



Eco Route

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ENVIRONMENTAL MAINTENANCE MANAGEMENT PLAN

CLEARING OF VEGETATION FOR SITE LINES FOR ACCESS TO ERF 1262 WILDERNESS, WESTERN CAPE.

5 October 2022



PREPARED FOR THE APPLICANT:

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ECO ROUTE ENVIRONMENTAL CONSULTANCY

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05/10/2022

PREPARED BY:

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DATE:



ENVIRONMENTAL MAINTENANCE MANAGEMENT PROGRAMME REQUIREMENTS:

In terms of the **National Environmental Management Act** (Act No. 107 of 1998, as amended) & the 2014 Environmental Impact Regulations as amended for: Clearing of vegetation for site lines for access to Erf 1262 Wilderness, Western Cape.

Appendix 4 of Regulation 982 of the 2014 EIA Regulations contains the required contents of an Environmental Management Programme (EMP). The table below serves as a summary of how these requirements were incorporated into this EMMP:

(1) An EMP must comply with section 24N of the Act and include:-

(a) Details of – (i) The EAP who prepared the EMP; and (ii) The expertise of the EAP to prepare an EMP, including a curriculum Vitae;	Section 1 and Annexure 2
(b) A detailed description of the aspects of the activity that are covered by the EMP as identified by the project description;	Section 1
(c) a map at an appropriate scale which superimposes the proposed activity, it associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;	Section 1 and Annexure 1
(d) A description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including – (i) planning and design; (ii) pre-construction activities; (iii) construction activities; (iv) rehabilitation of the environment after construction and where applicable post closure; and (v) where relevant, operation activities;	Section 2, 3 & 6
(f) a description of proposed impact management actions, identifying the manner in which the impact	Section 2, 3 & 6



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<p>management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to –</p> <ul style="list-style-type: none"> (i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; (ii) comply with any prescribed environmental management standards or practises; (iii) comply with any applicable provisions of the Act regarding closure, where applicable; and (iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable; 	
<p>(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);</p>	<p>Section 2, 3, 5 & 6</p>
<p>(h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);</p>	<p>Section 5 & 6</p>
<p>(i) an indication of the persons who will be responsible for the implementation of the impact management actions;</p>	<p>Section 5</p>
<p>(j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;</p>	<p>Section 6</p>
<p>(k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);</p>	<p>Section 5 & 6</p>
<p>(l) a program for reporting on compliance, taking into account the requirements as prescribed by Regulations;</p>	<p>Section 6</p>
<p>(m) an environmental awareness plan describing the manner in which –</p> <ul style="list-style-type: none"> (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and 	<p>Section 5 & 6</p>
<p>(n) any specific information that may be required by the competent authority.</p>	



GLOSSARY OF TERM:

BAR	Basic Assessment Report – A tool used by the EAP to submit to the competent authority if listed activities is triggered in Regulations GNR 327 and GNR 324 as per NEMA to make a decision regarding a proposed development.
DEA	Department of Environmental Affairs – the national authority for sustainable environmental management and integrated development planning.
DEA&DP	Department of Environmental Affairs and Development Planning – the provincial authority for sustainable environmental management and integrated development planning.
CBA	CBA Critical Biodiversity Area – Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.
EAP	<p>Environmental Assessment Practitioner – An EAP and a specialist, appointed in terms of regulation 12(1) or 12(2) must –</p> <ul style="list-style-type: none"> (a) be independent. (b) Have expertise in conducting environmental impact assessments or undertaking specialist work as required, including knowledge of the Act, these regulations and any guidelines that have relevance to the proposed activity. (c) Ensure compliance with these Regulations (d) 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 application. (e) Take into account, to the extent possible, the matters referred to in regulation 18 when preparing the application and any report, plan or document relating to the application; and (f) Disclose to the proponent or applicant, registered and affected parties and the competent authority all material information in the possession of the EAP and, where applicable, the specialist, that reasonably has or may have the potential of influencing – <ul style="list-style-type: none"> i. Any decision to be taken with respect to the application by the competent authority in terms of these regulations; or ii. The objectivity of any report, plan or document to be prepared by the EAP or specialist, in terms of these Regulations for submission to the competent authority; unless access to that information is protected by law, in which case it must be indicated that such protected information exists and is only provided to the competent authority. <p>(2) In the event where the EAP or specialist does not comply with sub regulation (1)(a), the proponent or applicant must,</p>



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	<p>prior to conducting public participation as contemplated in chapter 5 of these regulations, appoint another EAP or specialist to externally review all work undertaken by the EAP or specialist, at the applicants cost.</p> <p>(3) An EAP or specialist appointed to externally review the work of an EAP or specialist as contemplated in sub regulation (2), must comply with sub regulation (1).</p>
ECO	Environmental Control Officer – A site agent who needs to ensure that all environmental authorisation and conditions are adhered to during the construction phase of the project
EMPr	Environmental Management Programme – can be defined as “an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced”.
ESA	Ecological Support Area – Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of Pas or CBAs, and are often vital for delivering ecosystem services.
EMMP	Environmental Maintenance Management Plan – means a maintenance management plan for maintenance purposes defined and adopted by the competent authority
NEMA	National Environmental Management Act (Act 107 of 1998) as amended 2017 – national environmental legislation that provides principles for decision-making on matters that affect the environment.
PA	Protected Area - A protected area is an area of land or sea that is formally protected by law and managed mainly for biodiversity conservation. Protected areas recognised in the National Environmental Management: Protected Areas Act (Act 57 of 2003) (hereafter referred to as the Protected Areas Act) are considered formal protected areas in the NPAES. This is a narrower definition of protected areas than the International Union for Conservation of Nature (IUCN) definition. ¹ The NPAES distinguishes between land-based protected areas, which may protect both terrestrial and freshwater biodiversity features, and marine protected areas.



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1. INTRODUCTION

Eco Route Environmental Consultancy has been instructed by the applicant, the Department of Transport and Public Works (Western Cape Government) to prepare an Environmental Maintenance Management Plan (EMMP) for the clearance of vegetation for sightlines within the road reserve for the new driveway access point onto Waterside Road for Erf 1262 Wilderness.

The location of the sightlines is within the road reserve of the Waterside Road, within the Provincial Roads authority. The vegetation to be disturbed is Garden Route Granite Fynbos (endangered) and falls within a Critical Biodiversity Area. These activities trigger Listed activity 12 of Listing Notice 3 of the EIA Regulations, 2014 as amended.

Activity No(s):	Basic Assessment Activity(ies) as set out in Listing Notice 3 of the EIA Regulations, 2014 as amended	Activity to be undertaken.
12	<p>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.</p> <p>a. Western Cape</p> <p>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;</p>	The clearance of vegetation for sightlines within the road reserve for the new driveway access point onto Waterside Road.

A meeting with the Department of Forestry, Fisheries and the Environmental (DFFE) was held on 16/08/2022 to discuss the amendments to the approved SDP for the development on Erf 1262 Wilderness, including the new access for the driveway. Requirements for clearing of vegetation for sightlines was discussed and it was determined that an Environmental Maintenance Management Plan is adequate as a BAR is not triggered.

The Draft EMMP will be subjected to a 30-day public participation commenting period, where the draft EMMP will be made available on **Eco Route's** Website: www.ecoroute.co.za. All comments received will be incorporated into a Comments and Response Report and submitted to DFFE for authorisation.



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From the submission of the application for adoption of an EMMP, the final report must be submitted within 90 days (including the 30-day PPP) or the application will lapse.

Minimum required information to be contained in the EMMP *inter alia*:

1. Details of the party responsible for implementing the EMMP;
2. Details of the Environmental Assessment Practitioner appointed to compile the EMMP (if applicable), or the details of the proponent who compiled the EMMP;
3. Correct listed or specified activities, which will be excluded from the requirement to obtain an Environmental Authorisation, by the adoption of the EMMP submitted to the Competent Authority (CA).
4. The need for the development of EMMP and what it will achieve;
5. The nature of the maintenance/remedial work to be undertaken;
6. The impact of the maintenance/remedial work to the receiving environment;
7. The EMMP must distinguish between maintenance management actions and outcomes, if possible;
8. An appropriate assessment for risk for each of the proposed types of maintenance activities and management actions;
9. Specialist input/studies (if applicable and the declaration of independence);
10. Details of specialists or engineers appointed and the terms of reference of their studies to assess the needs for the maintenance work (if applicable);
11. Layout and sensitivity maps;
12. Mapped biodiversity features at the site of the proposed maintenance e.g., Critical Biodiversity Areas, Ecological Support Areas, National Freshwater Ecosystem Priority Areas, etc.; and
13. Public Participation Process (as agreed to at the pre-application meeting).



1.1 BACKGROUND

Environmental Authorisation was issued on 08/06/2020 with reference number 14/12/16/3/3/1/2071, for the development of Erf 1262 Wilderness. Clearing of vegetation on the lower level of the site has commenced according to the approved EA. Eradication of alien plants has commenced.

The access point for the new driveway entrance requires vegetation to be removed within the road reserve of Waterside Road for sightlines, as requested by the Roads Authority. This section of road runs through Erf 1262 Wilderness. This activity requires an approved Maintenance Management Plan.

The location of the sightlines is within the road reserve of the Waterside Road, within the Provincial Roads authority. The vegetation to be disturbed is Garden Route Granite Fynbos (endangered) and falls within a Critical Biodiversity Area. These activities trigger Listed activity 12 of Listing Notice 3 of the EIA Regulations, 2014 as amended.

A meeting with the Department of Environmental, Forestry and Fisheries (DFFE) was held on 16/08/2022 to discuss the amendments to the approved SDP for the development on Erf 1262 Wilderness, including the new access for the driveway. Requirements for clearing of vegetation for sightlines was discussed and it was determined that an Environmental Maintenance Management Plan is adequate as a BAR is not triggered.

There is an approved EMPr for the development on Erf 1262, that was compiled by Andrew West Environmental Consultancy in February 2020 for the Environmental Authorisation process. As the sightlines do not form part of this development, the EMMP will focus on the clearance of vegetation in order to minimise loss of habitat and minimise the loss of vegetation by using appropriate methods and mitigations.

The new position of the entrance road was determined by a consulting engineer, as the Department of Transport and Public Works (Western Cape) required the existing access road to be closed. The new position of the access road will be opposite the Melkhout Avenue entrance onto Waterside Road. This requires additional clearing for site lines along Waterside Road (figure 1).

The new road position allows for safer entrance and exit from the property. The existing entrance will be closed and rehabilitated. The sightlines are required to provide sufficient line of sight and visibility for safe use of the stretch of road. Vegetation that has encroached into the road reserve poses a risk to users of the road, specifically where there are intersections. It should also be noted that vegetation encroaching in to the road reserve has been previously disturbed when the road was constructed, and maintained thereafter.



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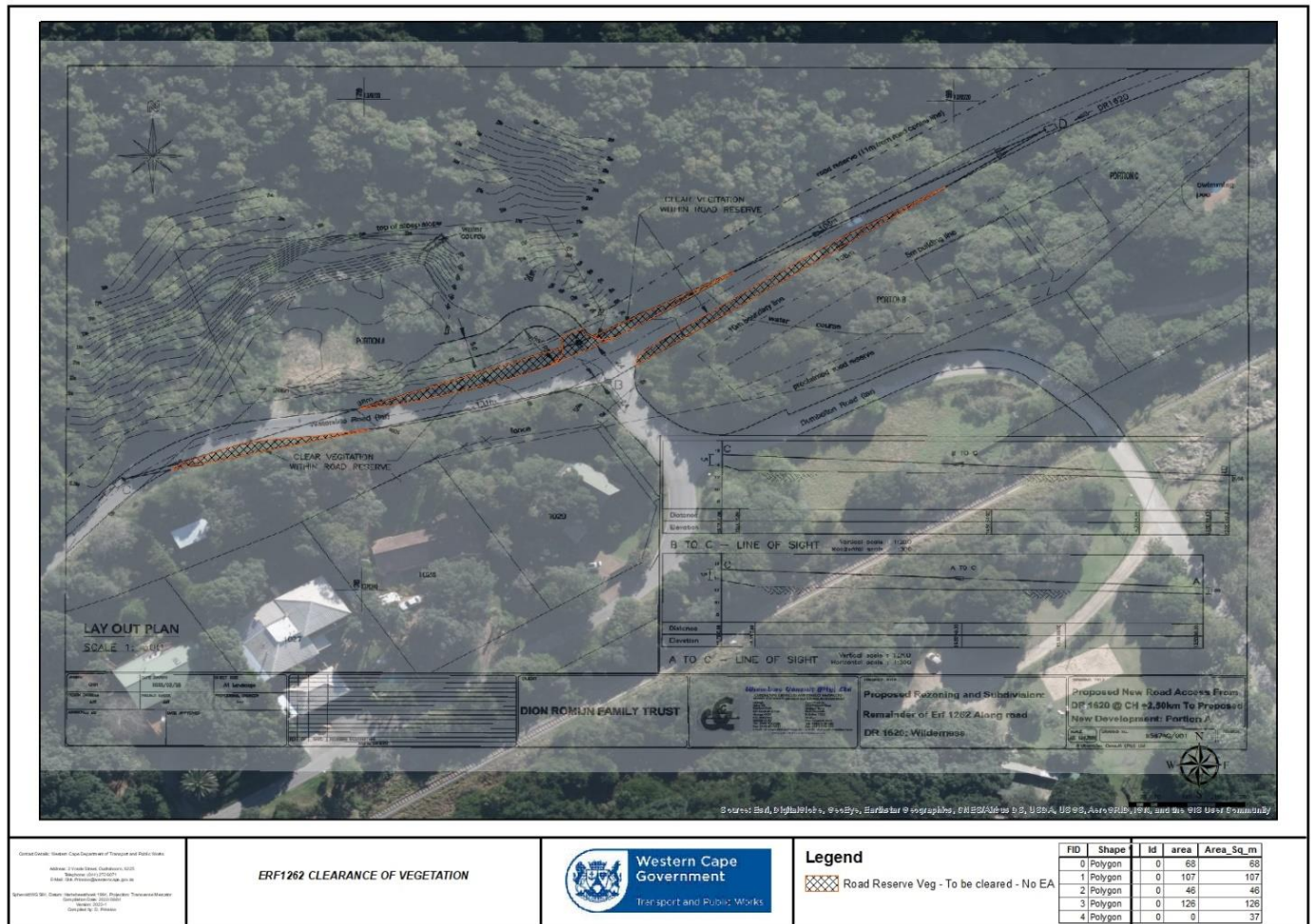


Figure 1: Overlay showing entrance to Erf 1262 Wilderness, with sightlines highlighted (orange and hash) that require vegetation clearing.

1.2 SITE DESCRIPTION

Erf Number:	1262
Area:	96434.3
SG Code:	C02700090000126200000
Co-ordinates:	Lat: -33.991238 Lon: 22.597792



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1.3 LOCALITY



Figure 2: Figure 1: Location of Erf 1262 Wilderness.

1.4 SITE SENSITIVITY

Critical Biodiversity Areas (CBAs) are defined by Berliner et al. (2007) as: "CBAs are terrestrial and aquatic features in the landscape that are critical for conserving biodiversity and maintaining ecosystem functioning". These areas are classified as natural to near-natural landscapes. The sight lines are partially within the CBA to the southeast of the property, as indicated in figure 2.

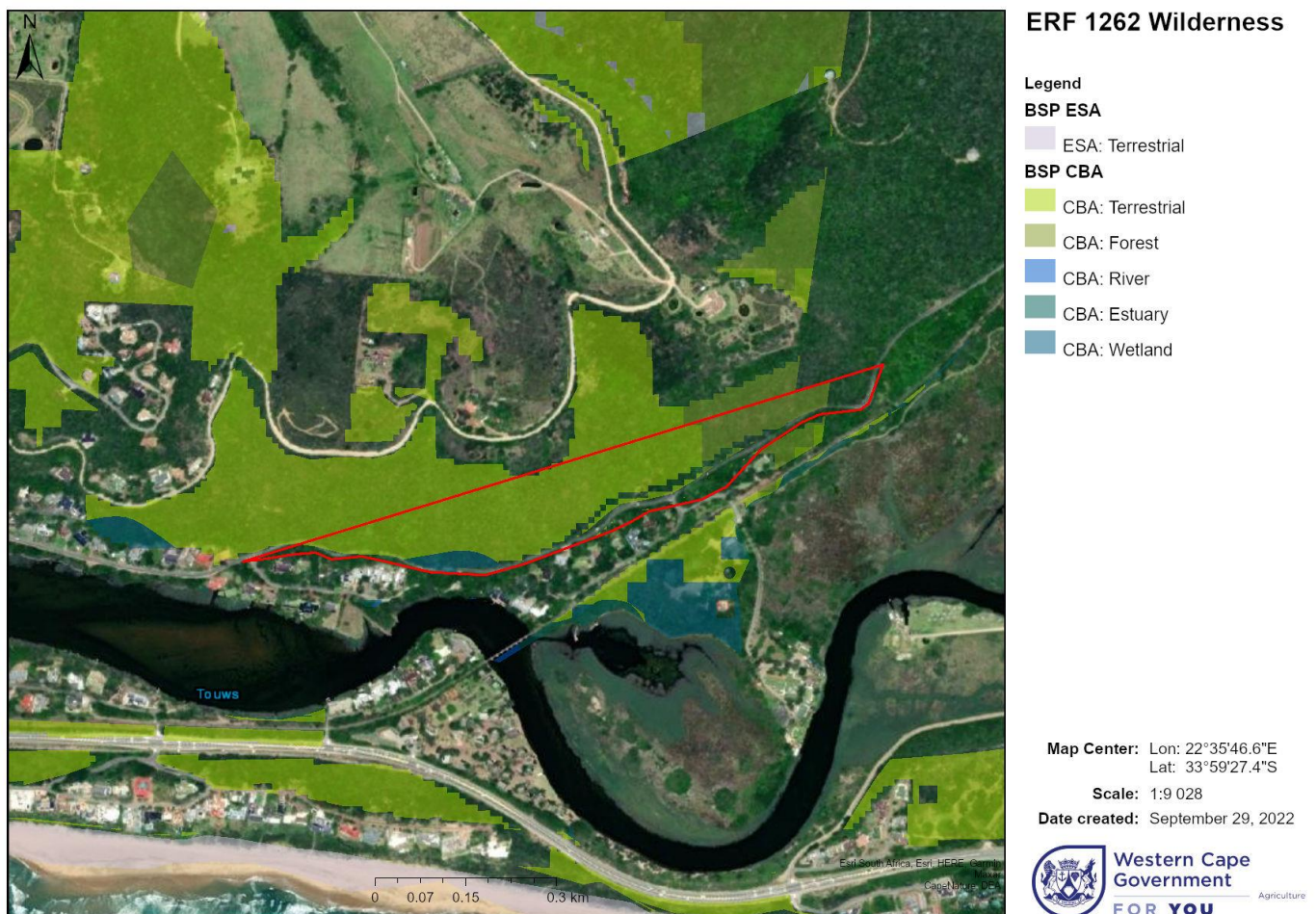


Figure 3: Critical Biodiversity (CBA) and Ecological Support Areas (ESA) for Erf 1262 Wilderness.



ERF 1262 Wilderness

Legend

Ecosystem Threat Status 2016

- Status
- CR
 - EN
 - LT
 - VU

Map Center: Lon: 22°35'46.6"E
Lat: 33°59'27.4"S

Scale: 1:9 028

Date created: September 29, 2022



**Western Cape
Government**
FOR YOU

Agriculture

Figure 4: Ecological Threat Status for Erf 1262 Wilderness.

The vegetation type on the property is Garden Route Granite Fynbos (figure 4), classified as Endangered. Only about 1% of this vegetation type is conserved in the proposed Garden Route National Park. About 70% has been transformed for cultivation (56%), pine plantations (7%) and by urban development (6%). Remnants are largely confined to isolated pockets on steeper slopes. Very few patches of this type remain in a pristine condition as most of it has been converted to pasture by liming, bush-cutting and frequent burning, and augmented with pasture grasses.

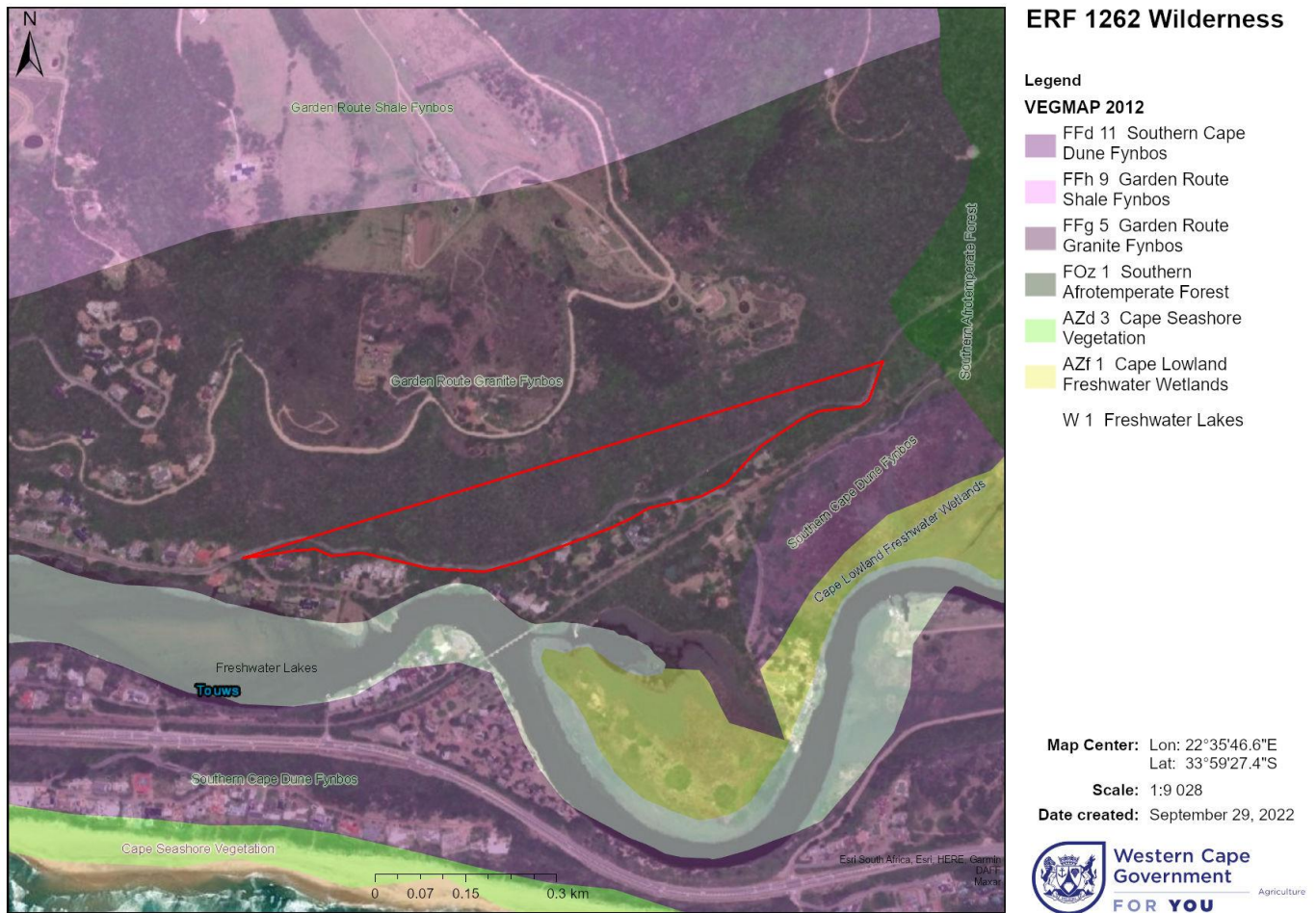


Figure 5: Vegetation type according to VegMap 2012, for Erf 1262 Wilderness.

1.5 PURPOSE OF THE EMMP

The purpose of this EMMP is to ensure that the negative environmental impacts of the proposed activities are managed, mitigated and kept to a minimum while undertaking the clearance of vegetation for the sightlines. The EMMP focuses on avoiding damage or loss to ecosystems and the services they provide, and to enhance positive environmental impacts where possible.

The EMMP is a living document that is flexible and responsive to new and changing circumstances; however, should a change be made within the EMMP, permission from DFFE must first be obtained.

Once the EMMP is approved by DFFE it is seen as a legal binding document on the following affected parties:

- 1 Project Applicant.
- 2 All contractors.
- 3 Sub-contractors and staff.
- 4 The appointed ECO.

Copies of this EMMP must be kept on site and all senior personnel are expected to familiarise themselves with the content of this document.



It is suggested that the EMMP be reviewed on a 5 yearly basis as maintenance of the sightlines will be ongoing. Written authorisation should be obtained from DFFE in this regard.

2. PHASES OF THE PROPOSED CLEARANCE OF VEGETATION FOR SIGHTLINES

2.1. PUBLIC PARTICIPATION

The draft EMMP was circulated to the following State Departments, Municipalities and Organs of State for comments:

STATE DEPARTMENTS			
NAME	CONTACT PERSON	POSTAL ADDRESS	EMAIL
Department of Environment, Forestry and Fisheries	Bathandwa Ncube		BNcube@dffe.gov.za
Department of Transport and Public Works – Western Cape Government	Azni Khail November	9 Dorp Street Cape Town 8001	Azni.november@westerncape.gov.za
Department of Transport and Public Works – Western Cape Government	Dirk Prinsloo	Private Bag x617, Oudtshoorn, 6620	Dirk.Prinsloo@westerncape.gov.za
DEA&DP	Danie Swanepoel	P/Bag X 6509 George 6530	DEADPEIAAdmin.George@westerncape.gov.za/ Danie.swanepoel@westerncape.gov.za
Heritage Western Cape	Andrew September	Private Bag x9067, Cape Town, 8000	Noluvo.Toto@westerncape.gov.za
DAFF: Forestry Management	Melanie Koen	P.O. Box 1205, George, 6530	Mkoen@dffe.gov.za
Southern Cape Fire Protection Agency	Dirk Smit	Private Bag x12, Knysna, 6570	managerfpa@gmail.com
Cape Nature – Western Cape	Collin Fordham	P/Bag 6546 George	landuseadvicesouth@capenature.co.za



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		6530	
SANParks	Maretha Alant	P.O. Box 3542 Knysna 6570	Maretha.alant@sanparks.org
MUNICIPALITIES			
George Municipality - Environmental management	Priscilla Burgoyne	82 Meade Street, George	Pburgoyne@george.gov.za
George Municipality - Town Planning Section	Clinton Petersen	71 York Street PO Box 19, George, 6530	cpetersen@george.gov.za
NGO'S			
Wilderness Ratepayer's Association WALEAF - Langvlei			waleaf@langvlei.co.za

All comments and concerns will be addressed in the Comments and Response Report included in the Final EMMP.

2.2. PRE-CLEARANCE

Before clearing commences the following steps must be taken:

1. The appointed contractor must have the signed appointment from the client in his possession.
2. The health and safety file must be prepared and approved, by the Health and Safety Officer, appointed by the client.
3. All personnel on site must be familiar with the approved EMMP.
4. All personnel on site must be inducted by the appointed ECO.
5. The EMMP must be adhere to at all times.

Section 15 of the National Forest Act (NFA) (Act No. 84 of 1998) as amended prohibits the cutting, disturbing, damaging or destroying of protected tree species without a licence. Section 7 of the National Forest Act (NFA), act no 84 of 1998 as amended provides for the prohibition of the destruction of indigenous trees in any natural forest without a license.

Protected trees must be considered as "No-go" areas. The roots of protected/ indigenous trees should not be exposed during maintenance. Ample soil radius around protected tree roots to be kept intact to avoid dehydration of tree. Measures must be put in place to achieve this goal in order



to avoid soil eroding from and around the root system i.e., three or more layers of heavy duty Bidim must be used in this case.

Prior to the commencement of clearing works, the following must be completed:

1. Notify DFFE prior to any clearance activities occurring on the site.
2. Delineate the area to be disturbed either physically using pegs and/or flagging tape.
3. No-go areas and protected trees must also be demarcated prior to commencement of activities.
4. The extent of the clearing must be marked out to satisfaction of the ECO.
5. Survey area for alien plants and remove them using the appropriate methods to prevent infestation.
6. A suitable site for vegetation stockpiles must be identified.
1. The appointed ECO must, on a weekly basis, submit Environmental auditing reports to all relevant authorities, with dated photographs and detailing compliance/ noncompliance with the EMMP.

2.3. VEGETATION CLEARING

Vegetation clearing will entail the following actions:

2. Pre-clearing meeting for all contractors to ensure that the clearing plan is understood by all relevant personnel.
3. Topsoil must not be disturbed. Where it is necessary to disturb topsoil, such as for the removal of tree stumps or alien vegetation, the activity must be closely monitored to ensure the area is not overworked, which may lead to the loss of topsoil or compaction and rutting.
4. Vegetation must be removed by hand as far as possible. This includes brush cutting, chainsaws, and hand pulling. Where deemed necessary, machinery such as tractor operated mowers can be used. Only qualified and trained personnel may operate the machinery.
5. Any indigenous vegetation, where there is any uncertainty regarding identification and status that is to be removed from the site must first be discussed with the ECO.
6. Removal of invasive alien vegetation must take place as a matter of course, with caution, to ensure that soil disturbance is not excessive, and areas opened up do not become vulnerable to potential erosion
7. Stack cleared vegetation into windrows within designated stockpiling locations inside the boundary of clearance area.
8. Cleared vegetation must be removed from the site to a suitable registered green waste facility or chipped on site.
9. Due to the ever-present risk of fire, no vegetation may be removed using burning. The same applies to the burning of excessive alien vegetative material on site.



2.4. MAINTAINANCE OF SIGHTLINES

It is suggested that the EMMP be reviewed on a 5 yearly basis as maintenance of the sightlines will be ongoing. Written authorisation should be obtained from DFFE in this regard.

Maintenance of the sightlines by clearing vegetation should be undertaken annually or as often as required, before visibility and line of sight is compromised by overgrown vegetation. It must be noted that due to the clearance methodology of brush cutting rather than removal of the plant, clearing may need to be undertaken more regularly. The first vegetation clearing activities for the sight lines done in accordance with the approved EMMP is referred to as the initial clearing. Clearing of vegetation thereafter will be referred to as follow-up clearing.

The responsibility for maintaining these sight lines should be that of the person in control of the land and must be undertaken in accordance with the approved EMMP.

3. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES DURING THE CLEARING ACTIVITIES

An environmental impact can be defined as an effect or consequence that a development or activity will have on economic, social, and ecological processes.

There are mainly three categories of environmental impacts:

Direct Impacts: These are caused by the development/activity itself on the receiving environment.

Indirect Impacts: These impacts are usually linked closely with a project and may have more profound results than the direct impacts.

Cumulative impacts: These impacts can be defined as the ability of natural and social environments to incorporate cumulative stresses placed on them and the likelihood of negative synergistic effects. Cumulative impacts also arise when existing or future development rights set a precedent in an area. The process of cumulative impacts may arise from any of the following events:

- A single large event,
- Multiple interrelated events
- Sudden or catastrophic events or incremental change

The objectives of management of impacts are to:

- Protect the receiving environment against degradation as a result of the clearance of vegetation.
- Identify mitigation measures to minimize each identified impact before the impact even occurs.
- Ensure the mitigation measures are appropriate, cost effective and financially feasible.
- Avoid, minimise or remedy adverse impacts.



- Ensure that residual impacts are within acceptable levels.
- Monitor the effectiveness of mitigation measures.
- Take action when unforeseen impacts occur.
- Have contingency plans at hand should an unforeseen event occur.

3.1. ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE CLEARANCE OF VEGETATION

The criteria are also based on the EIA Regulations, published by the Department of Environmental Affairs and Tourism (April 1998) in terms of the Environmental Conservation Act No. 73 of 1989. These criteria include:

Nature of the impact

This is an estimation of the type of effect the construction, operation and maintenance of a development would have on the affected environment. This description should include what is to be affected and how.

Extent of the impact

Describe whether the impact will be: local extending only as far as the development site area; or limited to the site and its immediate surroundings; or will have an impact on the region or will have an impact on a national scale or across international borders.

Duration of the impact

The specialist should indicate whether the lifespan of the impact would be short term (0-5 years), medium term (5-15 years), long term (16-30 years) or permanent.

Intensity

The specialist should establish whether the impact is destructive or benign and should be qualified as low, medium or high. The specialist study must attempt to quantify the magnitude of the impacts and outline the rationale used.

Probability of occurrence

The specialist should describe the probability of the impact actually occurring and should be described as improbable/unlikely (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of any prevention measures).

Reversibility

- Completely reversible – the impact can be reversed with the implementation of minor mitigation measures.
- Partly reversible – the impact is reversible but more intense mitigation measures are required
- Barely reversible – the impact is unlikely to be reversed even with intense mitigation measures
- Irreversible – the impact is irreversible, and no mitigation measures exist

Irreplaceable loss of resources

Describes the degree to which resources will be irreplaceably lost due to the proposed activity. It can be no loss of resources, marginal loss, significant loss or complete loss of resources.



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ENVIRONMENTAL CONSULTANCY

REGISTRATION NO. 1998/031976/23

DR. COLLEEN EBERSOHN

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Cumulative effect

An effect which in itself may not be significant but may become significant if added to other existing or potential impacts that may result from activities associated with the proposed development. The cumulative effect can be:

- Negligible – the impact would result in negligible to no cumulative effect
- Low – the impact would result in insignificant cumulative effects
- Medium – the impact would result in minor cumulative effects
- High – the impact would result in significant cumulative effects

Significance

Significance of impacts are determined through a synthesis of the assessment criteria and is described as –

- Low negative – where it would have negligible effects and would require little or no mitigation
- Low positive – the impact will have minor positive effects
- Medium negative – the impact will have moderate negative effects and will require moderate mitigation
- Medium positive – the impact will have moderate positive effects
- High negative – the impact will have significant effects and will require significant mitigation measures to achieve an accepted level of impact
- High positive – the impact will have significant positive effects
- Very high negative – the impact will have highly significant effects and are unlikely to be able to be mitigated adequately
- High positive – the impact will have highly significant positive effects.

The identified Environmental Impacts associated with the clearance of vegetation are indicated in the table below:

Potential impact on biological aspects:	
Nature of impact:	Loss of indigenous species and species diversity
Extent and duration of impact:	Limited to the site
Probability of occurrence:	Highly probable
Degree to which the impact can be reversed:	Partly reversible
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss
Cumulative impact prior to mitigation:	Low - Medium negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative



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Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	<ul style="list-style-type: none"> Disturbance to intact vegetation beyond the clearance footprint must be restricted by demarcating the areas to be cleared, including vegetation stockpile areas. vegetation stockpile areas should be contained within the planned clearance areas or existing disturbed areas and should not be placed in the surrounding intact vegetation. All personnel active on site must be notified of the importance of avoiding disturbance to intact vegetation outside of demarcated clearance areas. Permits for the destruction of protected plant species must be obtained from the relevant authorities.
Cumulative impact post mitigation:	Low negative
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Potential impact on biological aspects:	
Nature of impact:	Disturbance to wildlife
Extent and duration of impact:	Limited to the site and its immediate surroundings
Probability of occurrence:	Improbable/unlikely
Degree to which the impact can be reversed:	Partly reversible
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss
Cumulative impact prior to mitigation:	Low negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low – Medium negative



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Degree to which the impact can be mitigated:	Low
Proposed mitigation:	<ul style="list-style-type: none"> If any animals are encountered on site, they should be relocated to undisturbed areas. No animals may be caught, trapped, killed, injured, or hunted.
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Potential impact on biological aspects:	
Nature of impact:	Disturbance of protected and indigenous trees' roots systems.
Extent and duration of impact:	Limited to the site and its immediate surroundings
Probability of occurrence:	Improbable/unlikely
Degree to which the impact can be reversed:	Completely reversible – the impact can be reversed with the implementation of minor mitigation measures.
Degree to which the impact may cause irreplaceable loss of resources:	No loss
Cumulative impact prior to mitigation:	Medium negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	<ul style="list-style-type: none"> All protected and indigenous trees must be retained and cordoned off as No-go areas. Roots of protected/ indigenous trees should not be exposed during maintenance works. Ample soil radius around protected tree roots to be kept intact to avoid dehydration of tree. Permits for the destruction of protected plant species must be obtained from the relevant authorities.
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

Potential impact on biological aspects:
--



Nature of impact:	Spread of Alien Invasive Plants (AIP)
Extent and duration of impact:	Limited to the site and its immediate surroundings
Probability of occurrence:	Highly probable
Degree to which the impact can be reversed:	Completely reversible – the impact can be reversed with the implementation of minor mitigation measures.
Degree to which the impact may cause irreplaceable loss of resources:	No loss
Cumulative impact prior to mitigation:	Medium negative
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	<ul style="list-style-type: none"> • Any AIP material removed during clearing must be removed from the site and destroyed so that reestablishment on site is avoided, or chipped when the plant is not seeding. • Follow-up clearing for AIPs within the sight line areas should take place on a yearly basis. •
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low negative

4. LEGISLATIVE REQUIREMENTS

The Applicant, the Department of Transport and Public Works (Western Cape), is required to comply with all necessary legislation, policies and guidelines. These include, but are not limited to:

4.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA, ACT 107 OF 1998)

The National Environmental Management Act (NEMA, Act No. 107 of 1998, as amended) embraces the notion of sustainable development as contained in the Constitution in that everyone has the right:

- to an environment that is not harmful to their health or well-being; and
- to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures.



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Principles contained in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended (NEMA), which, amongst other things, indicates that environmental management should:

- In order of priority aim to avoid, minimise or remedy disturbance of ecosystems and loss of biodiversity;
- Avoid degradation of the environment and avoid jeopardising ecosystem integrity;
- Pursue the best practicable environmental option by means of integrated environmental management;
- Protect the environment as the people's common heritage;
- Control and minimise environmental damage; and
- Pay specific attention to management and planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.

Section 28 Duty under the National Environmental Management Act (NEMA) to take reasonable measures to prevent pollution or degradation to the marine environment throughout all proposed project phases.

All probable listed activities have been identified; the below table indicates all listed activities associated with the clearance of vegetation. The table provides a description of the listed activity and the reason why /why not the activity is not applicable to the clearance of vegetation for sight lines:

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 1 (GN R983)	Describe the portion of the proposed project to which the applicable listed activity relates.
N/A		
Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 3 (GN R98)	Describe the portion of the proposed project to which the applicable listed activity relates.
12	<p>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.</p> <p>b. Western Cape 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;</p>	<p>The clearance of vegetation for sightlines within the road reserve for the new driveway access point onto Waterside Road requires more than 300m² of indigenous vegetation cleared, approximately 500m², within a CBA. The area to be cleared is within a road reserve and will be undertaken in accordance with this Maintenance Management Plan.</p> <p>Therefore, listed activity 12 of LN 3 does not trigger the need for a Basic Assessment in this regard.</p>
Activity No(s):	Provide the relevant Scoping and EIR Activity(ies) as set out in Listing Notice 2 (GN R984)	Describe the portion of the proposed project to which the applicable listed activity relates.
N/A		



4.2 OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1983)

The Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work. In terms of this Act, a Health and Safety Officer and Protocol must be implemented on the site during clearance.

4.3 NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT, 2003 (ACT NO. 57 OF 2003) GN 1175 OF 2009

The purpose of the Regulations is-

(a) To provide for-

- (i) The management of the protected environment in accordance with the Act; and
- (ii) The management and protection of the ecological integrity of the protected environment;

(b) To ensure that-

- (i) The use of natural and biological resources in the protected environment is undertaken in a sustainable manner;
- (ii) the supply of environmental goods and services within the protected environment is undertaken in an equitable and sustainable manner and is consistent with the Act and the purpose for which the protected environment has been declared a protected environment; and
- (iii) All development as well as any other activity carried out in the protected environment is appropriate for the area and consistent with the Act, given the purpose for which the protected environment has been declared as such;

(c) To control-

- (i) change in the use of land situated within the protected environment;
- (ii) The use of public amenities within the biodiversity control area and declared a protected environment.

5. EMMP ROLES AND RESPONSIBILITIES

Responsibilities must be clearly identified for the different parties involved in implementing the management actions and monitoring.

The following parties play an important role in ensuring compliance to the EMMP:

1. Project Applicant – Department of Transport and Public Works (Western Cape)
2. Contractors
3. Environmental Control Officer



5.1 PROJECT APPLICANT

Department of Transport and Public Works (Western Cape) is the project applicant and will be responsible for the following:

- Adhering to the approved EMMP.
- Ensure that all employed Contractors are aware of and understand the conditions of the EMMP.
- Has the right to remove any person or appointed contractors or personnel from site if they contravene the EMMP.
- Ensure that all contracts with contractors/engineers include the authorised EMMP.
- Appoint an Environmental Control Officer.
- The project applicant (holder of the Environmental Authorisation of the EMMP) must notify the competent authority of the initial commencement of maintenance management activities **14 days prior to such commencement taking place.**

5.2 ENVIRONMENTAL CONTROL OFFICER

The name and contact details of the ECO must be forwarded to the DFFE case officer, prior to the initial commencement of clearance activities. The ECO's specific function will be to monitor the Contractor's compliance to the EMMP and the impact on the environment.

The ECO is responsible for environmental awareness training, and must ensure that contractors, site personnel and staff receive an induction presentation on the importance and implications of the EMMP prior to initial commencement of vegetation clearing. The Training must include the following:

- The importance of complying with the EMMP.
- Identification of no-go areas.
- The identified negative environmental impacts and the mitigation measures.
- Request method statements prior to clearing commencing.

It is envisaged that the ECO will be on site for the following periods:

- A site visit or visits at the start of the project for as many hours as required.
- A site visit or visits at the completion of the project for as many hours as required.
- Whenever there is an emergency environmental incident.
- The ECO should attend any site meetings.

The ECO will be responsible for monitoring, reviewing and verifying compliance with the EMMP by the Contractor. The ECO's duties in this regard will include the following:

- Monitoring and verifying that the EMMP is adhered to at all times and taking action if the specifications are not followed;
- The ECO must keep compliance and noncompliance records and make available to the relevant authorities within 5 days of receipt of this request;



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- Monitoring and verifying that environmental impacts are kept to a minimum;
- Reviewing and approving method statements together with the Contractor;
- Assisting the Contractor in finding environmentally responsible solutions to problems;
- Keeping a register of and dealing with any community comments or issues;
- Monitoring the undertaking by the Contractor of environmental awareness training for all new personnel coming onto site;
- Ordering the removal of person(s) and/or equipment not complying with the specifications.
- Issuing of fines for transgressions of site rules and EMMP;
- Suspending all environmental activities should a serious environmental transgression occur, until the transgression is fixed.
- Ensuring that activities on site comply with other relevant environmental legislation;
- Keeping a photographic record of progress from an environmental perspective;
- Engage in regular discussions with relevant authorities on any significant non-compliance by the applicant and the steps to be taken to rectify this.
- Undertaking a continual internal review of the EMMP and submitting an ECO Report to all relevant authorities, when requested.

5.3 CONTRACTORS

The responsibilities of the Contractors include but are not limited to the following:

- Adhere with the conditions and recommendations of the EMMP or any other legally binding documentation;
- Prevent actions that may cause harm to the environment;
- Be responsible for any remedial activities in response to an environmental incident within their scope of influence;
- Ensure compliance of all site personnel and / or visitors to the EMMP and any other authorisations.



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6. ENVIRONMENTAL MANAGEMENT PROGRAMME

PRE-CLEARANCE PHASE			
TASK	MANAGEMENT TOOLS	RESPONSIBILITY	TIMEFRAME
EMMP INDUCTION	PLANNING		
	The EMMP applies to all appointed contractors, ECO and their staff	All	Ongoing
	Provide the ECO with all method statements and contingency plans	Contractor	Prior to clearing commencing
	All site staff and contractors to have environmental training on the EMMP and identifications of no-go areas prior to initial commencement	ECO	
	CODE OF CONDUCT		
	No Harvesting, trampling, cutting and disturbing of flora (outside the active site) is permitted and will be subjected disciplinary action	ECO	Ongoing
Pollution of the site and surrounding areas will be subjected to disciplinary action			
SITE ESTABLISHMENT	SITE ESTABLISHMENT		
	Area for cleared vegetation stockpiling must be identified, and easily accessed for removal	Contractor /ECO	Before site setup
	Provisions must be made for the following: <ul style="list-style-type: none"> Hazardous substance storage area such as fuel Safety measures for staff working next to the road 	All	
	Identify no go areas and site demarcation around the sight line footprints. Damage to the environment is prohibited within the no go areas	Contractor	
	Waste bins to be provided where necessary	Contractor	
CLEARANCE PHASE			
SITE ACCESS	ROUTING/VEHICLES		
	Care should be taken that local traffic flow patterns is not significantly disturbed	All	During clearance
	All vehicles to adhere to speed limit and traffic rules		
VEHICLE & EQUIPMENT	MAINTENANCE		
	No vehicles may be repaired on site.	Contractor	During clearance
	No re-fuelling of vehicles on site.	Contractor	
	Tarpaulin must be laid down if equipment is to be repaired in case of emergency in designated area to prevent environmental pollution	Contractor	



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	All equipment to be serviced and adequately maintained to prevent oil spills, diesel, or fuel leaks	Contractor	
	Should the equipment/machinery used to be deemed a pollution risk by the ECO, this equipment must be repaired or removed from site	ECO	
FIRE AND SAFETY MANAGEMENT	FIRE PREVENTION		
	No open fires allowed on site	ALL	Ongoing
	No burning of waste is permitted on site		
	Working fire extinguishers and firefighting equipment must be available all times on site		
	In case of an accidental fire the contractor must alert George Fire Department immediately	Contractor	
	SAFETY		
A Health and Safety Officer to be appointed	Contractor	Prior to clearing	
A first aid kit to be on site and all emergency numbers to be displayed on site	Contractor		
NOISE AND VISUAL IMPACTS	NOISE IMPACTS		
	Noise levels must comply with health and safety regulations. The health and safety consultant should ensure compliance with legal limits.	Contractor	Ongoing
POLLUTION – METHOD STATEMENT AND CONTINGENCY PLANS	POLLUTION PREVENTION MEASURES		
	The pollution of the receiving environment must be prevented at all costs, therefore it is required to prevent and manage the sources of pollution. The probable source of pollution is listed below: <ul style="list-style-type: none"> 1. Spillage and contamination from oil 2. Spillage and contamination of hydraulic fluids 3. Spillage and contamination from fuel <p>A method statement and contingency plan written by the contractor must be submitted to ECO for approval.</p>	Contractor	Prior to clearance and ongoing
CRITICAL BIODIVERSITY AREA	FAUNA & FLORA		
	No harvesting of plants permitted.	ALL	Ongoing
	Any fauna found on site may not be harmed, and the ECO is to determine appropriate relocation procedures should this become necessary.		
No-go areas to be adhered to and no damage or people walking/trampling will be permitted in the identified no-go areas.			
HERITAGE	DISCOVERY OF HERITAGE RESOURCES		



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	<p>If any heritage resources are discovered work will be suspended immediately and the appropriate authorities must be contacted</p> <p>Examples of heritage resources are as follow:</p> <ul style="list-style-type: none"> • Human remains • Coins/Gold/Silver • Fossils • Fossils shell middens/ marine shell heaps • Pottery/ceramics 	ALL	Ongoing
RECORD KEEPING	APPOINTED ECO		
	All administrative procedures, permits, required licences to be submitted to ECO	Contractor /Applicant	Ongoing
	Record keeping of all site meetings, monitoring reports, approved EMMP, contingency plans and method statements must be clearly documented and kept by the ECO	ECO	
	A site register should also be kept on site for recording of any emergency incidents, negative environmental impacts	ALL	
ECO reports to be submitted to DFFE when requested	ECO		
SITE AREA	SITE CLEAN-UP		
	All Areas cleared of any stockpiled materials	Contractor	After clearing is completed
	All cleared vegetation to be removed to a licensed facility or chipped on site		
	Invasive Alien Plant materials to be dealt with according to the mitigation measures		
	Any demarcations associated with the clearing phase are to be removed from site		
	All litter and rubbish bags/bins to be removed from site		
AUDIT REPORT			
An environmental audit report must be completed and submitted to DFFE when requested	ECO	After clearing is completed	



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7. CONCLUSION

This is a draft EMMP and the comments of all Authorities and Registered I&AP's will be taken into consideration for the Final Report. A Comments and Response Report will be attached to the Final EMMP. Clearing activities may only commence once DFFE has approved the EMMP.



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Annexure 1 Map of Sight Lines





Annexure 2 CV of EAP

FORM TECH-6 (CONTINUED)

CURRICULUM VITAE (CV)

Position Title and No.	Senior Environmental Assessment Practitioner
Name of Expert:	Janet Ebersohn
Date of Birth:	23/05/1977
EAPASA REG:	2019/1286
Country of Citizenship/Residence	South Africa

Education:**Institution:** Tshwane University of Technology and Unisa**Year:** 1998**Degree:** National Diploma in Food Service Management**Institution:** University of South Africa**Year:** 2012**Degree:** BSc. Hons in Environmental Management**Institution:** Stellenbosch University**Year:** 2012**Degree:** Certificate on Flood Line Determination**Institution:** Rhodes University**Year:** 2013**Degree:** Certificate on Wetland Delineation.**Employment record relevant to the assignment:**

Period	Employing organization and your title/position. Contact info for references	Country	Summary of activities performed relevant to the Assignment
1998 - 2008	Various positions in Food Service Management Reference: Voughan Havenga	South Africa	Chef, Food procurement, Menu Development, Client Liaison
2008 - 2010	Junior Environmental Assessment Practitioner Reference: Dr C Ebersohn / Peet Joubert	South Africa	Oscaer Permits, DAFF permits, Basic Assessment Reports
2010 - 2022	Senior Environmental Assessment Practitioner Reference: Dr C Ebersohn / Danie Smit	South Africa	Social Impact Assessments, Wetland Delineation, Environmental Impact Assessments and Environmental Impact Reports pertaining to: <ul style="list-style-type: none"> • Residential Developments • Industrial Developments • Game Farm Management • Water use license



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			<p>applications</p> <ul style="list-style-type: none">• Waste management license applications• Air quality license applications• Permit applications for developments in identified sensitive areas <p>Environmental Management Programmes & Frameworks pertaining to:</p> <ul style="list-style-type: none">• Residential Developments• Industrial Developments• Game Farm Management• Water use license applications• Waste management license applications• Air quality license applications• Permit applications for developments in identified sensitive areas <p>Environmental Assessments for the determination of:</p> <ul style="list-style-type: none">• Coastal set back lines• Erosion set back lines• Flood line determinations• Wetland delineation• Sensitive areas set back lines <p>Integrated Environmental and Conservation Planning with Multi Spectrum Participation:</p> <ul style="list-style-type: none">• Environmental Management Programmes and training for companies• Environmental Management Programmes and training for NGO's
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Membership in Professional Associations:

Environmental Assessment Practitioners of South Africa

Language Skills:

Languages	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Good	Good	Good

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
{List all deliverables/tasks as in TECH- 5 in which the Expert will be involved}	Ms Janet has completed various Environmental Impact Assessment Applications, Environmental Management Programmes and social impact assessment reports. She has worked on the assessment of goods and services that the wetlands provide, thereby aiding informed planning and decision making.

Expert's contact information: (e-mail : janet@ecoroute.co.za, phone : +27 082 5577122)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.



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Annexure 3 Method Statement

To be included in Final EMMP



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Annexure 4 Comments and Response Report

To be included in Final EMMP