



22/05/2020

## ENVIRONMENTAL MANAGEMENT METHOD STATEMENT (EMMS) PROPOSED NEW RESIDENTIAL DWELLING ON ERF 314, WILDERNESS, GEORGE

### Section 1: Background, project location and proposed actions

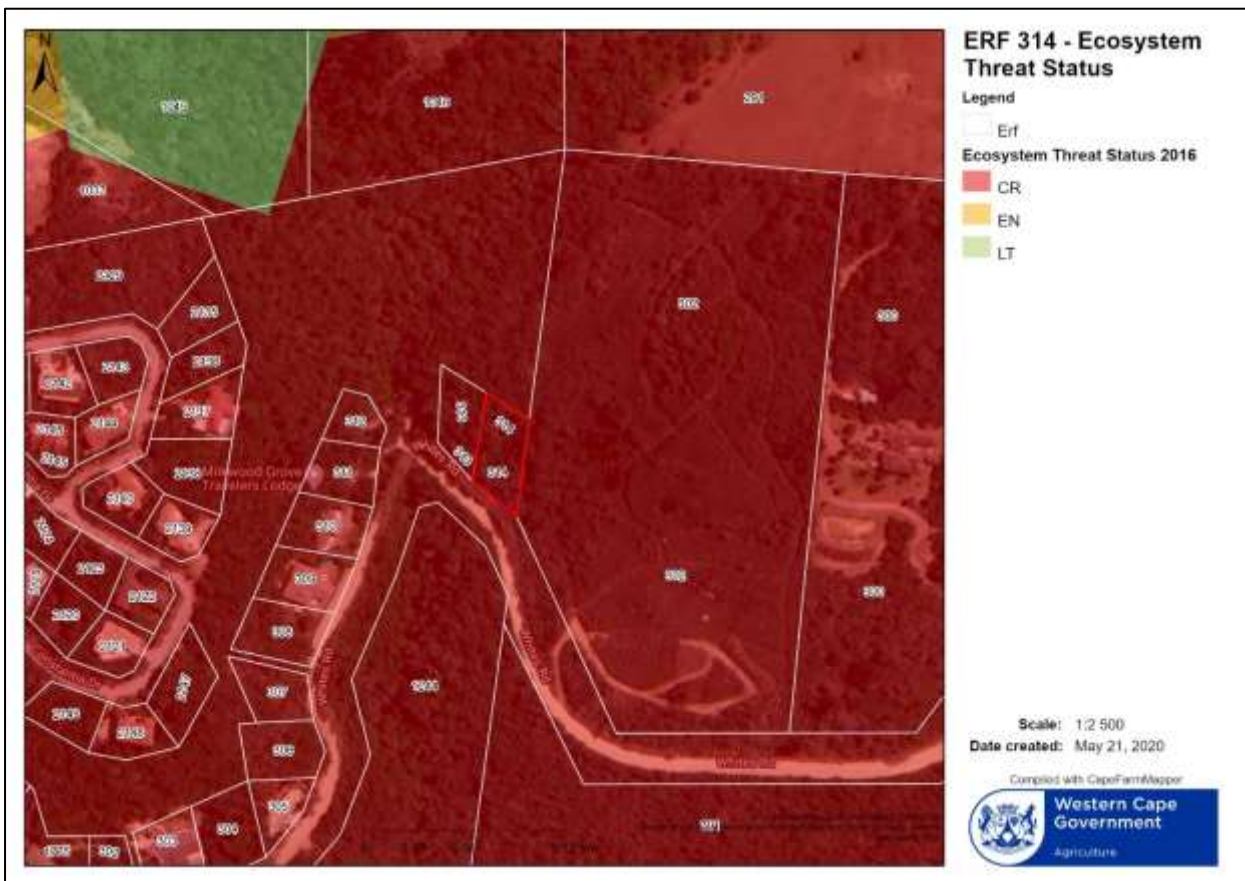
The property is 1137m<sup>2</sup> in extent and is situated on Stand 314, Whites Road, Wilderness. (Lat: -33.982451 | Lon: 22.692478). The owner of Stand 314 proposes to construct a double-story residential dwelling on the property. Stand 314 has access to water and electricity from the George Municipality. A Septic Tank will be used for sewage and storm water will be re-directed onto natural vegetation and into rainwater tanks. The coverage area of the proposed residential dwelling and infrastructure will be approximately 12.9% of the total property; however, the total coverage for disturbed areas will be 24.33% of the property. The proposed dwelling occurs within a **Critically Biodiversity Area**, with an Ecosystem Threat Status of **Critically Endangered** and is not located within 100 meters of a watercourse. The footprint of the proposed residential dwelling and associated infrastructure will be 276.7m<sup>2</sup>.

### Property Location





Critical Biodiversity Areas – CBA Terrestrial



Ecosystem Threat Status – Critically Endangered

## SITE ACCESS

The site is accessed via Whites Road. Provision has been made for two vehicles to park inside a locked garage on the property. Due to the steep gradient of the stand no driveway will extend further into the stand than required for parking.

The stand's access road branches off the Wilderness village centre, which has a close proximity to the N2.

## GRADIENT OF THE SITE

The site has a steep slope from the northern boundary of the stand flowing down in a southerly direction where it meets Whites Road. The Slope Percentage ranges between 24% and 26%. The dwelling is proposed to be constructed on stilts on the northern end of the property.

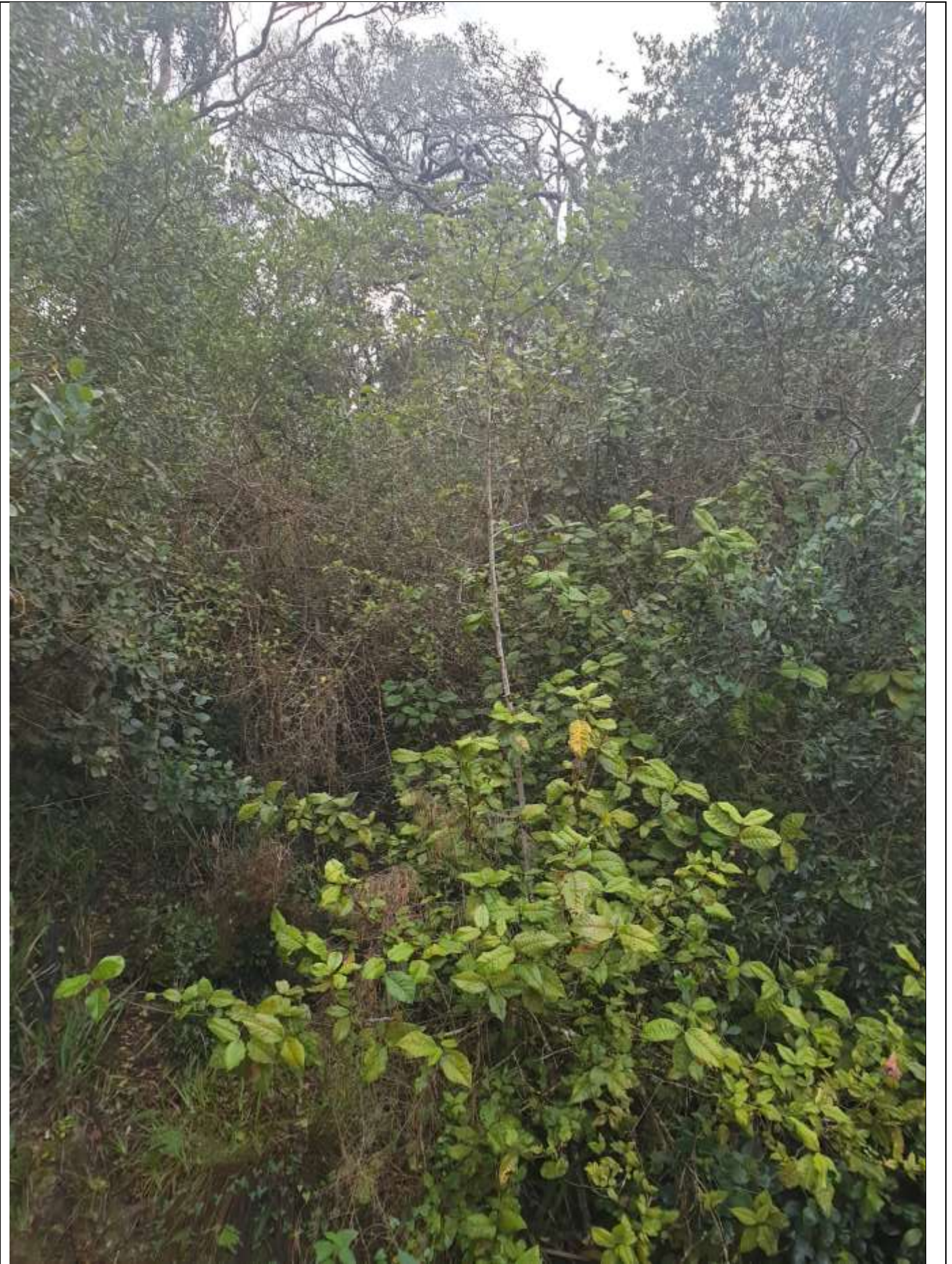
## LOCATION IN LANDSCAPE

Plain	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Ridgeline	Undulating plain/low hills	Dune	Sea-front
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## SITE PHOTOGRAPHS



Standing in road facing the site (North Direction)



Standing in the middle of the site



Eastern Boundary

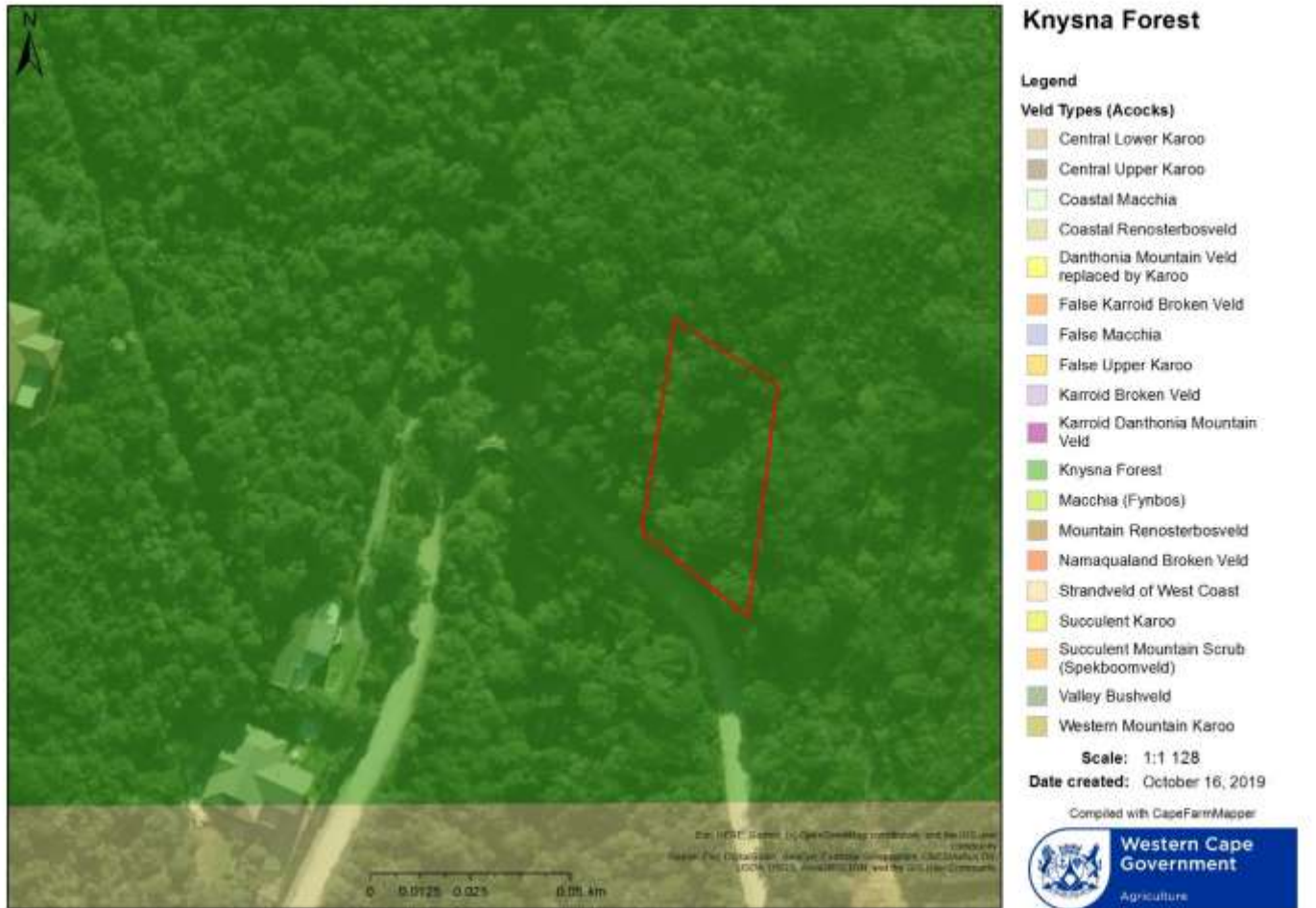


Natural Forest found on site

## Section 2: Current Environmental status of the property

A site inspection was held in June 2019. The vegetation on the property as per VegMap 2018 (Beta) is classified as Garden Route Granite Fynbos with a conservation status of Endangered.

**Acocks Veld Types indicate the site as Knysna Forest**



A site inspection indicated that the vegetation on site contains mostly indigenous tree and forest species.

## Section 3: Potential Environmental Impacts and Mitigation Measures

Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

<b>Potential impacts on geographical and physical aspects:</b>	
Nature of impact:	Soil compaction as a result of the proposed single residential dwelling and parking area.



Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	As a result of the construction of the residential dwelling this impact cannot be mitigated or reversed
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources anticipated
Cumulative impact prior to mitigation:	Water runoff
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Re-direct water of hardened structures into rain water tanks and onto natural vegetation.
Cumulative impact post mitigation:	No impact is expected after mitigation measures are set in place to redirect water runoff
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
<b>Potential impact on biological aspects:</b>	
Nature of impact:	Loss of vegetation as a result of construction of the single residential dwelling
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	High (no indigenous vegetation is lost as the site is heavily infested with longleaf Wattle.
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Loss of ecological corridors
Significance rating of impact prior to mitigation	Low

(Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>1. It is imperative that impacts on the continuity of ecological processes and corridors be taken into consideration irrespective of the type of land use proposed or envisaged in the region as a whole.</p> <p>The proposed development should allow for a vegetated buffer strip, set back 10 meters from the boundary fence.</p>
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measure are implemented
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
<b>Potential impact on biological aspects:</b>	
Nature of impact:	Storm water drainage
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Soil Erosion
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Hi
Proposed mitigation:	All storm water from the proposed single residential dwelling is directed into rain water tanks and onto natural vegetation. Rainwater tanks must be

	implemented in order to catch storm water from roofs of the buildings.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impacts on geographical and physical aspects:</b>	
Nature of impact:	Loss of top soil
Extent and duration of impact:	During construction
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Prior to construction the top 15cm of soil should be collected and stored on site covered with plastic material to prevent loss of soil during rainy period. The top soil saved to be re used for rehabilitation after construction.
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential impact on biological aspects:</b>	
Nature of impact:	Storm water drainage
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Soil Erosion
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	Hi
Proposed mitigation:	All storm water from the proposed single residential dwelling is directed into rain water tanks and onto natural vegetation. Rainwater tanks must be implemented in order to catch storm water from roofs of the buildings.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential noise impacts:</b>	
Nature of impact:	Impacts associated with general building construction noise
Extent and duration of impact:	Only during construction phase
Probability of occurrence:	High

Degree to which the impact can be reversed:	None
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	No cumulative impact foreseen
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Construction work and noise generation only allowed during weekday working hours
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

<b>Potential visual impacts:</b>	
Nature of impact:	The proposed single residential dwelling may in all probability be visible to neighbouring properties. .
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>The conditions imposed by the Department: Planning and Housing must be adhered to:</p> <p>(iii) That all new structures on the subdivided portions be restricted to two (2) storeys and/or a maximum height of 8.0m as measured from natural ground level to top of roof.</p> <p>(iv) That these structures be designed so as to integrate harmoniously with the surrounding natural and rural environment.</p> <p>(v) That each dwelling unit and its outbuildings be restricted to at total footprint of 300m<sup>2</sup>, including all decks, patios, verandas and porches.</p> <p>(vi) That no structure be erected on a slope with a gradient greater than 1:4 or within the 1:50 year flood line of any river or natural water body.</p> <p>(viii) That each new dwelling unit and/or its associated outbuildings be constructed from at least 25% natural and or renewable (recyclable) materials.</p> <p>(ix) That a new dwelling unit and/or its associated outbuildings be painted a natural “earthy” colour should a “plastered brick” or “handi-plank” structure be erected;</p> <p>(x) The roof of the new dwelling unit be painted in a dark green, brown or grey/black colour to blend harmoniously with the surrounding natural environment.</p> <p>(xi) That the architectural style of a new dwelling unit and its associated outbuildings are in harmony with the surrounding natural and rural environment.</p> <p>(xii) That all exterior lighting on the subdivided properties be no more than 1.0m above natural ground level and that such lighting be kept to a minimum.</p>
Cumulative impact post mitigation:	N/A

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
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**(b) Impacts that may result from the operational phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.**

<b>Potential impacts on the geographical and physical aspects:</b>	
Nature of impact:	Storm Water drainage
Extent and duration of impact:	Throughout the project life cycle
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	No cumulative impacts are foreseen
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	All storm water drainage measures must be correctly installed and maintained through the project life cycle. Storm water outlets must be designed to capture all rain water in rain water tanks.  No pollution of surface or ground water may occur. Storm water control and preventative measures must be implemented.
Cumulative impact post mitigation:	No foreseen cumulative impacts are foreseen after post mitigation
Significance rating of impact after mitigation	Low

(Low, Medium, Medium-High, High, or Very-High)	
<b>Potential impact biological aspects:</b>	
Nature of impact:	Clearance of alien vegetation must be an ongoing process in order to restore the area to its natural state.
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	A positive impact as the vegetation will be restored to its natural state
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	N/A.
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low



#### Section 4: Site cleanup and rehabilitation

1. All building materials and construction waste should be separated according to the waste hierarchy (Re-use or Recycle). All materials that cannot be recycled to be transported to a licensed municipal site.
2. All materials that can be recycled to be transported to a recycling centre.
3. Alien vegetation clearing should be an ongoing process, in order for the property to return to its natural desired state.
4. Only indigenous vegetation to be planted on site.
5. Stored topsoil before construction to be reused on site to promote indigenous vegetation to establish on site.