaande huiseienaarsversekering hernu is vir 'n verdere termyn.

Bygaande is 'n afskrif van die Aktebesorgerssertifikaat vir u rekords.

Hierdie document kan u aan die naaste munisipaliteit kantore geneem word ten einde hul rekords te wysig om toekomstige korrespondensie direk aan u te adresseer.

Ons vertrou u vind dit so in orde.

Gebruik asseblief die bogemelde verwysing.

Die uwe

nms. **TAKBESTUURDER - BOEDELDIENSTE**
A2D

ABSA Trust Limited/Beperk, Reg No 1915/004665/06



Member of the Association of Trust
companies in South Africa
Lid van die Vereniging van Trust-
maatskappye in Suid-Afrika

516147 (ABSA 2759) ABSA 123505 (03/2006)

Directors/Direkteure: WT Lategan (Chairman /Voorsitter) M J Grobler (Managing Director/Besturende Direkteur)
HA Greenan (Executive Director/Uitvoerende Direkteur)
ZMB Bassa GE Lewis V Klein Secretary/Sekretaris: ABSA Secretarial Services (Pty) Ltd

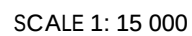
Reg. No 1277/014516/07
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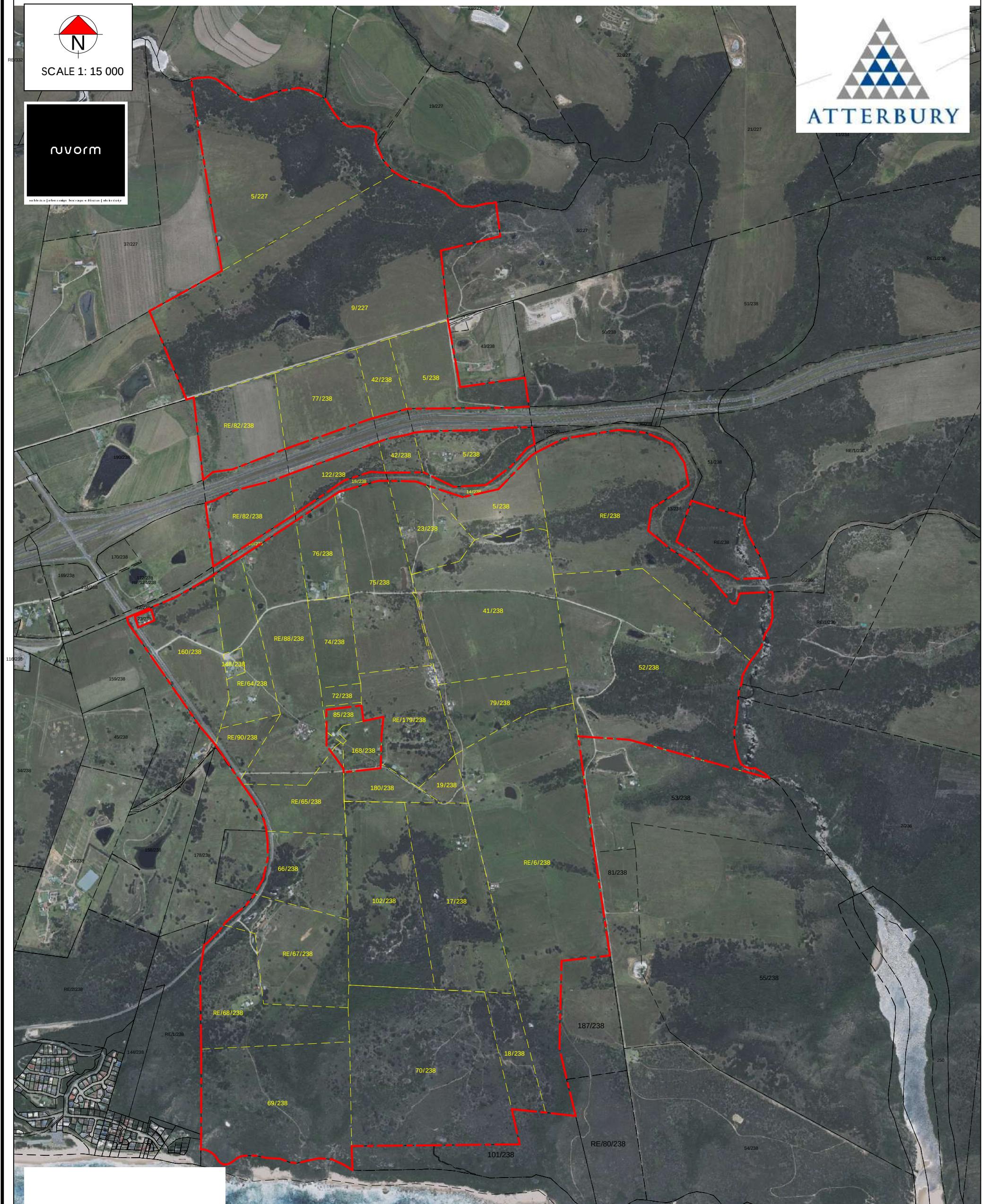
BARCLAYS Group
Groep

PLAN 1:

The Application Area



n Vorm



PLAN 1

THE APPLICATION AREA

PORTIONS 5 & 9 OF THE FARM BUFFELSDRIFT
NO 227; DIVISION GEORGE, AND
REMAINDER OF THE FARM HOOGEKRAAL NO 238;
AND PORTIONS 5; 6; 17-19; 23; 41; 42; 52;53; 55;
64-70; 72; 74-77; 79; 81; 82; 85; 88; 90; 102; 122; 148;
160; 168 & 178-180 OF THE FARM HOOGEKRAAL
NO 238, DIVISION GEORGE



21 Trotter Street, PO Box 2180
KNYSNA 6570

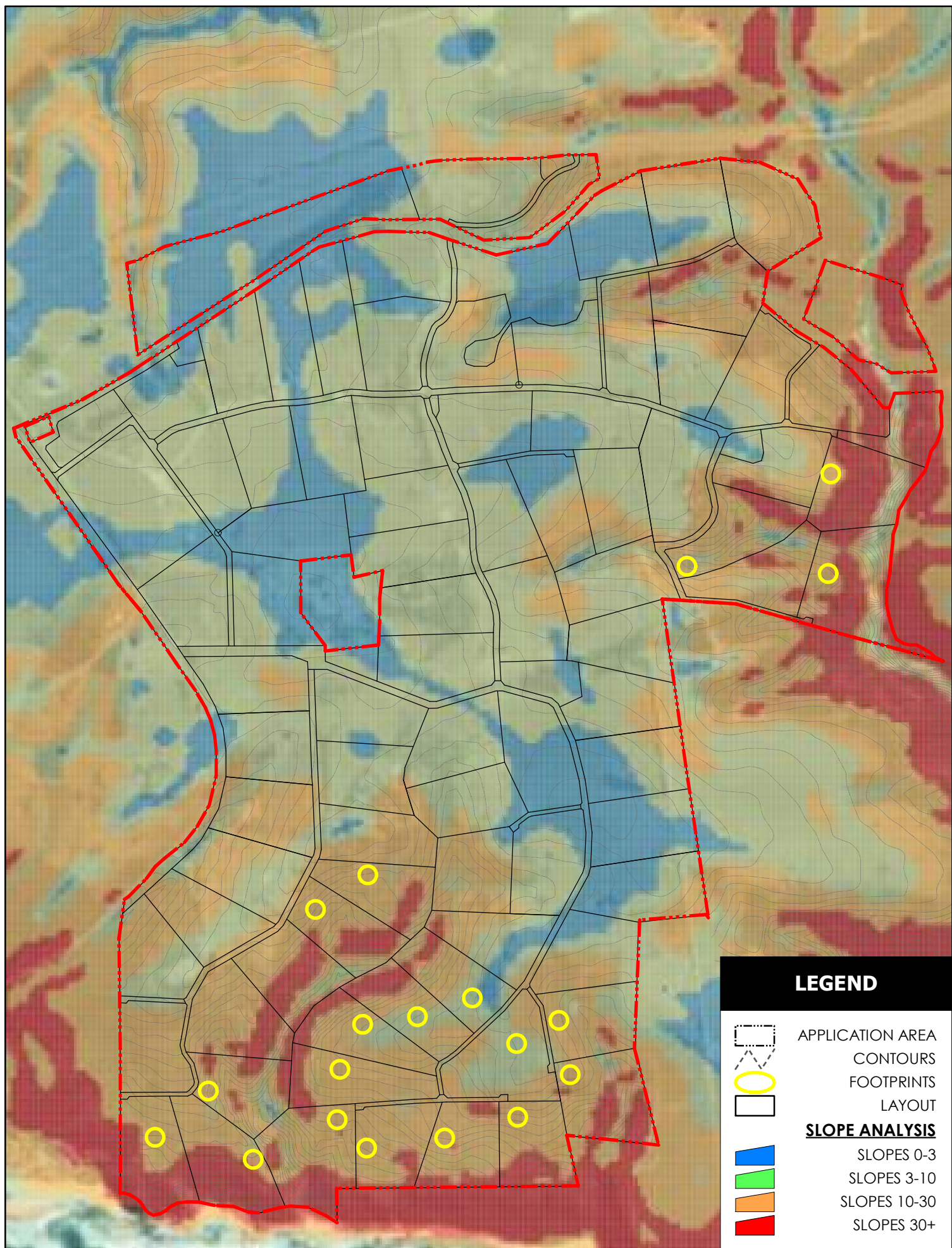
7 (044) 382 0420
086-459-2987
e-mail: marike@vreken.co.za
www.vreken.co.za

PLAN 2:

Locality Plan

PLAN 3:

Slope Analysis Plan



PORTIONS OF THE FARM HOOGEKRAAL NO 238
& PORTIONS OF THE FARM BUFFELSDRIFT NO 227
(DIVISION GEORGE), GEORGE MUNICIPALITY

SLOPE ANALYSIS

0 SCALE: 500 m



Projection: Transverse Mercator
Centre Lon: 22°19'59" E
Centre Lat: 34°02'10" S
Plan No: Pr24/70SA04
Created: 2026/03/13
Scale: 1:14000



Stads & Omgevingsplanneers

21 Trotter Street, P.O. Box 2180

KNYSNA, 6570

(044) 382 0420

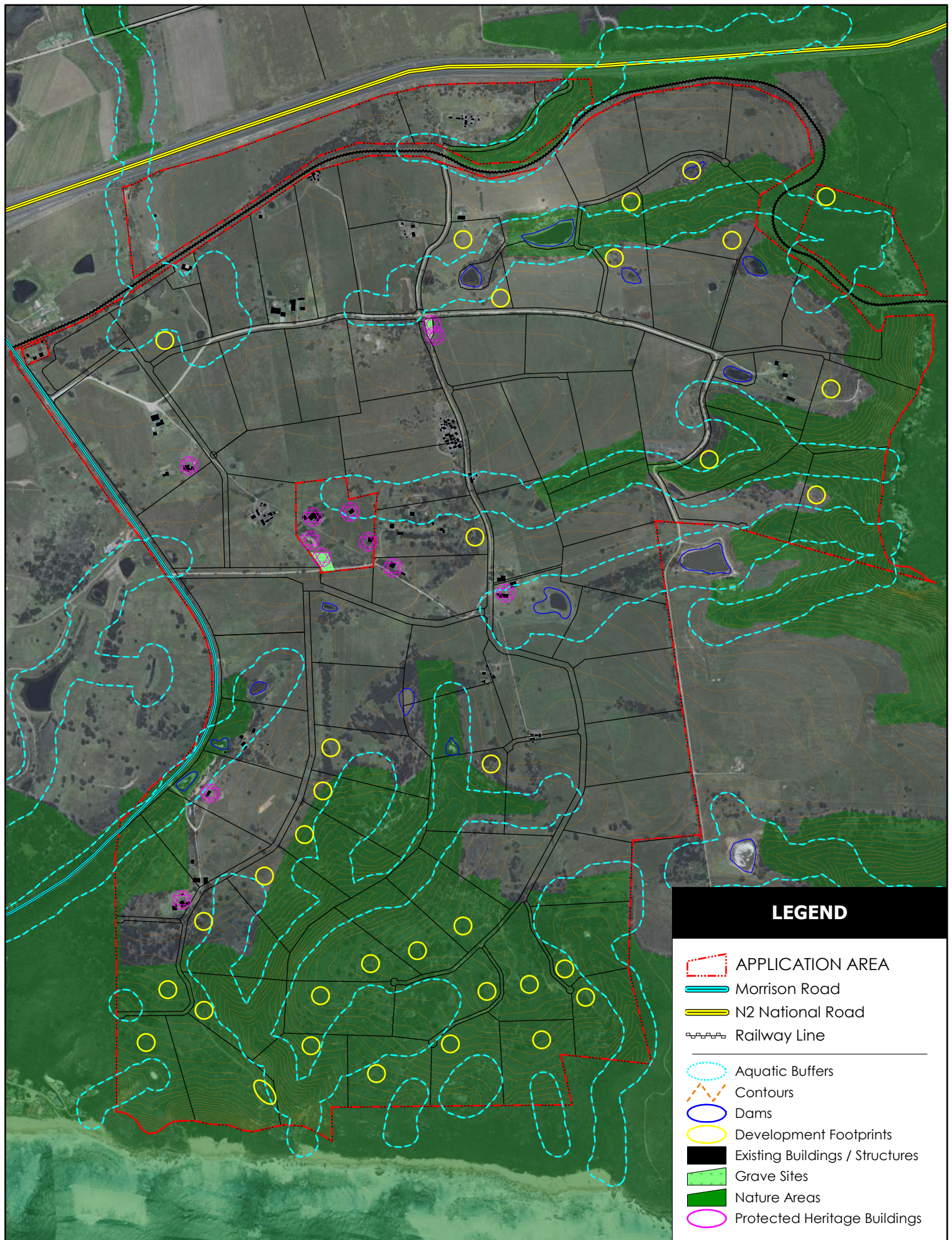
(086) 459 2987

e-mail: info@vreken.co.za

web: www.vreken.co.za

PLAN 4:

Site Characteristics Plan



LEGEND

- APPLICATION AREA
- Morrison Road
- N2 National Road
- Railway Line
- Aquatic Buffers
- Contours
- Dams
- Development Footprints
- Existing Buildings / Structures
- Grave Sites
- Nature Areas
- Protected Heritage Buildings

PORTIONS OF THE FARM HOOGEKRAAL NO 238
& PORTIONS OF THE FARM BUFFELSDRIFT NO 227
(DIVISION GEORGE), GEORGE MUNICIPALITY

SCALE: 300 m

SITE CHARACTERISTICS



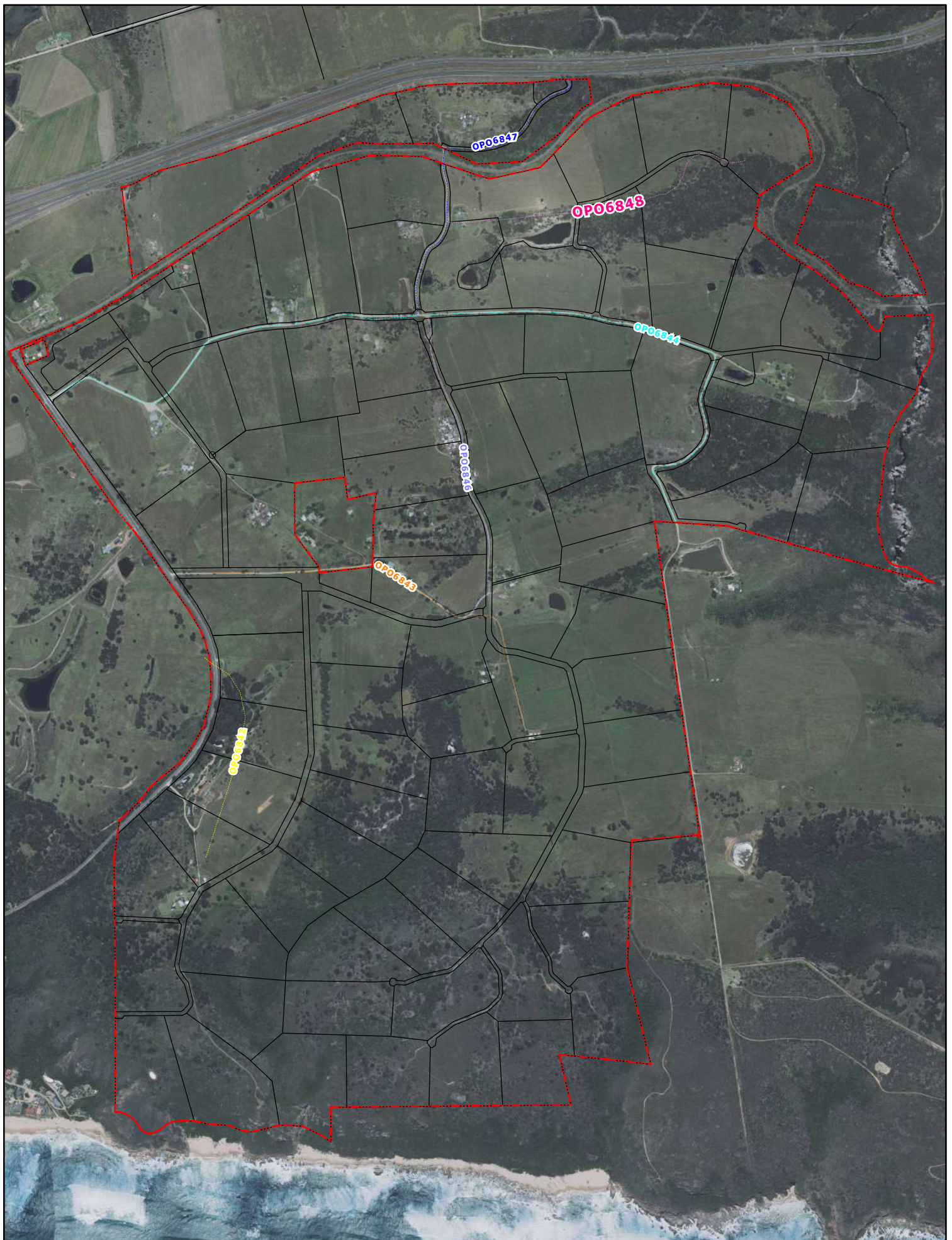
Projection: Transverse Mercator
Centre Lon: 22°19'59" E
Centre Lat: 34°02'17" S
Plan No: Pr24/70SC05
Created: 2026/09/03
Scale: 1:14000



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PLAN 5:

Proclaimed Roads



PORTIONS OF THE FARM HOOGEKRAAL NO 238
& PORTIONS OF THE FARM BUFFELSDRIFT NO 227
(DIVISION GEORGE), GEORGE MUNICIPALITY

SCALE:
0 300 m

PROCLAIMED DISTRICT ROADS



Projection: Transverse Mercator
Centre Lon: 22°19'59" E
Centre Lat: 34°02'17" S
Created: 2026/09/03
Scale: 1:14000

Stored: F:\1\Marlie Vreken Town Planners\GIS\Appointed Projects\P12470 - Hoogekraal 238 GED



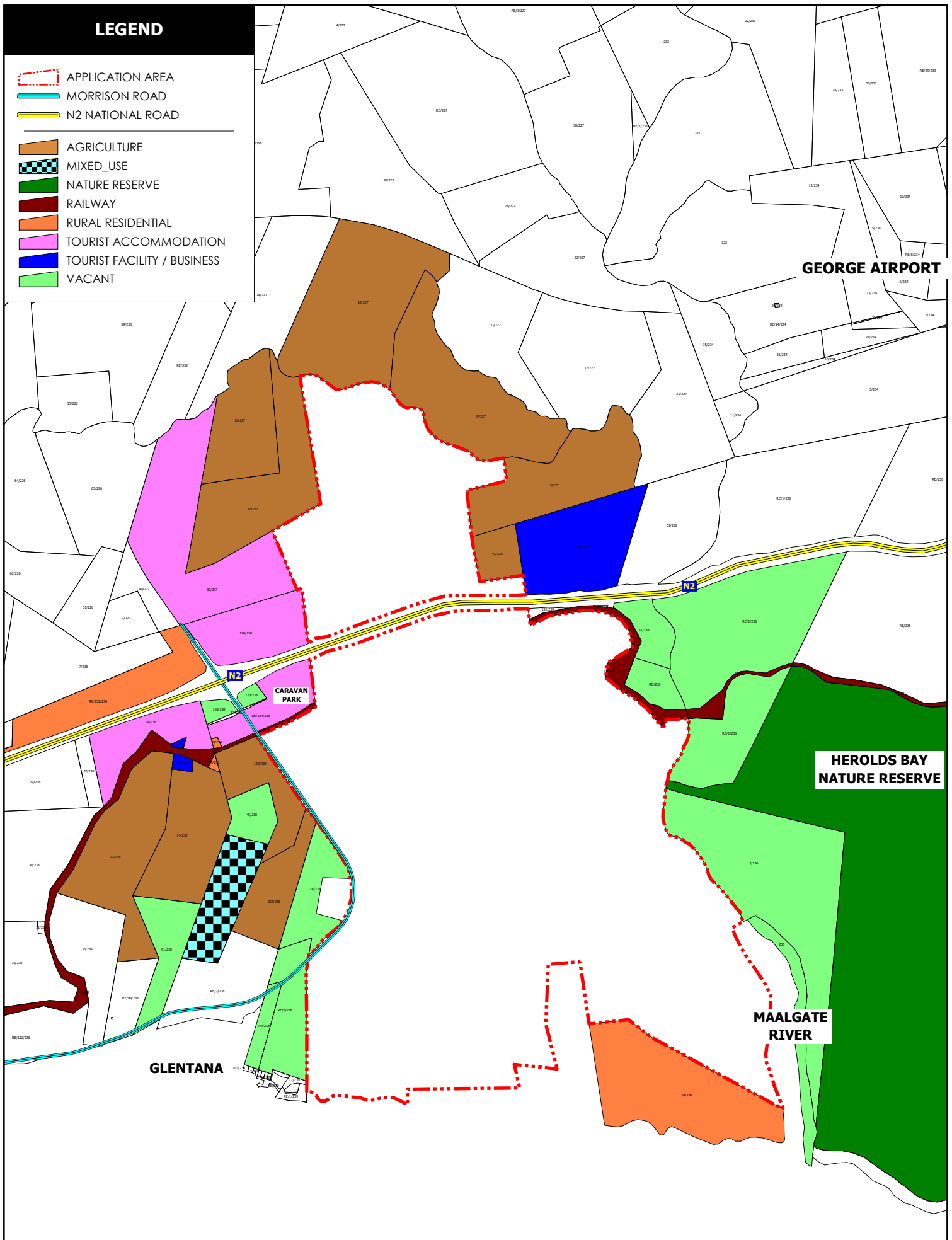
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web: www.vreken.co.za

PLAN 6:

Land Use / Character of the area Plan

LEGEND

-  APPLICATION AREA
-  MORRISON ROAD
-  N2 NATIONAL ROAD
-  AGRICULTURE
-  MIXED_USE
-  NATURE RESERVE
-  RAILWAY
-  RURAL RESIDENTIAL
-  TOURIST ACCOMMODATION
-  TOURIST FACILITY / BUSINESS
-  VACANT



PORTIONS OF THE FARM HOOGEKRAAL NO 238
& PORTIONS OF THE FARM BUFFELSDRIFT NO 227
(DIVISION GEORGE), GEORGE MUNICIPALITY

SCALE:
0 500 m

LAND USE PLAN



Projection: Transverse Mercator
Centre Lon: 22°19'59" E
Centre Lat: 34°01'28" S
Created: 2025/11/14
Scale: 1:30000

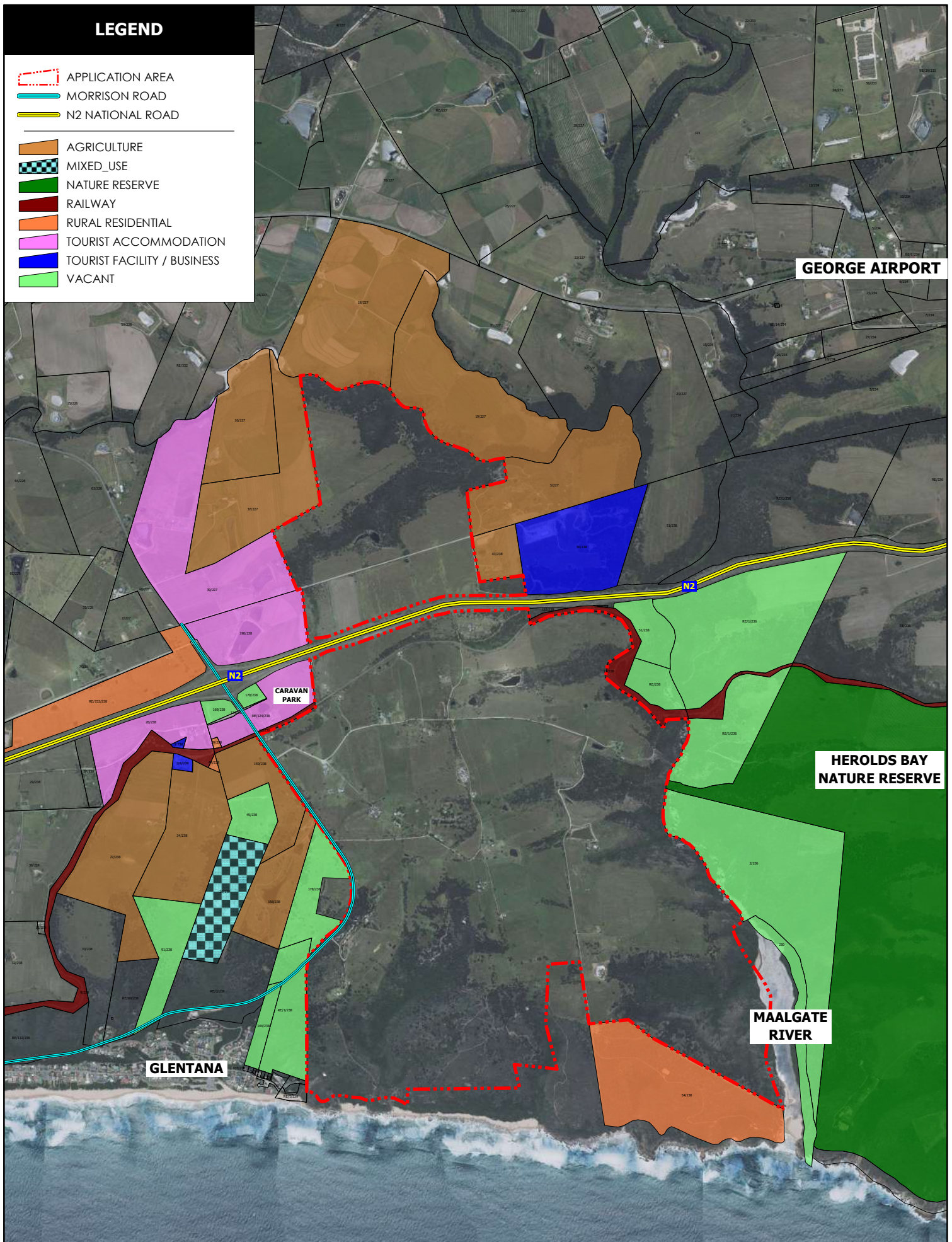
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LEGEND

-  APPLICATION AREA
-  MORRISON ROAD
-  N2 NATIONAL ROAD
-  AGRICULTURE
-  MIXED_USE
-  NATURE RESERVE
-  RAILWAY
-  RURAL RESIDENTIAL
-  TOURIST ACCOMMODATION
-  TOURIST FACILITY / BUSINESS
-  VACANT



PORTIONS OF THE FARM HOOGEKRAAL NO 238
& PORTIONS OF THE FARM BUFFELSDRIFT NO 227
(DIVISION GEORGE), GEORGE MUNICIPALITY

SCALE:
0 500 m

LAND USE PLAN



Projection: Transverse Mercator
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Centre Lat: 34°01'28" S
Created: 2025/11/14
Scale: 1:30000

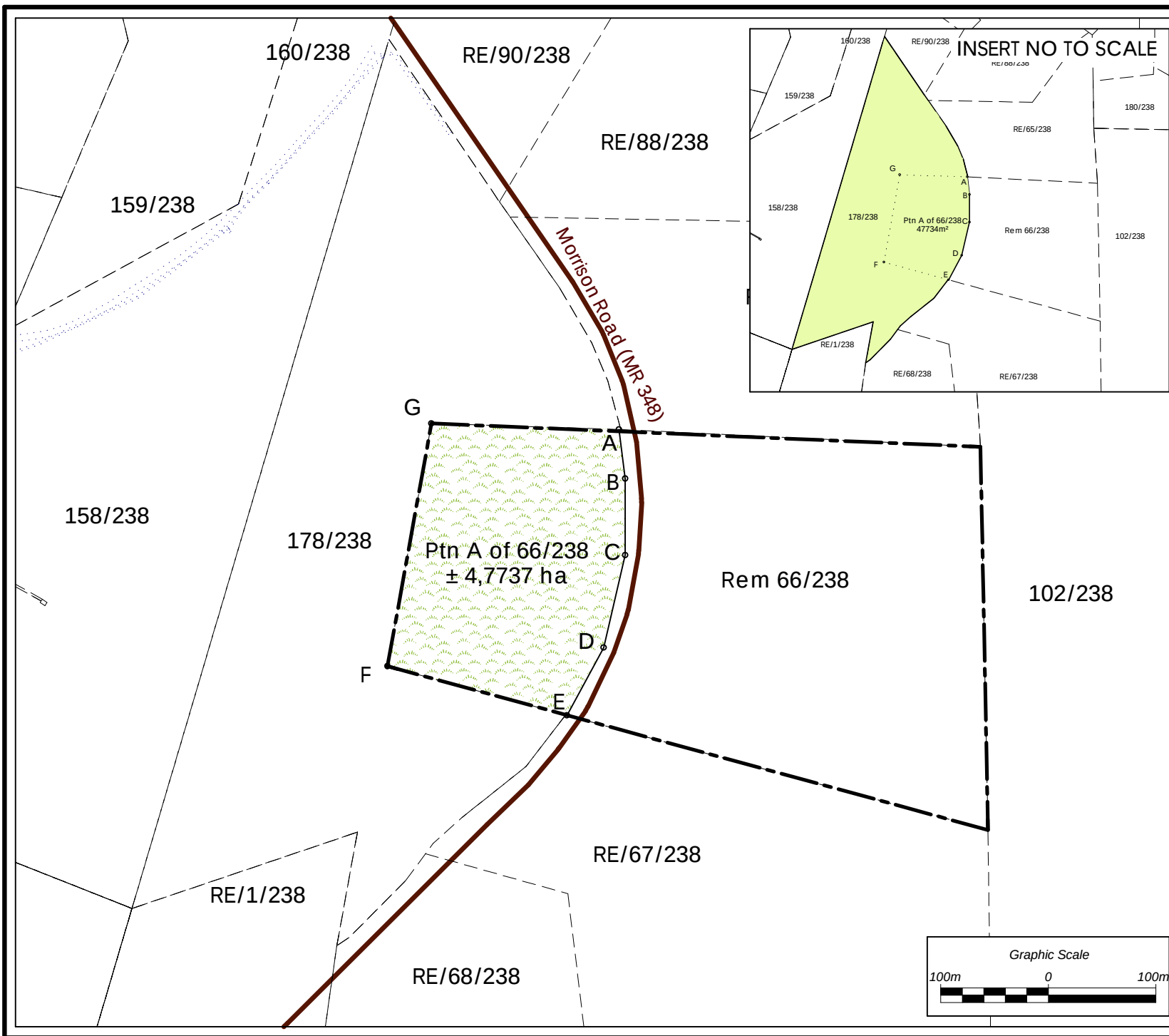
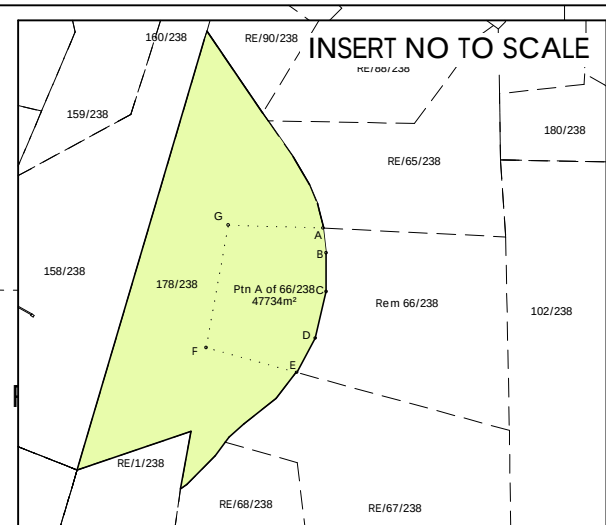
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PLAN 7:

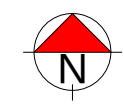
Subdivision & Consolidation of Portions 66 & 178 of the Farm Hoogekraal No 238, George



PLAN 7

PORTIONS 66 & 178
OF THE FARM
HOOGEKRAAL NO 238,
DIVISION GEORGE

SUBDIVISION & CONSOLIDATION PLAN



SCALE 1:5000

- NOTES
1. Sizes and dimensions are approximate and subject to final survey
 2. For erf data, refer SG 8376/1947
 3. The Figure ABCDEFGH represents Ptn A of Portion 66 of the Farm Hoogekraal No 238, George, measuring ± 4,7737 ha in extent.
 4. Portion A of Ptn 66 of Farm No 238, to be consolidated with Portion 178 of the Farm Hoogekraal No 238, George, to form a new property of ±20,2637 ha.

DRAWN:	MV	CHECKED:	MV
PLAN NO:	Pr2470F238Ptn66Sub01		
PLAN DATE:	20 Oct 2025		
STORED:	z:\drawings\1App\1Pr2470F238Ptn66Sub01.dwg		

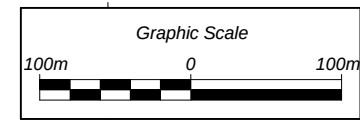
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MUNICIPAL MANAGER
DATE: _____



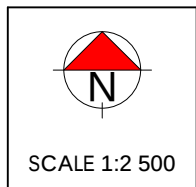
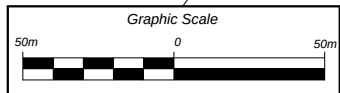
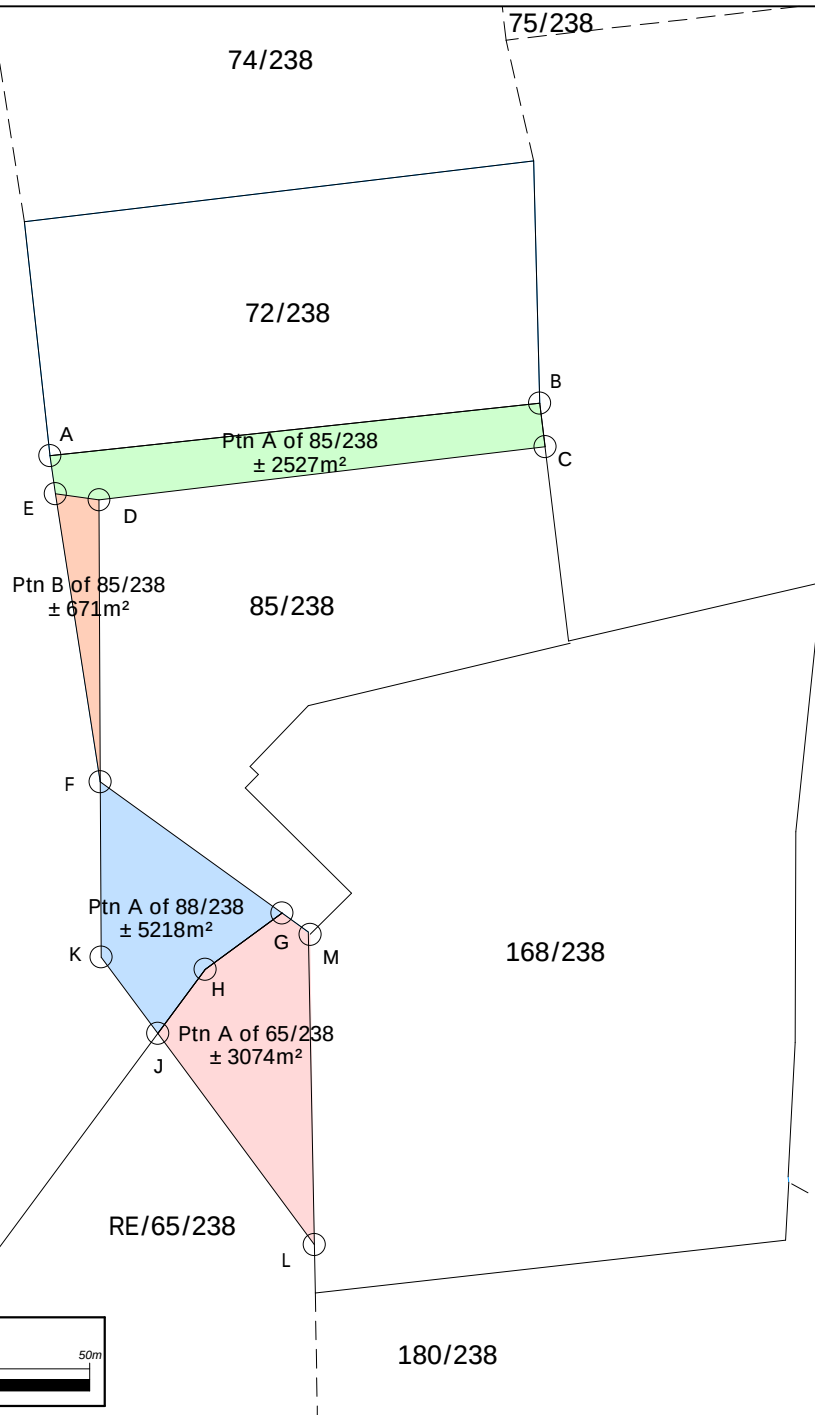
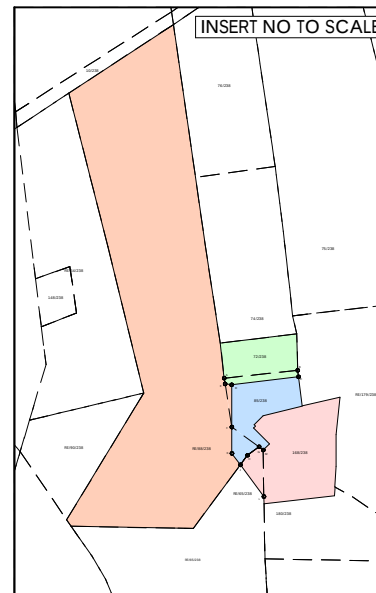
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(044) 382 0420
086 459 2987
e-mail: marika@vreken.co.za
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PLAN 8:

*Subdivision & Consolidation of Portions 65; 78;
85; 88 & 138 of the Farm Hoogekraal No 238,
George*



PLAN 8

PORTIONS 65; 72; 85;
88 & 168 OF THE FARM
HOOGEKRAAL NO 238,
DIVISION GEORGE

SUBDIVISION & CONSOLIDATION PLAN

NOTES

1. Sizes and dimensions are approximate and subject to final survey
2. The figure ABCDE represents Ptn A of 85/238 ($\pm 2527\text{m}^2$)
3. The figure DEF represents Ptn B of 85/238 ($\pm 671\text{m}^2$)
4. The figure FGHJK represents Ptn A of 88/238 ($\pm 5218\text{m}^2$)
5. The figure GHJLM represents Ptn B of 65/238 ($\pm 3074\text{m}^2$)
6. Ptn A of 85/238 ($\pm 2527\text{m}^2$) to be consolidated with 72/238.
7. Ptn B of 85/238 ($\pm 671\text{m}^2$) to be consolidated with Re 88/238.
8. Ptn A of 88/238 ($\pm 5218\text{m}^2$) to be consolidated with 85/238.
9. Ptn B of 65/238 ($\pm 3074\text{m}^2$) to be consolidated with 168/238.

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PLAN NO:	Pr2470-F238Ptn8Plan8		
PLAN DATE:	26 Feb 2026		
STORED:	z:\drawings\1App\Pr2470-F238Ptn8Plan8.dwg		

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APPROVED IN TERMS OF SECTION 23(1) OF THE
GEORGE MUNICIPALITY'S BY-LAW ON
MUNICIPAL PLANNING AS PUBLISHED IN
P.N. 8747/2023 ON 21 APRIL 2023.

MUNICIPAL MANAGER

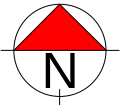
DATE:



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PLAN 9:

*Subdivision Plan: Portions 5; 42; 82 of the
Farm Hoogekraal No 238*



SCALE 1:7500

39/227

9/227

43/238

50/238

77/238

Ptn A of
RE/82/238
± 11,87ha

Ptn A of
42/238
± 4,37ha

Ptn A of
5/238
± 11,26ha

190/238

132/238

Ptn B of
42/238
± 2,36ha

Rem 5/238
± 9,27 ha

122/238

15/238

RE/238

Rem of
RE/82/238
± 8,15ha

Rem 5/238
± 8,60 ha

14/238

23/238

76/238

41/238

Re 88/238

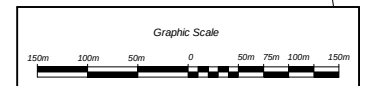
75/238

Re 64/238

160/238

NOTES

1. Sizes and dimensions are approximate and subject to final survey
2. For Erf data, refer SG595/1886; SG4505/1925 & SG 8392/1947.
3. Rem of Portion 82 of the Farm Hoogekraal No 238 George, to be subdivided into 2x Portions: Ptn A = ±11,87ha & Rem Ptn 82 = 8,15ha
4. Portion 42 of the Farm Hoogekraal No 238 George, to be subdivided into 2x Portions: Ptn A = ± 4,37ha & Rem Ptn 42 = ± 2,36ha
5. Portion 5 of the Farm Hoogekraal No 238 George, to be subdivided into 2x Portions: Ptn A = ± 11,26ha & Rem Ptn 5 = ± 2,36ha & 8,60ha (a split remainder).



PLAN 9

PORTIONS 5; 42; & 82 OF
THE FARM HOOGEKRAAL NO 238
DIVISION GEORGE

SUBDIVISION PLAN

MUNICIPAL MANAGER

DATE:

DRAWN:	MV	CHECKED:	MV
PLAN NO:	Pr24/70 F238Plan8subPtn82,42&5		
PLAN DATE:	26 Feb 2026		
STORED:	z:\drawings\1 AppPr24/70 F238Plan8subPtn82,42&5.dwg		

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PLAN 10:

*Consolidation Plan: Portions & Portions 5 & 9
of the Farm Buffelsdrift No 227*