DRAFT ENVIRONMENTAL MAINTENANCE MANAGEMENT PLAN

For

GROOTVADERBOSCH NATURE RESERVE & BOOSMANSBOS WILDERNESS AREA WORLD HERITAGE SITE - ROAD MAINTENANCE & REPAIRS

National Environmental Management Act (Act No. 107 of 1998, as amended) & 2014 Environmental Impact Regulations

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PURPOSE OF THIS REPORT:

Stakeholder Review and Comment

APPLICANT:

CapeNature

CAPE EAPRAC REFERENCE NO:

WES914f/03

DEPARTMENT REFERENCE:

14/12/16/3/1/1/429/MP1

SUBMISSION DATE

29 April 2026

DRAFT ENVIRONMENTAL MAINTENANCE MANAGEMENT PLAN

in terms of the

National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended & Environmental Impact Regulations 2014

GROOTVADERBOSCH NATURE RESERVE & BOOSMANSBOS WILDERNESS AREA WORLD HERITAGE SITE - ROAD MAINTENANCE & REPAIRS

Western Cape Province

Submitted for:

Stakeholder Review & Comment

Report Issued by:
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1 EXECUTIVE SUMMARY

Grootvaderbosch Nature Provincial Reserve & Boosmansbos Wilderness Area (incorporated) World Heritage Site lies in the Langeberg Mountain range in the Western Cape province, North-East of Swellendam, 22km North-West of Heidelberg, East of Montague (GPS center point: 33° 59' 08.4" S | 20° 49' 24.7" E). It is a declared protected area of +/-250ha (Grootvadersbosch) plus 14 200ha (Boosmansbos).

The Reserve was proclaimed a protected area and set aside as a nature reserve in 1986, whilst Boosmansbos was proclaimed a wilderness area in 1978. Both are incorporated in the Cape Floral Kingdom and was declared part of the Cape Floral Kingdom World Heritage Site in 2004.

In compliance with the National Environmental Management: Protected Areas Act (NEMPAA Act 57 of 2003), the Reserve/Wilderness Area is operated as a protected area under an adopted **Langeberg Complex Protected Area Management Plan** (2020-2030). In accordance with this PAMP, the above-mentioned sectors must be visited and inspected for alien clearing, species surveys, fence management, as well as ecological fire management (incl fire breaks) – below extract from the PAMP regarding road/track maintenance.

> All roads and tracks need regular maintenance to fill potholes and erosion furrows as well as repairing and clearing drainage furrows and pipes. Some roads might need new layers of gravel or the placing of concrete blocks, paving bricks or *in-situ* casted concrete strips. This is done as part of a maintenance schedule and will include the cutting back of plant material that overgrow the paths. Care should be taken that all material brought into the reserve is clear of invasive alien vegetation seed or that it is regularly checked and cleared from germinating alien invasive vegetation.

To implement these important management actions, legitimate **vehicular access** is critical to transport rangers throughout and across the Reserve/Wilderness Area, to remote boundaries and locations, which may also include visiting tourist accommodation and maintaining hiking routes.

One (1x) management road within Grootvadersbosch (**Redwoods Road**) and one (1x) management track in Boosmansbos (**BarendKoen track**) require maintenance to enable safe vehicular access, including the BarendKoen bridge.

The location of the Reserve/Wilderness Area is in mountainous terrain, with several non-perennial and perennial tributaries from the greater catchment area, feeding larger streams. Runoff along and over the management track/roads causes erosion and damage, especially along minor drainage lines and more prominent watercourses. The damage caused by runoff and erosion prohibit safe vehicular access.

In the case of the Barend Koen track in the Boosmansbos Wilderness Area, a wildfire damaged the wooden bridge, making it impossible to cross with a vehicle. The track subsequently became overgrown and eroded. When accessing the Barend Koen track, CapeNature must traverse two (2) private land parcels, namely **Portion 1/Farm 196** and **Remainder Farm 97**.

The short RedWoods Road is an internal management road that CapeNature uses to access the RedWoods Trail.

Repair and maintenance of the damaged Redwoods Road and BarendKoen track is essential to CapeNature operations. Lack of, or limited access to remote species survey areas, boundary fences and eco-tourist features, restrict CapeNature's ability to implement their mandate within the Reserve and it compromises their ability to adhere to their PAMP in an effective manner. Furthermore, the resulting loss of income when CapeNature cannot offer all its eco-tourism opportunities, has a direct financial implication for Reserve operations.

The National Environmental Management Act (NEMA) makes allowance for the **repair and maintenance of existing lawful structures and infrastructure,** such as roads and water crossings, under guidance of an adopted Environmental Maintenance Management Plan (EMMP), on condition that such structures/infrastructure are repaired/maintained in a **like-for-like manner, where capacity and/or footprint is not increased** and the **structure/infrastructure remains in the same position/location**. In simple terms, maintenance interventions and repairs to the road and its supporting infrastructure, to ensure that the Redwoods Road and Barend Koen track can be accessed with a vehicle in a safe manner.

This EMMP deals with the repair and maintenance of these two roads/tracks within the Reserve, with its associated structures and infrastructure, within the scope of this definition. Importantly this EMMP takes note of the following important documents/guidelines:

- Langeberg PAMP,
- *Guidelines for the Development of a Management Plan for a Protected Area* in terms of the NEM:PAA
- *Guidelines for Development of an Environmental Management Plans* in terms of the NEMA, as well as
- CapeNature's internal *Environmental Management Plan for Roads*.

2 PURPOSE OF THIS REPORT

Considering the landscape, topography and ecological sensitivity of the Reserve/Wilderness ARea and its receiving environment, which is characterised by catchment management area functions and threatened vegetation types, maintenance of the internal roads/tracks must be conducted in a controlled, lawful, and environmentally responsible manner.

The purpose of this EMMP is to provide a structured, legally compliant framework that enables CapeNature to conduct routine, as well as emergency maintenance activities within the existing disturbed road/track footprints necessary for the road/track to function, without triggering listed activities that may require additional *prior* Environmental Authorisation (EA).

This report outlines the maintenance activities required, ensures that all interventions remain like-for-like, and prescribes the mitigation and management measures necessary to safeguard ecological and hydrological processes.

This EMMP has been prepared in accordance with the National Environmental Management Act, 1998 (Act No. 107 of 1998; NEMA) and the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), which allow for the adoption of an EMMP to regulate maintenance activities in sensitive environments, including Protected Areas declared under the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003; NEM:PAA).

Adoption of this MMP by the National Department of Forestry, Fisheries and the Environment (DFFE), as the competent authority, will enable the necessary repair and maintenance works to be undertaken in a regulated manner.

Once adopted, this EMMP must be adhered to by CapeNature and any party/employees responsible for conducting similar maintenance or repair works.

The EMMP must be reviewed on a five (5) year cycle and the DFFE must be informed if there is any need for amendments or updates to this EMMP.

3 ORDER OF REPORT

The EMMP comprises of several important sections, namely:

Section 1 outlines the **project background, need, and desirability** of the repairs and maintenance.

Section 2 provides an **environmental baseline**, including desktop vegetation, aquatic systems, biodiversity, heritage resources, and sensitive habitats.

Section 3 states the **legislative and policy framework** applicable to maintenance within Protected Areas.

Section 4 provides for **sensitivities, impact identification and assessment**, along with impact management outcomes and corresponding mitigation measures, confirming that no long-term negative impacts are expected with the correct and continued implementation of this EMMP.

Section 5 deals with monitoring and compliance requirements;

Section 6 reports on method statements aligned with the Western Cape Government (WCG) and Department of Infrastructure Maintenance Methods Manual (2021);

Whist **Section 7** details the Public Participation Process to support transparency and compliance with the EIA Regulations, 2014 (as amended).

4 PUBLIC PARTICIPATION

This EMMP is submitted as a *draft* report for review and comment by key stakeholders, including mandated Authorities, Organs of State and members of the public for a period no less than 30-days extending from **Thursday, 30 April – 1 June 2026**.

- Newspaper advert has been placed in the *South Cape Forum* calling for I&APs to participate and comment on the document;
- Site Notices have been put up at the Grootvaderbosch Nature Reserve office;
- Electronic copy of the document is available and can be downloaded from www.cape-eaprac.co.za (listed under 'Active Projects') and a hard copy is available at the Grootvadersbosch Nature Reserve office.

Following the outcome of the stakeholder engagement process, this draft EMMP will be updated to reflect submissions received and all submissions will be considered and responded to in order to capture potential outstanding information / oversights or corrections that may be necessary.

All submission must be made, in writing or orally to the addresses below, and must reach us no later than 1 June 2026 in order for such submissions to be considered:

Cape Environmental Assessment Practitioners (Pty) Ltd

c/o Louise-Mari van Zyl (Registered EAP, Reg Nu 2019/1444)

Email: louise@cape-eaprac.co.za

Tel: 044-8740365 (verbal communication / comments will be captured)

5 CONCLUSION

The Environmental Regulations define 'maintenance' as *'…..actions performed to **keep a structure, or system, functioning**, or **in service** on the **same location**, **capacity and footprint**'* with a 'maintenance management plan' described as the *'….plan for maintenance purposes defined, or adopted by the Competent Authority'.*

The formal Application for Adoption of the EMMP, has been made to the DFFE (Competent Authority) and the file reference number and case officer awarded prior to this draft report being circulated for comment. A copy of the pre-application meeting minutes is included with this report.

It is submitted that the proposed like-for-like maintenance work can be contained and implemented without the need for further environmental approvals once this EMMP has been adopted. Ongoing maintenance such as resurfacing and vegetation trimming is excluded.

The potential impacts resulting from repairs and maintenance proposed by the appointed project Engineers, are deemed acceptable and will not result in environmental degradation or cause undue harm to the receiving environment.

CONTENTS

Appendix 4 of Regulation 326 of the 2014 EIA Regulations (as amended) contains the required contents of an Environmental Management Programme (EMMP). The checklist below serves as a summary of how these requirements were incorporated and adopted for the purpose of this EMMP:

Requirement	Description
(1) A EMMP must comply with section 24N of the Act and include -	Noted
(a) Details of (i) The EAP who prepared the EMMPr; and (ii) The expertise of the EAP to prepare an EMMP, including a curriculum vitae.	Louise-Mari van Zyl EAPASA registered: 2019/1444 Practicing as an EAP since 2002
(b) A detailed description of the aspects of the activity that are covered by the EMMP as identified by the project description.	Main Report
(c) A map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers	Main Report & Appendices Note to reader – maintenance work may occur along any length or location of the various management roads/tracks identified in this EMMP.
(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 the 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	Main Report

Requirement	Description
(v) Where relevant, operation activities.	
(e) A description of the proposed impact management actions, identifying the manner in which the impact management outcomes contemplated above will be achieved and must, where applicable include actions to – (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 practices; (iii) Comply with any applicable provisions of the Act regarding closure, where applicable; and (iv) Comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable.	Main Report
(f) The method of monitoring the implantation of the impact management actions contemplated above.	CapeNature must self-regulate for ad hoc maintenance and adhere to their own internal Generic Environmental Management Plan (EMP) at all times. When a Contractor must be appointed to conduct maintenance work, an ECO must be appointed to oversee and monitor compliance with this EMMP.
(g) The frequency of monitoring the implementation of the impact management actions contemplated above.	CapeNature must self-regulate for ad hoc maintenance and adhere to their own internal Generic Environmental Management Plan (EMP) at all times. When a Contractor must be appointed to conduct maintenance work, an ECO must be appointed to oversee and monitor compliance with this EMMP and the ECO must conduct monthly site inspections and provide monthly monitoring reports to the

Requirement	Description
	DFFE as well as the Conservation Manager (Reserve Manager).
(h) An indication of the persons who will be responsible for the implementation of the impact management actions.	CapeNature
(i) The time periods within which the impact management actions must be implemented.	During the course of maintenance on the specified management roads/tracks, especially where work must be undertaken in watercourses.
(j) The mechanism for monitoring compliance with the impact management actions.	CapeNature must self-regulate for ad hoc maintenance and adhere to their own internal Generic Environmental Management Plan (EMP) at all times. When a Contractor must be appointed to conduct maintenance work, an ECO must be appointed to oversee and monitor compliance with this EMMP.
(k) A program for reporting on compliance, taking into account the requirements as prescribed in the Regulations.	CapeNature must self-regulate for ad hoc maintenance and adhere to their own internal Generic Environmental Management Plan (EMP) at all times. When a Contractor must be appointed to conduct maintenance work, the Contractor's HSEQO must conduct daily monitoring with weekly reporting to the ECO who must compile and submit monthly monitoring reports to the DFFE and Conservation Manager.
(l) An environmental awareness plan describing the manner in which – (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.	This EMMP

Requirement	Description
(m) Any specific information that may be required by the competent authority.	Appendices

1 INTRODUCTION

Cape Environmental Assessment Practitioners (Pty) Ltd, hereafter referred to as Cape EAPrac, has been appointed to act as independent environmental assessment practitioner (EAP) to facilitate the process of adoption of an environmental maintenance management plan (EMMP) for the Grootvaderbosch Provincial Nature Reserve & Boosmansbos Wilderness Area World Heritage Site in the Western Cape Province.

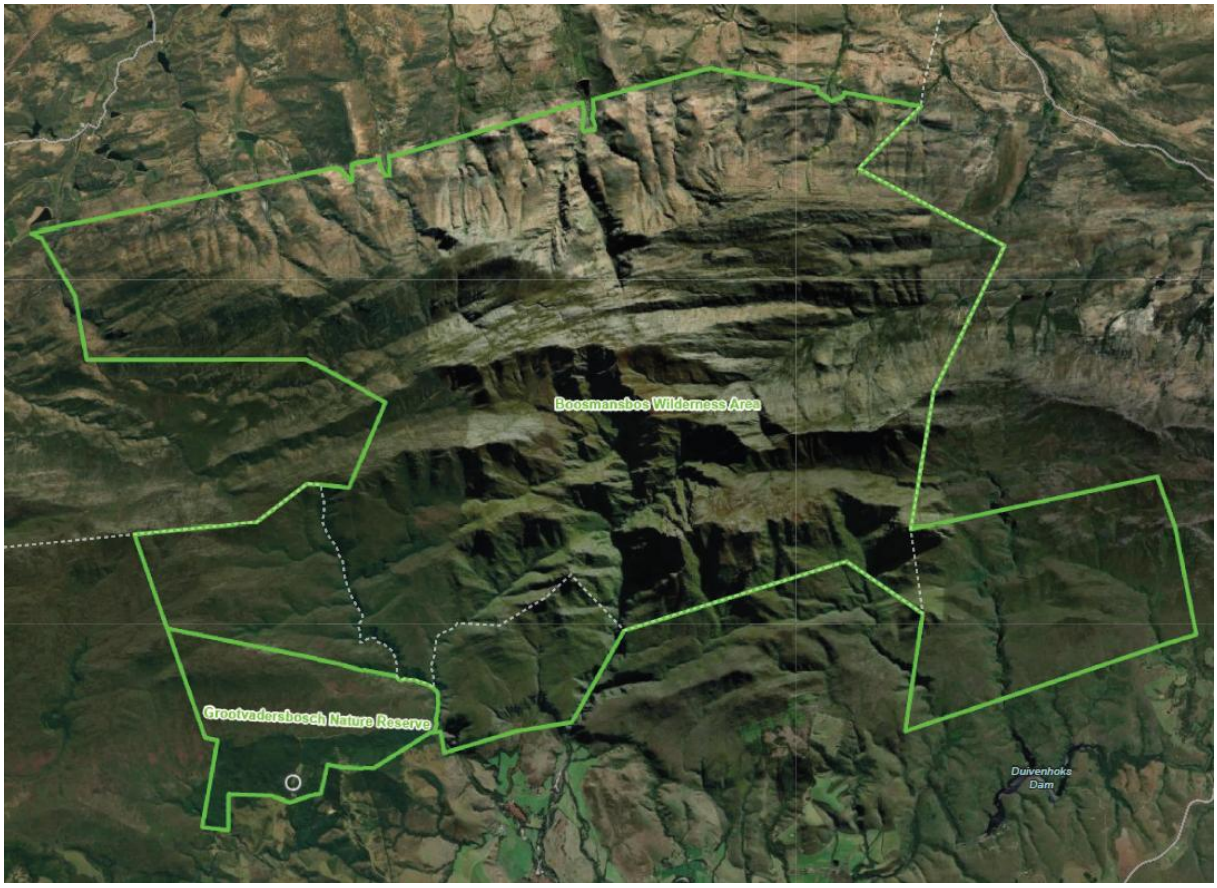


Figure 1: Location of Grootvaderbosch Nature Reserve & Boosmansbos Wilderness Area (Source: CapeFarmMapper).

This EMMP draws from the *Condition Assessment – Stormwater Damage* report compiled by V3 Consulting Engineers[1], dated 30 July 2025 (Ref: 11755000) that was specifically compiled to evaluate the state of damaged roads/tracks and provide technical advice by qualified engineers, on how best to repair the damaged sections of roads/tracks.

Allowance is made for general 'ad hoc' maintenance which CapeNature tends to conduct on a continuous basis in terms of their internal *Generic EMP for Road Maintenance* (this they have

[1] Appointed by Western Cape Government Department of Infrastructure who funds the maintenance work.

been doing since inception of the Reserve), as well as the more significant maintenance for stabilisation, erosion control, working in watercourses and repairing flood damage (the focus of this EMMP).

The EAP conducted a site inspection during end-September 2025, accompanied by the Reserve Manager, to ground-truth environmental site conditions.

2 SPECIFIC INTERVENTIONS AND WORK AREAS

Within the greater Reserve/Wilderness Area, there are two (2) specific roads/tracks where repair and maintenance work is required, noting that ongoing maintenance of other roads in the Reserve that do not trigger the need for an EMMP to be adopted or maintenance such as vegetation trimming in roads/alongside tracks, that fall outside the scope of this EMMP.

> **Maintenance:** *Actions performed to keep a structure, or system functioning or in service, on the same location, capacity and footprint.*
>
> Environmental Regulations, 2017

Similarly, any work involving 'new' structures and/or infrastructure that may require additional *prior* Environmental Authorisation ito the National Environmental Management Act (NEMA) and/or National Water Act (NWA), are also not included under this EMMP.

Damage observed by V3 and the appointed EAP include damage to the **wooden bridge**, **erosion** along roads caused by either **sheet flow** or where **water overtopped the road/tracks** due to **existing culverts/pipes being blocked, damage to culverts/stormwater pipes, drifts, gabions and reno mattresses** as a result of flooding, resulting in unwanted erosion and damage and the deposit of silt, debris, grit, rocks and sand both upstream and downstream of existing low level watercourse crossings that affects hydrology of the system and causes erosion.

> **Watercourse:** *A river or spring, a natural channel in which water flows regularly or intermittently, a wetland, pan, lake or dam into which, or from which, water flows and any collection of water which the Minister my, declare to be a watercourse as defined in the National Water Act.*
>
> National Water Act, 1998

Because of the mountainous terrain, where damages occurred on roads/tracks water crossings and/or from fire at the bridge on the BarendKoen track, it prevents CapeNature from accessing the tracks/roads beyond said damaged crossing. This has resulted in long stretches of tracks/road where vegetation cover has re-established because no vehicles can get there past the damaged infrastructure / watercourse crossings.

For ease of reference, the identified areas within the Reserve that's applicable to this EMMP are listed in the following table:

Table 1: List of affected areas within the Reserve/Wilderness Area (Source: V3 Consulting Engineers).

Site name:	CapeNature – Grootvadersbosch Nature Reserve
Management Road Assessments:	1. Barendkoen Road Bridge 2. Barendkoen Management Road 3. Redwood Management Road

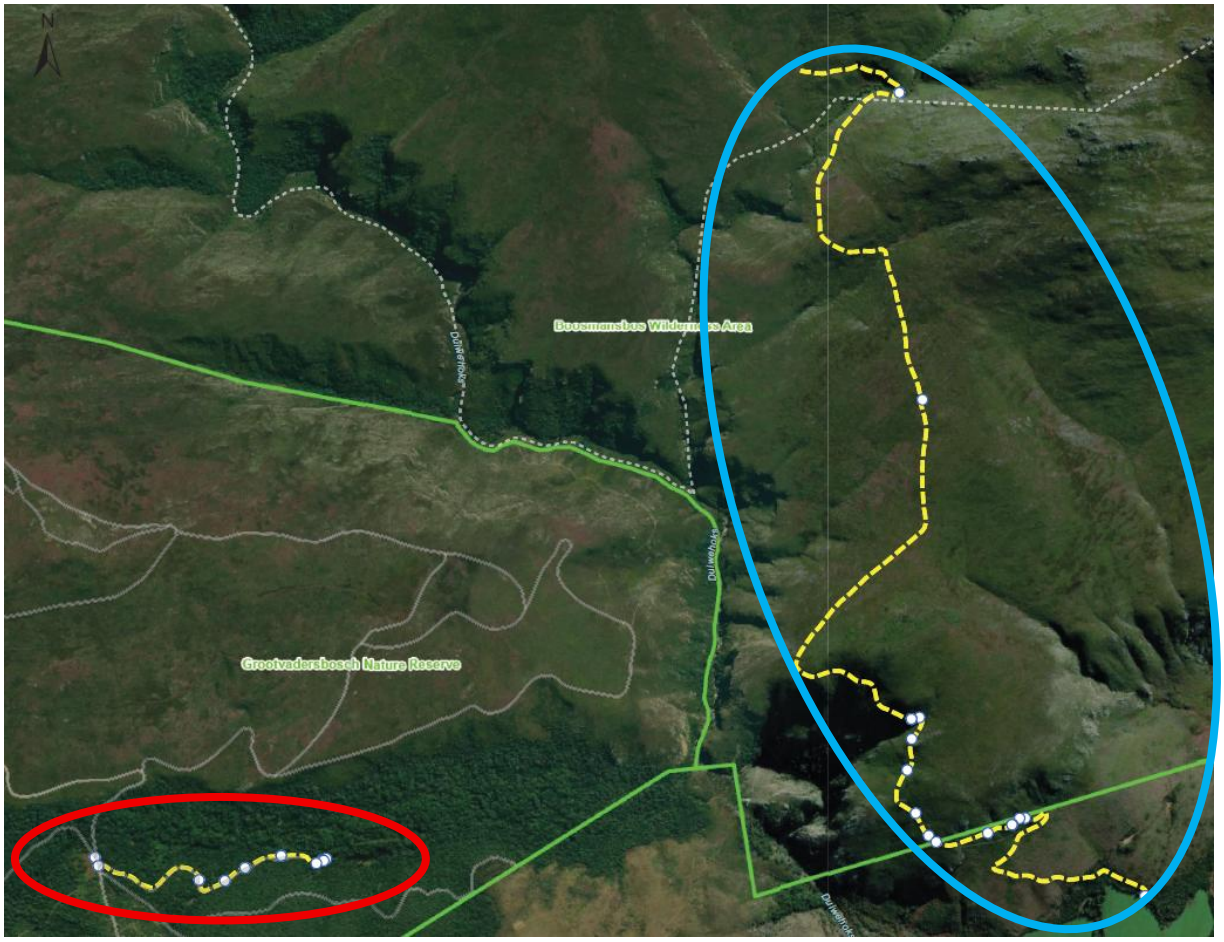


Figure 2: Location of the RedWoods Road (Grootvadersbosch = RED) and Barend Koen track (Boosmansbos = BLUE) (Source: CapeFarmMapper).

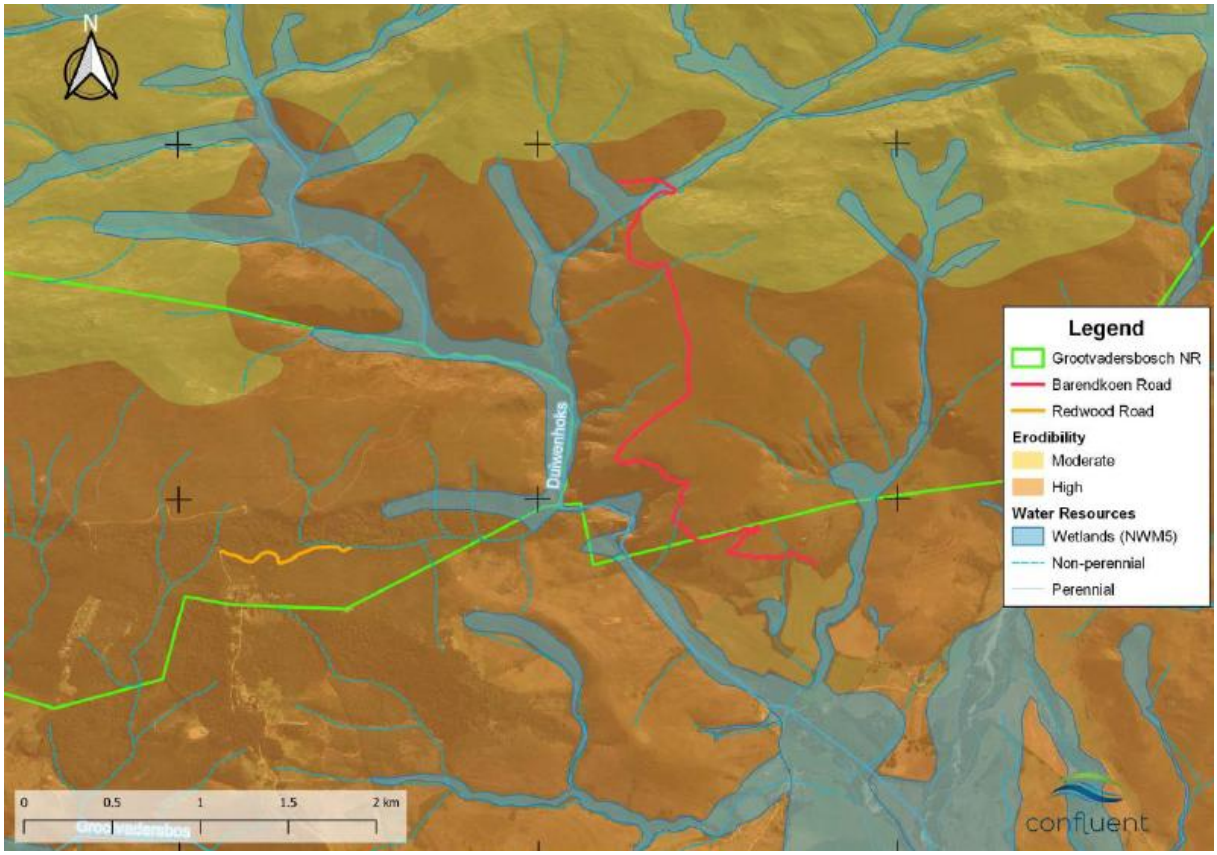


Figure 3: Map showing soil erodibility classes along the alignment of the two roads/tracks in need of repair and maintenance as well as proximity to drainage lines/wetland areas contributing to damage to the roads/tracks.

Figure 4: Bridge that requires replacement and track in need of repairs (Source: V3 Consulting Engineers).

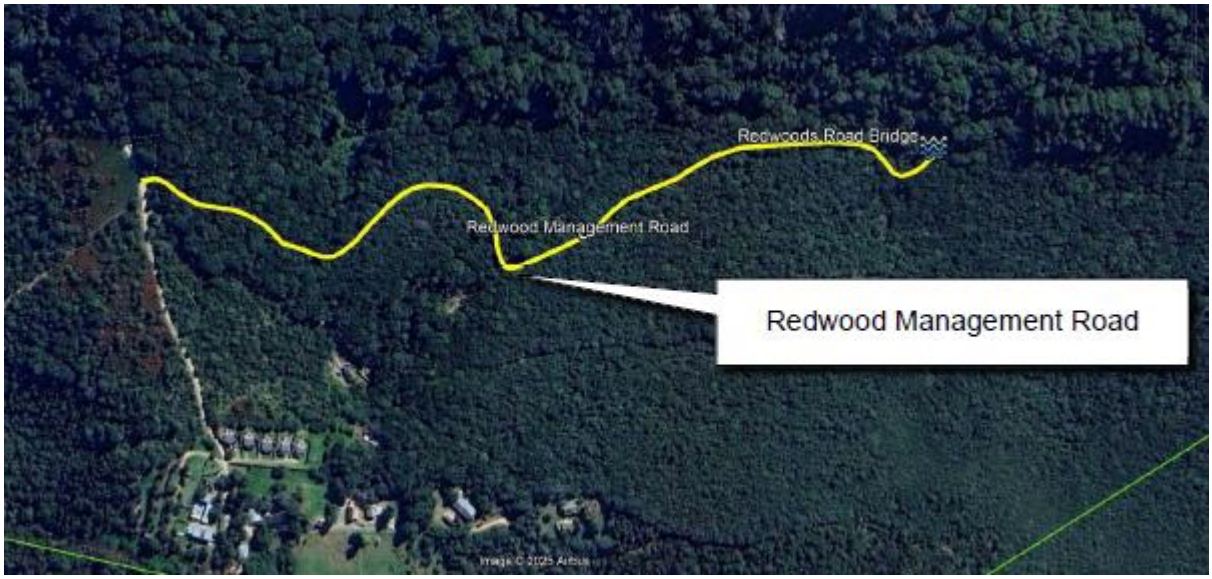


Figure 5: RedWoods Road that requires repairs and maintenance (Source: V3 Consulting Engineers).

1.1 BAREND KOEN TRACK & BRIDGE

This track provides access for fire management and invasive alien clearing teams. It also provides CapeNature with access to the Helderfontein overnight huts, maintenance and emergency operations.

The condition of the track varies along its length with initial lower-level sections passable under dry conditions, but becoming dangerous when wet due to poor drainage and clay soils as well as eroded surfaces. Slips have been noted along steep slope sections that require stabilisation.

The burnt and damaged bridge disrupts connectivity and requires structural replacement.

START	1/3 UP	MIDDLE POINT	1/3 TO END	END POINT
33°59'00.88" S	33°58'56.20" S	33°59'29.09" S	33°57'58.19" S	33°57'43.03" S
20°51'19.45" E	20°50'55.79" E	20°50'52.10" E	20°50'43.14" E	20°50'39.98" E
BRIDGE	**GABION WALL #1 (pvt property)**	**GABION WALL #2**		
33°57'45.51" S	33°58'55.58" S	33°58'44.86" S		
20°50'51.52" E	20°51'01.57" E	20°50'52.87" E		

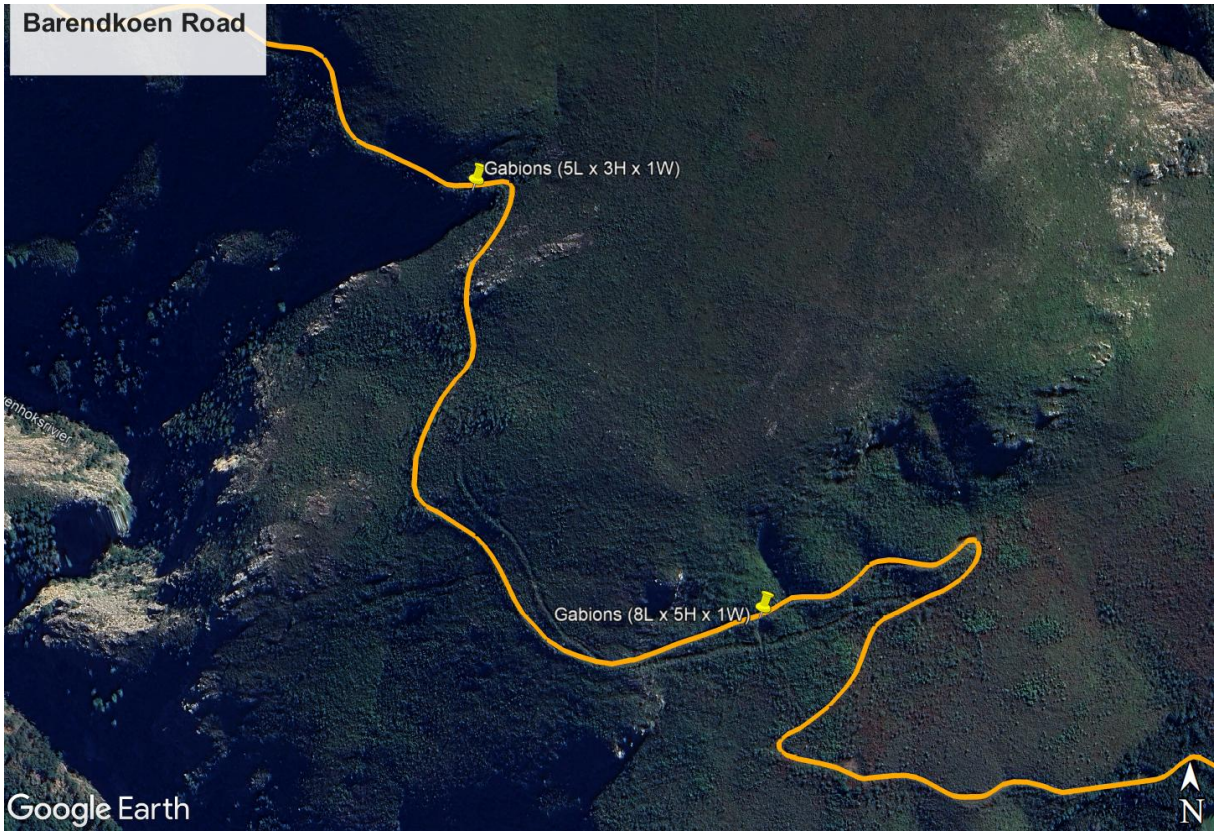


Figure 6: Approximate location for the two gabion wall structures necessary for repair of the track and stabilisation of the slope.

1.2 REDWOODS ROAD

This road has multiple sections affected by rutting, poor surface drainage and erosion which leads to standing water, saturated soils and slippery surfaces that compromise vehicular safety and accessibility especially during wet periods. This route is essential for accessing the RedWoods hiking trail and ecological monitoring.

Although previously restored, the RedWoods bridge maintenance and repairs are included as part of this EMMP should the bridge be exposed to flood damage in future.

START POINT	MIDDLE POINT	END POINT (also RedWoods Bridge location)
33°58’58.62” South	33°59’00.14” South	33°58’57.84” South
20°49’20.29” East	20°49’34.82” East	20°49’46.04” East

Table 2: Short summary of repair and maintenance work along the five sections of road/track in Grootvaderbosch Nature Reserve & Boosmansbos Wilderness Area.

SPECIFIC WORK AREA	INTERVENTIONS
BarendKoen track & bridge	+/-4.4km Accessible through two private properties namely Portion 1/Farm 196 and Remainder Farm 97. Vegetation trimming has been undertaken track to clear overgrown vegetation within the road surface to enable access on foot along the track and to the bridge. Note that vegetation *removal* is subject to the adoption of this EMMP. • Re-gravelling necessary for sections where road surface has washed away exposing rocks that leads to tyre damage/slips deemed dangerous to drive. • Where sheet flow has caused erosion gulleys on or across the track, reno mattresses / water bars must be instated within the footprint of the track, to make the track passable. • Reno mattresses to fix loose rockfill at low level watercourse crossings to avoid same (loose) rocks getting washed away repeatedly. • Clearing of sediment/sand/rocks/grit deposits across existing watercourse crossings to make the road passable. • Clear vegetation that has grown in the tracks to restore functional access (noting that grading is not permitted given the Wilderness Area), but leaving the 'middelmannetjie' with vegetation cover where possible; • Backfill eroded sections by importing G5 gravel material or pack rocks, to infill erosion gulleys (this 2-spoor track must not be converted to a wide road in the process since it is within a wilderness area where 'human footprint' should be minimized and structures/infrastructure avoided or maintained in a sensitive manner); • Install concrete strips/interlocking blocks within the tyre tracks along eroded / steep areas where imported material/rock packing may not be sustainable; • Install rolling dips (water bars) to manage stormwater runoff, prevent further erosion and improve surface drainage; • Replace the bridge stabilizing bars and wooden driveway of the original bridge (the concrete footing is still stable and does not require replacement). • Two (2) areas along the track that have been identified as potentially unstable and subject to slope failure to be stabilized with gabion wall structure:

	○ Gabion Wall 1: BarendKoen track traverse private property ○ Hand-excavate the affected slope; ○ Create a concrete slab foundation to carry the gabion wall; ○ Pack gabions by hand to reinstate the slope and protect the track from further damage (8m long x 5m high x 1m wide) ○ 33°58'55.58" South / 20°51'01.57" East  Example of a typical gabion wall structure associated with road slope stabilizing (Source: https://www.gabionbarriers.com/img/gabion-retaining-wall.jpg). ○ Gabion Wall 2: Boosmansbos Wilderness ○ Hand excavate the affected slope; ○ Create a concrete slab foundation to carry the gabion wall; ○ Pack gabions by hand to reinstate the slope and protect the track from further damage (5m long x 3m high x 1m wide) ○ 33°58'44.86" South / 20°50'52.87" East • Implement routine maintenance to manage vegetation regrowth, erosion, monitor drainage function, and retain access quality. New infrastructure that exceeds the Environmental Regulations thresholds of Listed Activities, are excluded from this scope.
RedWoods Road	+/-787m • Reshape the track to eliminate rutting and restore proper camber. • Backfill eroded areas with compacted rock and G5 gravel. • Open side drainage / create cross drains and water bars to divert surface runoff.

	• Clearing of sediment/sand/rocks/grit deposits across the existing watercourse crossing bridge to make the road passable after flooding. • Repair of the existing RedWoods bridge in a like-for-like manner in the event of flood damage. • Restore stormwater channel on the inside of the road to divert water away from the steep slope towards the stream. • Implement routine maintenance to manage vegetation regrowth, erosion, monitor drainage function, and retain access quality. New infrastructure exceeding listed activity thresholds, excluded from this scope.

Notably the repairs and maintenance described above, can be undertaken as regular/scheduled/ad hoc or emergency maintenance on condition that CapeNature adheres to the adopted EMMP.

2.1 ZONING WITHIN THE RESERVE

Protected area zonation provides a standard framework of formal guidelines for conservation, access and use for particular areas. Zonation and infrastructure development planning must be guided by:

- existing infrastructure and use;
- potential future infrastructure and access requirements; and
- careful evaluation of overall impact, construction costs and operating costs vs. likely benefits for alternatives of every component.

The following important zoning applies to the maintenance routes in the Reserve as per the PAMP:

Zonation Category	Explanation
Wilderness / Wilderness	Areas with pristine landscape. Includes area with sensitive or threatened habitats. Very limited access.
Primitive	Areas providing natural landscape in solitude with limited access. Normally a buffer area to wilderness zones.
Nature Access	Providing easy access to natural landscape. Includes areas such as roads and trails, and popular viewing sites and sites of interest.
Development – Low intensity	Area with existing degraded footprint. Providing primarily self-catering accommodation and camping, environmental education facilities.
Development – High intensity	Area generally extensively degraded. Providing low and/or higher density accommodation, and maybe some conveniences such as shops and restaurants.
Development – Management	Location of infrastructure and facilities for Reserve Administration.
Development - Production	Commercial or subsistence farming (only applicable if privately owned and managed as contract nature reserve).
Development – Private Areas	Private dwelling and surrounds (only applicable if privately owned and managed as contract nature reserve).
Species / Habitat / Cultural Protections	Protection zone – Protection of species or habitats of special conservation concern.
Cultural Species / Habitat Visual Natural Resource Access	Special management overlays provide an indication of areas requiring special management intervention within the above zone.

Boosmansbos Wilderness Area falls within the ‘wilderness’ zoning with controlled access only, whereas Grootvadersbosch Nature Reserve has various zonings including ‘primitive’, ‘nature access’, ‘development low intensity’, ‘development management’, as well as ‘species / habitat / cultural protections’.

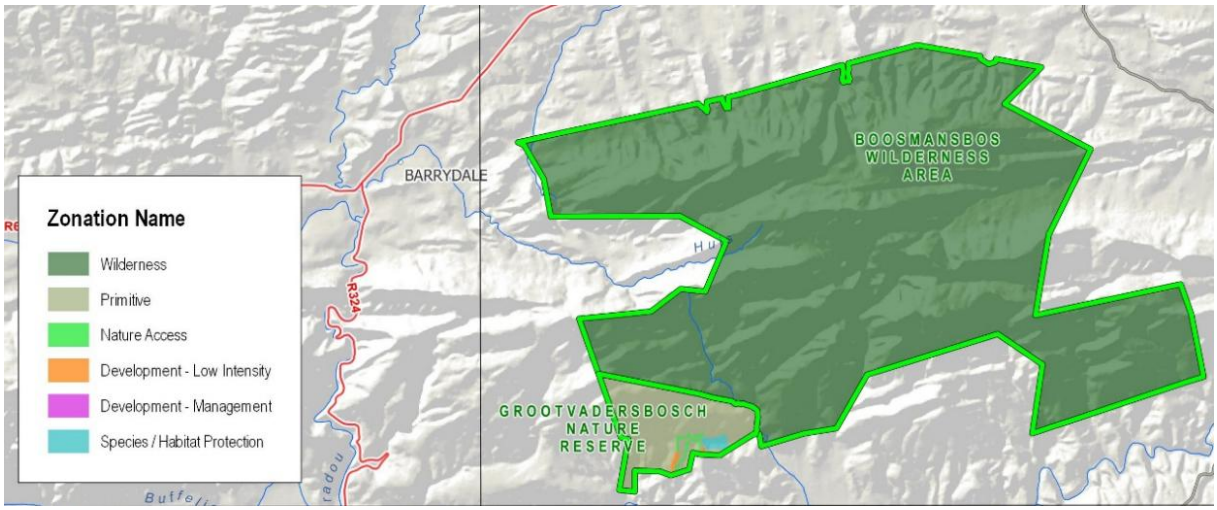


Figure 7: Zoning map for Grootvadersbosch & Boosmansbos.

Wilderness Zone: The BarendKoen management track falls within this zone.

Nature Access Zone: The RedWoods Road falls within this zoning, surrounded by an area of Primitive Zone: This zone covers all the remaining natural veld allowing for the protection of extensive special habitats and the intrinsically wild appearance and character of the area.

3 NEED & DESIRABILITY

Without repairs and maintenance of the identified tracks/roads within the Reserve/Wilderness Area, CapeNature will be unable to service their eco-tourism facilities, they will not be able to access important species monitoring sites that are in remote locations, they will not be able to provide continued vehicle support to tourists/hikers to some of the more remote accommodation units (or ensure safe evacuation of such accommodation facilities in the event of a fire/flooding). Similarly, CapeNature will not be able to perform effective fire management within the Reserve/Wilderness Area (cannot access areas where fire breaks need to be maintained/created) or implement alien vegetation clearing (cannot access areas with vehicles necessary take clearing teams and equipment for cutting off invasive species).

If CapeNature is unable to perform these duties, there is an increased risk of wildfires that can spread to neighbouring properties, reduced ecological importance, as well as lack of income from eco-tourism opportunities.

The existing roads/tracks form the basis / backbone for access, maintenance, research and tourism and therefore must be maintained and kept in a safe and working condition.

Importantly, engagement with the two (2) private landowners whose properties must be traversed to access the BarendKoen track in the Boosmansbos Wilderness Area, must be consulted and engaged with by CapeNature, prior to any maintenance teams conducting maintenance work along this track to ensure security and access requirements are agreed to in advance.

The following criteria provides a common baseline to determine whether an EMMP is the most suitable 'environmental tool' to consider and ultimately allows for the implementation of repair/maintenance work:

As an EMMP the most appropriate decision-making tool:	**Answer**	
Is there evidence of the presence of existing structures / infrastructure that has been damaged/eroded that can be repaired in a like-for-like manner to improve sustainability of the structure / infrastructure?	YES	~~NO~~
Will proposed repair / maintenance increase the footprint or capacity of the observed existing infrastructure / structures to prevent / reduce maintenance?	~~YES~~	NO
Is there evidence of existing structures / infrastructure not able to function as intended, as a result of overgrown vegetation / erosion / silt build-up?	YES	~~NO~~

Can repair and maintenance work be undertaken without 'triggering' any Listed Activities ito the NEMA and NWA?	YES	~~NO~~
Will repair and maintenance actions improve and/or extend the lifespan of the existing structure / infrastructure?	YES	~~NO~~

V3 Consulting Engineers in their Status Assessment report, provides specific details for the type of repair and maintenance work applicable to this EMMP. Their proposals fall within the above-mentioned categories except for where new structures/infrastructure must be installed in which case CapeNature must apply for prior Environmental Authorisation (EA) since new structures/infrastructure falls outside the scope of this EMMP.

By adopting this EMMP, the Competent Authority will facilitate both proactive and reactive maintenance interventions that safeguard ecological functioning, while ensuring the continued safety and operability of roads/tracks within the nature reserve.

4 LEGISLATION OVERVIEW

The proposed maintenance and repairs on the Grootvaderbosch Nature Reserve & Boosmansbos Wilderness Area falls within a protected area and World Heritage Site, which **significantly elevates** the need for compliance and monitoring of repair work and maintenance in ecologically sensitive areas.

This MMP is prepared in terms of NEMA and the EIA Regulations, 2014 (as amended), and is intended for adoption by DFFE as the Competent Authority. The legal framework governing the preparation, adoption and implementation of this EMMP includes:

4.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (NEMA) NEMA P

NEMA provides the overarching legislative framework for environmental governance in South Africa. It establishes the principles, duties and obligations that guide environmental decision-making and ensures that activities are planned and undertaken in a manner that avoids, minimises, mitigates or remedies environmental harm.

NEMA is therefore the primary statute under which this EMMP is prepared. Its provisions apply to all parties involved in the planning, execution, monitoring and management of the proposed maintenance activities, including CapeNature (as the proponent, landowner, implementing agent, and holder of the EMMP, if adopted), contractors, the affected private landowners, service providers, ECOs and auditors.

4.1.1 Section 2: Environmental Management Principles

The Section 2 principles are legally binding and form the foundation of this MMP. Key principles relevant to the maintenance work include:

- **Avoidance first:** Environmental impacts must first be avoided, and only where avoidance is not possible may minimisation, rehabilitation or remediation be applied—this is the core hierarchy applied throughout the MMP.
- **Duty of care and accountability:** All parties involved must apply due diligence and adopt a precautionary approach when interacting with sensitive ecosystems, including watercourses, wetlands and riparian zones.

- **Sensitive ecosystems to be protected:** Protected Areas, Critically Endangered vegetation, riparian ecosystems and strategic water source areas must be afforded the highest level of protection.
- **Disturbance must be limited to existing transformed areas:** Where feasible, all activities must remain within existing road footprints or previously disturbed surfaces.
- **Polluter pays principle:** Any party responsible for pollution or degradation must bear the cost of avoiding, minimising and remedying such harm.
- **Intergenerational equity:** Infrastructure must be maintained in a way that does not compromise ecological integrity or future use of the Nature Reserve and maintenance must be done in such a manner that input/cost is reduced over the long-term by being more robust and sustainable.
- **Integrated environmental management:** Maintenance must consider ecological, hydrological, social and infrastructural factors collectively in order to maintain sustainable functioning of the reserves.

These principles form the backbone of the impact management outcomes, mitigation measures, roles and responsibilities, and monitoring requirements within this EMMP.

4.1.2 Section 28: Duty of Care Section 28

Imposing a general duty of care on any person who causes, has caused, or may cause significant pollution or environmental degradation is important. In the context of this EMMP, the duty of care applies to:

- CapeNature, as proponent and implementing agent executing the works, appointed contractors and sub-contractors, the Employer's Representative / Engineer, the Environmental Control Officer (ECO), and any service provider working within the Nature Reserves.

Under Section 28, these parties must:

1. Take all reasonable measures to prevent environmental degradation.
2. Minimise and rectify impacts that cannot be avoided.
3. Contain and clean up spills, contamination or accidental damage immediately.
4. Rehabilitate affected areas, including watercourses, riparian zones and disturbed vegetation.
5. Cease activities causing harm until adequate mitigation is implemented.
6. Report environmental incidents to the relevant authority when required.

This MMP operationalizes the duty of care by providing the required impact management actions, buffer zones, no-go areas, method statements, and monitoring and reporting requirements.

4.1.3 Section 30: Emergency Incidents Section 30 of NEMA

Emergency provisions in NEMA provide for emergency responses where sudden, unexpected events—such as extreme weather, storm damage, washed-out crossings, or blocked culverts—require urgent intervention.

Although emergency works may proceed without prior written EA (although Section 30A still requires verbal, followed by written agreement from the DFFE), the duty of care principle still applies, and the party responsible is always obliged to:

- prevent pollution as far as possible,
- contain spills,
- notify the Competent Authority,
- ensure sufficient monitoring and control,
- implement reasonable measures to minimise environmental harm, and •
- submit required reports after the incident to ensure that no environmental harm has been caused intentionally.

This EMMP incorporates a dedicated Emergency Works Protocol to ensure that response actions are lawful, appropriate and environmentally responsible. Relevance of NEMA to the Maintenance Works NEMA applies throughout the full lifecycle of the proposed works because:

- the roads are located entirely within Protected Area / World Heritage Site,
- watercourses, wetlands and riparian zones occur adjacent to, or roads/tracks to be worked on,
- works are undertaken in ecologically sensitive terrain affected by flooding and erosion, and
- maintenance activities carry inherent risks of sedimentation, contamination, habitat disturbance and alteration of hydrological processes.

The EMMP ensures that all maintenance is consistent with NEMA obligations and that CapeNature (as the proponent, landowner, implementing agent, and holder of the EMMP, if adopted) meet their legal responsibilities under the Act and EIA Regulations, 2014 (as amended).

The EIA Regulations made under NEMA establish the procedural framework for obtaining environmental authorisation for listed activities that may significantly affect the environment. These regulations identify when an EMMP must be adopted by the Competent Authority, how maintenance activities must be regulated, and the responsibilities of the proponent and implementing agent in ensuring legal compliance. Road maintenance within Protected Areas and watercourses, such as the activities proposed under this EMMP, falls within the scope of the EIA Regulations.

To avoid repeated EIA applications each time maintenance becomes necessary, the Regulations allow an EMMP to be formally adopted by DFFE, enabling ongoing lawful maintenance activities under predefined conditions.

4.1.4 Listed Activities Relevant to the Proposed Works

Although the proposed maintenance and repair works would ordinarily trigger certain ‘listed activities’ under Listing Notice 1 (GN R.983 of 2014, as amended) and Listing Notice 3 (GN R.985 of 2014, as amended) due to the location of the roads/tracks within Protected Areas, watercourses, and sensitive biodiversity areas, these listed activities do not require a separate Environmental Authorisation (EA) on condition that an EMMP is adopted by the Competent Authority prior to said maintenance/repair work being undertaken.

It remains important to identify and describe the listed activities that would have been triggered in the absence of an adopted EMMP. Their inclusion ensures that:

- the scope of authorised maintenance is clearly defined,

- all environmentally sensitive triggers are acknowledged,
- the MMP provides an appropriate mitigation, management, and monitoring framework, and;
- the Competent Authority adopts the EMMP with full appreciation of the environmental risks and regulatory context.

Accordingly, the following 'listed activities' are relevant to the proposed works and have been considered in the preparation of this EMMP.

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1** of the EIA Regulations, 2014 as amended	Describe the portion of the proposed project to which the applicable listed activity relates.
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 ten cubic metres from (i) a watercourse, but **excluding:** (b) where such activities are for maintenance purposes undertaken in accordance with a **maintenance management plan.**	The identified existing two roads and management tracks for Grootvaderbosch/Boosmansbos cross a combination of non-perennial tributaries and a perennial watercourse along the Barend Koen track. Due to the Reserve/Wilderness Area being located in a mountainous region, rainfall events result in persistent damage to the road/tracks and associated infrastructure due to poor drainage, sheet flow and erosion along watercourses. The purpose of this MMP is for existing watercourse crossings to be repaired and for continuous maintenance of such crossings to be permissible. Maintenance must be confined to the existing disturbed footprint of structures/infrastructure i.e. road/track and must not involve the expansion of footprint, or increase in capacity, or changes in the footprint location. Activities will be confined to the existing disturbed footprint of structures/infrastructure and will not involve the expansion of footprint, or increase in capacity, or changes in the footprint location. • Depending on when maintenance and repairs on

		existing watercourse crossings will be done, the threshold of 10 cubic metres will be exceeded collectively for all the routes.
27	The clearance of an area of 1 hectares or more, but less than 20ha of indigenous vegetation, **except** where such clearance of indigenous vegetation is required for (i) a linear activity or (ii) maintenance purposes undertaken in accordance with a **maintenance management plan.**	Barend Koen track, more so than RedWoods Road, requires removal of natural vegetation along the +/-4.4km + +/-0.8km (measured at an average of 2m along the length of these tracks approximately 8 800m^2 of natural vegetation may be removed) identified section in need of repair and maintenance. Barend Koen necessitates the removal of vegetation in the tracks, whilst trimming of vegetation is required in the 'middelmannetjie' and along road verge of the same, and RedWoods Road requires continued vegetation management to along the road verges to ensure safe passage. Maintenance in terms of stormwater management and/or clearing of vegetation to restore road infrastructure/structures at watercourse crossings, or in proximity of watercourses will result in the removal of natural vegetation. For the stabilising gabion wall structures an estimated 250m^2 of natural vegetation may have to be removed to install the +/-180m^2 structures. A total of 10 050m^2 (0.05ha) may need to be removed in order to reinstate the roads/tracks through maintenance and repair work. Maintenance must be confined to the existing disturbed footprint of structures/infrastructure i.e. road/track and must not involve the expansion of footprint, or increase in capacity, or changes in the footprint location.

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3** of the EIA Regulations, 2014 as amended	Describe the portion of the proposed project to which the applicable listed activity relates.
12	The clearance of an area of 300m^2 or more of indigenous vegetation **except** where such clearance is required for **maintenance purposes** undertaken in accordance with a **maintenance management plan** (i) within a critically endangered or endangered ecosystem listed in terms of the NEMBA, (ii) within critical biodiversity areas identified ito bioregional plans, (iv) on land, where at te 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 or Spatial Development Framework adopted by the MEC or Minister,	Barend Koen track more so than RedWoods Road, requires removal of natural vegetation along the +/-4.4km section identified for repair and maintenance. Barend Koen necessitates the removal of vegetation in the tracks, whilst trimming of vegetation is required in the 'middelmannetjie' and along road verge of the same, and RedWoods Road requires continued vegetation management to along the road verges to ensure safe passage. Maintenance in terms of stormwater management and/or clearing of vegetation to restore road infrastructure/structures at watercourse crossings, or in proximity of watercourses will result in the removal of natural vegetation. Maintenance must be confined to the existing disturbed footprint of structures/infrastructure i.e. road/track and must not involve the expansion of footprint, or increase in capacity, or changes in the footprint location.

8.3 NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT, 2003 (NEM: PAA)

The proposed works are located within a Protected Area/World Heritage Site managed by CapeNature. Section 48 of NEM:PAA restricts activities that may negatively impact the purpose or management objectives of a protected area. Maintenance activities must therefore be consistent with conservation objectives and must not result in ecosystem degradation.

The Applicant is required to note section 50 (5) of the National Environmental Management: Protected Areas Act, 2003 (Act 57 of 2003) (NEMPAA); that provides as follows:

> - *No development, construction or farming may be permitted in a national park,* ***nature reserve*** *or* ***world heritage site*** *without the prior written approval of the management authority.*

The Minister has, under Section 86 of the National Environmental Management: Protected Areas Act, 2023 (Act No. 57 of 2003), made the Regulations in the schedule on the 28th of

October 2005, including Regulation 19(1)(a) under Regulations for the Proper Administration of Special Nature Reserves, National Parks**,** and **World Heritage Sites** stipulates:

> *(1) No development contemplated in section 50(5) of the Act shall be implemented—*
>
> *(a) in any area other than an area specifically designated for such development in a management plan; and*
>
> *(b) before a management authority has indicated in writing the nature and extent of the strategic or environmental impact assessment required for the development.*
>
> *(2) No commercial activity or activity contemplated in section 50 of the Act, which requires an environmental impact assessment to be undertaken, either in terms of sub-regulation (1)(b) or under any other law, may be implemented before a management authority has approved, with or without conditions, the environmental impact assessment before it is submitted to the relevant authority for approval.*

Maintenance activities must therefore be consistent with conservation objectives and must not result in ecosystem degradation.

This EMMP must be read in conjunction with the Langeberg Complex Protected Areas Management Plan (PAMP) and Contractors must adhere to Standard Operating Procedures (SOP) that CapeNature has in place for repair and maintenance work of roads.

The approval in terms of **Section 50(5) of NEM:PAA** from CapeNature must be submitted with the Final MMP.

8.4 National Water Act, 1998 (Act No. 36 of 1998)

The proposed maintenance activities will take place within or in close proximity to watercourses and therefore constitute water uses as defined in Section 21 of the National Water Act, 1998. In addition, the activities will be undertaken within what is deemed the 'regulated area' which covers 100m from watercourses / 500m from wetlands (as a buffer area in which additional care must be taken).

The following water uses are applicable:

- Section 21(c): Impeding or diverting the flow of water in a watercourse; and
- Section 21(i): Altering the bed, banks, course, or characteristics of a watercourse.

In order to lawfully undertake these activities, Water Use Authorisation is required in terms of the National Water Act, 1998 as determined under **General Authorisation (GA).**

Confluent Consulting has been appointed to facilitate the GA process alongside the EMMP.

5 ENVIRONMENTAL BASELINE FOR THE WORK AREAS

Appointed **Contractors** must understand that the Reserve is a Protected Area/World Heritage Site.

By implication, they must understand that *'(road)work as normal'* does not apply and that there is an additional obligation on them to conduct their work in a **responsible manner** and **without**

causing harm to the receiving environment beyond what is permitted for the repair and maintenance work.

In addition to this EMMP, CapeNature has several standard operating procedures (SOPs) that must be adhered to including their internal Environmental Management Plan (EMP) for road maintenance, as well as the Western Cape Government: Department of Infrastructure's Guideline for maintenance work that must be complied with at all times.

All areas falling outside of the proposed maintenance area **must be considered as no-go areas**. No person / machine / materials may enter or utilise no-go areas without prior consent from the Reserve Conservation Manager or ECO as per designated locations.

SPECIFIC WORK AREA	INTERVENTIONS
BarendKoen Management Track	 Example along BarendKoen where slope failure compromises vehicular access where it has scoured into the track surface (location on private property).  Side elevation photo showing the slope failure that requires stabilizing of the BarendKoen track (location on private property).

Natural vegetation regrowth that CapeNature has since trimmed to enable contractor/engineers access on foot to assess the route and the bridge.

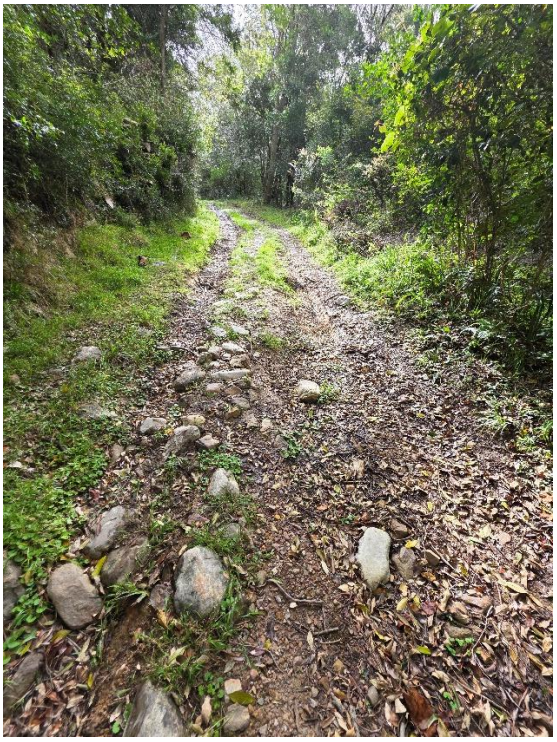
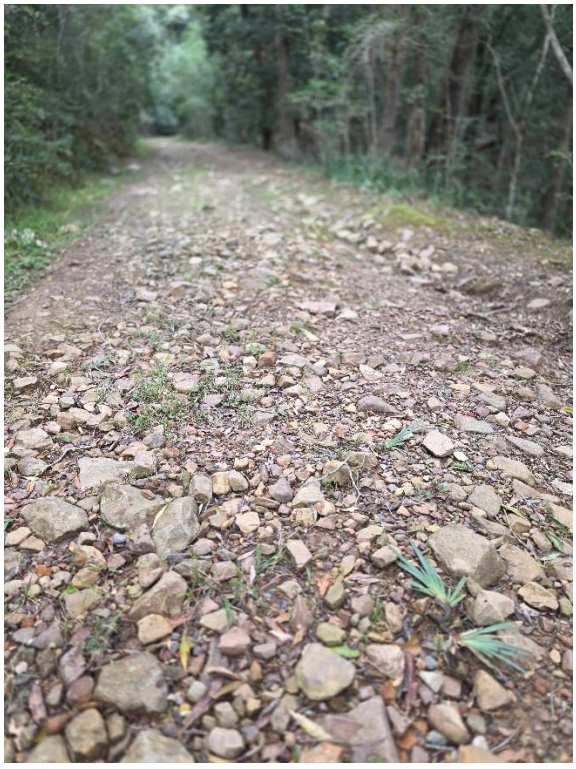
Important that vegetation removal must be limited to the tyre tracks, whilst vegetation in the 'middelmannetjie'/center of the track, must be retained and vegetation trimming alongside the track must be limited to 1m on each side.

Example of road gradient sloping towards the downward hillside resulting in sheet flow and seepage making the road very slippery when wet. Stormwater interventions such as water roller bars/dips within the surface area of the track necessary to direct flow off the road surface.

Example of a water roller dip diagonally across a track to direct surface sheet flow and improve drainage.

Remnant of the existing BarendKoen bridge structure where burnt sleeper bars must be replaced with steel bars to support the wooden bridge to be reinstated across the watercourse.

BarendKoen bridge with existing concrete stabilizing walls onto which the replacement steel bars will be fitted and the wooden bridge structure replaced on-top.

RedWoods Road	 Sections of track where wearing course have eroded due to insufficient drainage / stormwater management. Wearing course can be replaced in like-for-like manner.  Sections of track where wearing course have eroded due to insufficient drainage / stormwater management. Wearing course material can be replaced in like-for-like manner.

Erosion gulleys forming in surface or road due to insufficient drainage and stormwater management because side drains are no longer functional.

Existing side drain along the road is silted up and blocked, therefore stormwater runs over and into the road resulting in erosion. Side drains must be opened/vegetation regrowth cleared to be functional and stone pitching recommended to improve sustainability.

6 ENGINEERING INTERVENSIONS

Due to variable site conditions along the length of the affected roads/tracks, crossing tributaries and work required in proximity to watercourses, specific interventions will be informed by site specifics, considering hydrology, constructability and logistical constraints. However, the following range of interventions are proposed for the affected roads/tracks in the Grootvaderbosch Nature Reserve/Boosmansbos Wilderness Area to be considered as part of this EMMP:

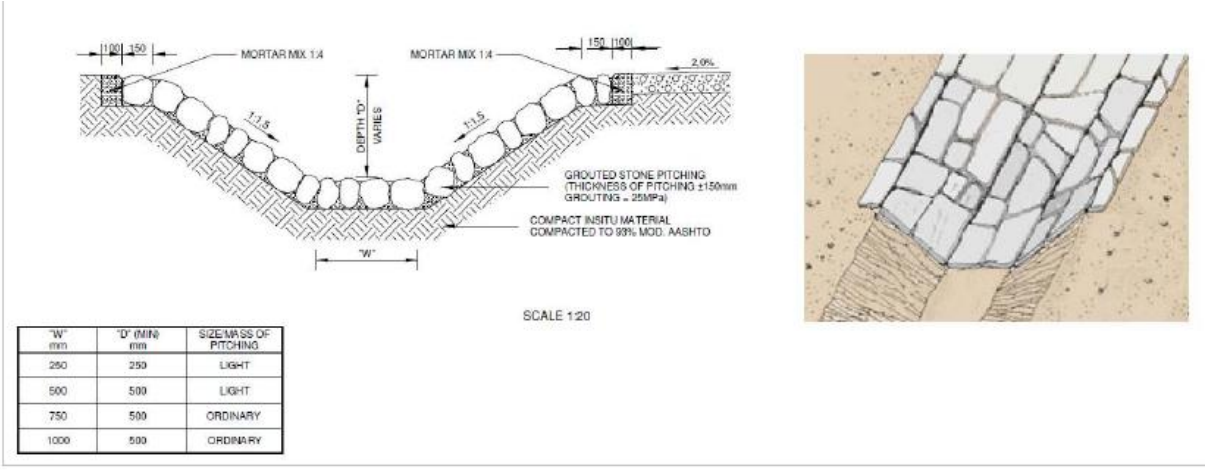
INTERVENSION	PURPOSE	APPROVALS
Rolling dips/Water Bars	Gravel humps across a road/track to divert runoff from the road surface	General maintenance within road footprint, no approval required. Ongoing throughout several locations in the Reserve.
Example of rolling dip that require maintenance within the road.		
Concrete/Grass Blocks	Surface existing tyre track (typically 2-spoor) or road surface less than 4m, over erodible, steep or uneven i.e. very rocky terrain	General maintenance within road footprint, no approval required. Ongoing throughout several locations in the Reserve.
Example of road surface that has become undrivable due to road surface eroding along rocky/steep terrain, with example of concrete strips to reduce maintenance and ensure that the road is passable.		
Side drains	Unblock/remove silt from existing side drains to improve drainage and keep runoff from eroding the tracks/road surfaces.	General maintenance within road footprint, no approval required.

		Ongoing throughout several locations in the Reserve.
Example of side drain at roller bar draining into veld (Source: ResearchGate).		
Stormwater and erosion prevention structures	Replace and repair broken/blocked stormwater and erosion prevention structures such as reno mattresses/gabions/wing walls/head walls/pipes/culverts to maintain road/track in passable condition.	Removal and reinstatement in a like-for-like basis within regulated areas. EMMP adoption required for working in watercourse and removal of riparian vegetation. Note that no new stormwater / erosion prevention structures outside of road maintenance will be constructed.
Gabion Wall	Stabilise embankments/slopes with rock filled wire baskets to prevent further soil erosion and retain fill or natural slope material to maintain track width and integrity.	Sites with gabion walls: 1. BarendKoen track #1 2. BarendKoen track #2 EMMP adoption required for removal of vegetation.

The following images show examples of the existing structures that will be subject to repair and maintenance as provided for by the consulting Engineers in as far it is relates to this EMMP:

1.1 Typical Hand-Laid Stone Pitching

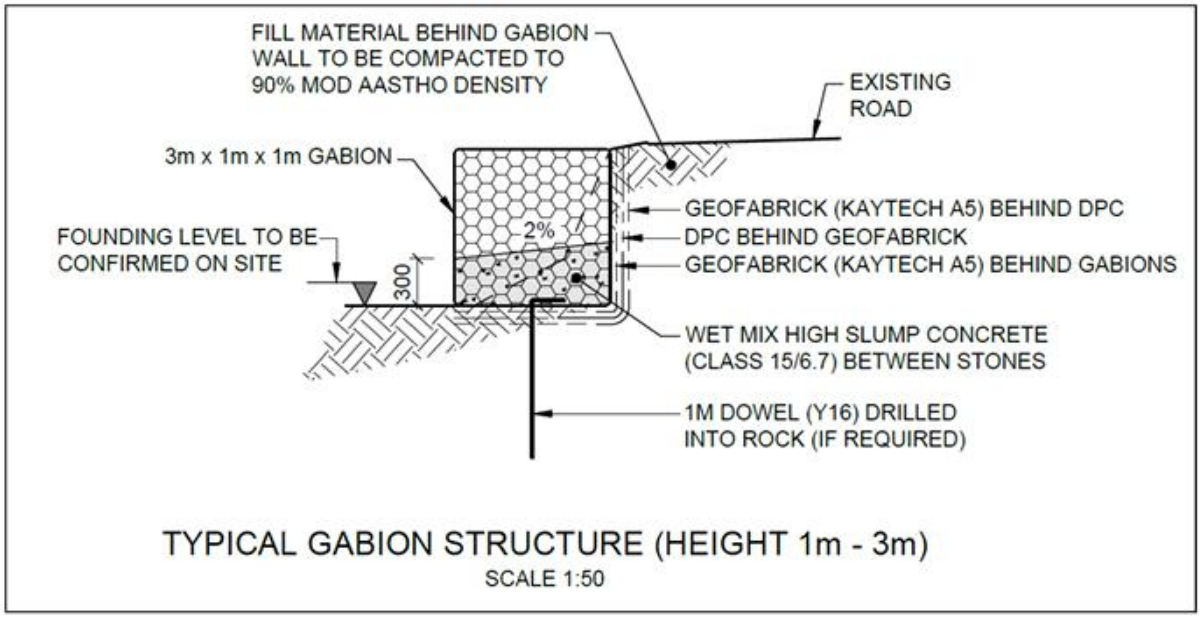
Existing stormwater channels that are eroded / silted up or covered with vegetation regrowth in need of repair, must be cleared. Hand laid stone pitching is a sustainable intervention to prevent vegetation regrowth/silting and erosion in areas where there are signs of washout or undermining of the track/road.



"W" mm	"D" (MIN) mm	SIZE/MASS OF PITCHING
250	250	LIGHT
500	500	LIGHT
750	500	ORDINARY
1000	500	ORDINARY

1.2 TYPICAL GABION STABILISING WALL DESIGN:

The combined area of the two (2) sections where gabion stabilising walls are necessary interventions amount to +/-180m^2. Due to the nature of the protected/wilderness area, all the necessary work to install the stabilising structures must be done by hand, with minimal excavation and intrusion.



1.3 REPAIR & MAINTENANCE OF BARENDKOEN BRIDGE

Using the existing concrete anchor blocks of the original bridge, replace the previous sleeper carrier bars with steel carrier bars (more sustainable and less susceptible to damage). Install

two (2) new anchor blocks at the edges of the bridge where a vehicle must drive onto the bridge itself and install stacked pine wood beams to form a driving surface.

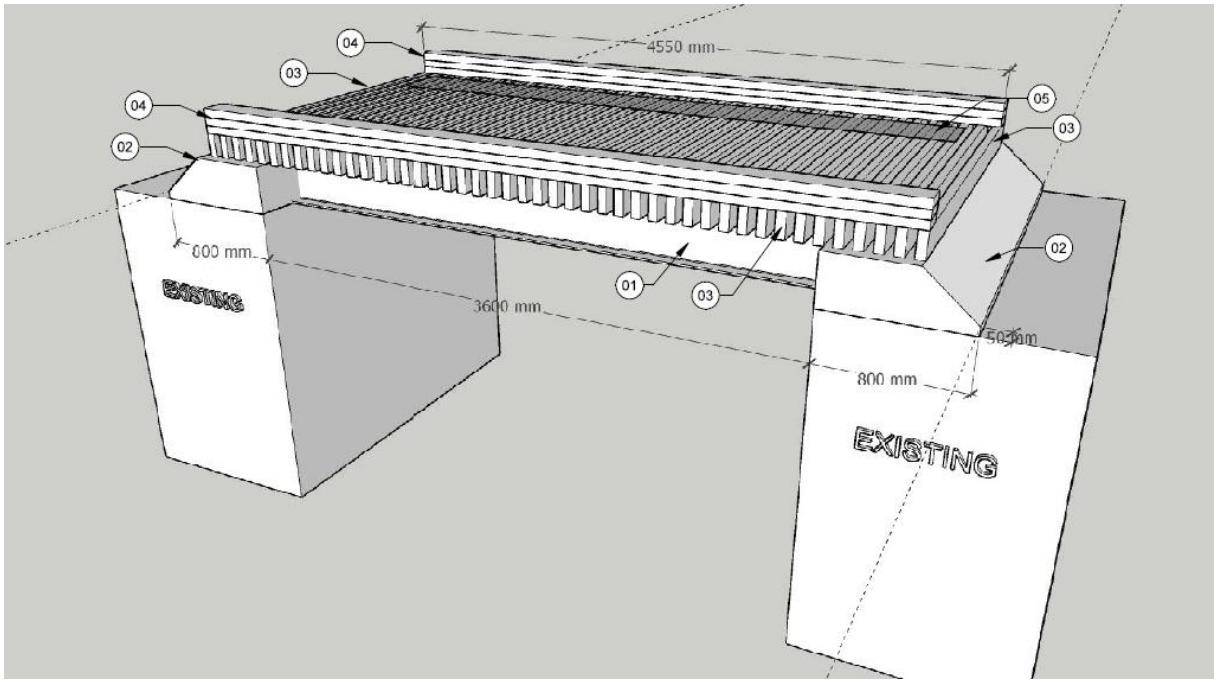


Figure 8: Provisional engineering design for reinstatement of the BarendKoen bridge within the same footprint / same capacity and same location.

7 ASSESSMENT AND MANAGEMENT RECOMMENDATIONS

The National Screening Tool provides a mechanism for determining environmental sensitivities at a high level. Sensitivities are *mapped* at a desktop level and therefore not produced from ground-truthed data, however for the purpose of the EMMP the results are indicative and used to determine potential impacts arising from the repair and maintenance work.

The following potential environmental sensitivity themes have been identified for the different sections in the Reserve and impacts are discussed according to these themes. Notably some of the sensitivities differ between the different sections, mostly on the 'Agricultural' and 'Civil Aviation' themes which as deemed to not be applicable having a very low to negligeable sensitivity associated with repair/maintenance work.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme				X
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme		X		
Terrestrial Biodiversity Theme	X			

Table 3: Screening Tool sensitivities – Grootvadersbosch/Boosmansbos

7.1 POTENTIAL RISKS AND IMPACTS

Although noted in by the Screening Tool, it is submitted that the following themes are not applicable either through usage or zoning, and no risks/impacts are associated with these themes Agriculture (functioning as a protected area and nature reserve with no agricultural land use), Defence and Civil Aviation are not impacted in any manner by road maintenance.

7.1.1 Animal Species – Very High sensitivity

Bird, insect, reptile and mammal species are listed as potentially sensitive and/or unique which is expected for a nature reserve under conservation management.

Repair and maintenance activities are proposed to take place within existing road and track footprints with associated structures and infrastructure such as gabions, side drains, stormwater structures, wingwalls, head walls etc. Although work will entail disturbance inclusive of vegetation removal/trimming supporting animal habitat, the repair and maintenance work is of a temporary nature, limited in scope and extent. Work areas will be monitored by an appointed Environmental Control Officer (ECO) on a monthly basis and by experienced CapeNature rangers on a regular basis.

Potential impacts that may impact on fauna species include:

- Limited removal of vegetation/habitat to access working areas
- Temporary noise impacts associated with Contractor teams and machinery
- Possibility of poaching / Harming of fauna

The appointed Contractor will be briefed by CapeNature and formal Environmental Induction will be scheduled by the appointed ECO to ensure that workers are aware of the protected status of the environment they will be working in.

Contractors are to be advised on the presence of wild animals that include leopard and baboons.

Under these controlled conditions, search and rescue of fauna is possible prior to, as well as during repair/maintenance works.

Very limited and only temporary impacts are anticipated which will be within acceptable limits.

7.1.2 Aquatic Biodiversity – Very High sensitivity

The Reserve/Wilderness Area spans the catchment divide between the Breede River primary catchment to the south and the Olifants River primary catchment to the north. This catchment falls within the Southern Coastal Belt ecoregion which is characterized mainly by moderately undulating plains with altitude ranging from 0 to 500 m above mean sea level. The catchment (H80B) is the source of the Duiwenhoks River and the area has an average annual rainfall of about 1 050mm with drier periods from May – July and December - January.

Therefore, the sensitivity rating of Very High is to be expected since the road/tracks do run in proximity to and over larger watercourses. Aquatic habitats will be temporarily disturbed during repairs and maintenance of crossings and it is recommended that any work done in watercourses or near watercourses where aquatic habitats can be impacted, work be restricted to dry period to minimise disturbances.

The following potential impacts/risks have been identified:

- Temporary modification of streambeds and banks during earthworks / moving of material / removing of structures/infrastructure and/or installation of structures/infrastructure;
- Temporary increase in sedimentation when work is undertaken in proximity to watercourses;
- Short-term water quality impairment;
- Temporary erosion risk associated with working along watercourse banks/steep slopes;
- Long-term reduction of erosion potential once structures is repaired and functional;
- Potential for spills of fuel i.e. diesel / oil in the riparian areas when machinery work in the area;
- Improved hydrological functioning when blocked/damaged culverts/pipes are repaired and/or water rolling dips are installed;
- Reduced need for repeated maintenance in watercourses once infrastructure is repaired in a more sustainable manner.

The appointed Contractor must be briefed by CapeNature and formal Environmental Induction must be scheduled by the appointed ECO to ensure that workers are aware of the protected status of, as well as the sensitivities of the aquatic environment they will be working in.

Work areas must be monitored by an appointed Environmental Control Officer (ECO) on a monthly basis and by experienced CapeNature rangers on a regular basis.

Under such controlled conditions, impacts are of low risk, temporary in nature and within acceptable limits.

7.1.3 Archaeology / Cultural Heritage & Palaeontology – Very Low & Very High

The Grootvaderbosch Nature Reserve & Boosmansbos Wilderness Area is also a declared World Heritage Site. The Boosmansbos Wilderness Area is indicated as having cultural

landscape value due to its wilderness characteristics, as well as high paleontological sensitivity, whereas Grootvadersbosch Nature Reserve partially also contains very high paleontological sensitivity features.

Potential impacts associated with cultural heritage/archaeology/palaeontology include:

- Permanent damage to exposed features when working in proximity to identified features i.e. vehicles driving outside of designated work areas / collecting materials;
- Visually intrusive interventions in an otherwise wilderness area.

The repair and maintenance work is restricted to roads/tracks within the Reserve/Wilderness Area already transformed by means of excavations / infilling / construction of roads/tracks. Exposure of, or damage to paleontological features is therefore highly unlikely considering the restricted work areas.

The sections along the BarendKoen track where slope failure has compromised the track, requires gabions to be installed to stabilize the slope and track. Visual scarring must be limited and only hand excavation/installation is permitted. Colour of the rocks to be used in the gabions must blend and not cause visual scaring. Gabion walls must be covered with topsoil and revegetated where possible to reduce potential visual scaring.

7.1.4 Plant species – High | Terrestrial Biodiversity – Very High

Several plant species within the Reserve are deemed sensitive with many recorded as priority species of conservation concern (SCCs) that include some Critically Endangered, Endangered, Vulnerable, Near Threatened, Data Deficient, Rate and Critically Rare species. This is expected from an area under conservation management.

RedWoods Road runs into closed canopy Southern Afrotemperate forest which includes protected trees such as yellowwood and milkwood trees that may not be cut/removed without Forestry Permits. Boosmansbos Wilderness Area consists mostly of mountain Fynbos that is home to several rare erica species, such as *erica blenna*, *erica langebergensis* and *erica barrydalensis*.

Wetlands associated with the Reserve/Wilderness Area include both bench flats and hillslope seeps which feed into channelled valley-bottom systems. The vegetation type for these wetlands is Southern Silcrete Fynbos and are classified as least threatened and well protected.

The areas where roads/tracks cross watercourses, in some instances contain water-dependent species, however these species are not abundant in the non-perennial tributaries and work is limited within any of the perennial streams.

Due to the location of work areas being within a protected area, the very high sensitivity rating for terrestrial biodiversity is evident.

Potential impacts associated with impact on plant species / biodiversity include:

- Limited vegetation clearing within work areas, as well as vegetation trimming alongside roads/tracks to enable workers/machinery access;
- Trampling and damage to vegetation;

- Poaching of plants (bulb species);
- Increased risk of alien vegetation regrowth following disturbance.

Regular monitoring by CapeNature rangers in areas where repair/maintenance work will take place, as well as the formal Induction by the appointed ECO, will point out that workers may not wander beyond their working areas into the veld and they may not collect any plants.

Considering that the repairs and maintenance work are on existing roads/infrastructure where habitat has already been transformed / previously disturbed during construction / maintenance activities, the impacts are expected to be localized, temporary and reversible.

7.2 IMPACT MANAGEMENT ACTIONS AND OUTCOMES

Considering the potential impacts and risks that have been identified, this EMMP considers both ‘environmental actions’ as well as ‘environmental outcomes’ as part of the measures to ensure impacts are minimised and/or mitigated effectively.

For the purpose of the MMP the EAP has considered:

- The receiving environment in which repair and maintenance work will be performed;
- The engineering interventions proposed for repair and maintenance (refer to Section 10 of this report);
- Evaluate the potential impacts and considered best practice to minimise / mitigate.

The following ‘action’ and ‘outcomes’ are summarised based on the above criteria.

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
Stormwater and erosion prevention structures	Slopes & embankments of watercourses / Hydrology / watercourses / riparian habitat / aquatic biodiversity	Siltation (sediment) Temporary disturbance of aquatic habitat Unwanted erosion **IMPACT RATING:** Low-Medium without mitigation Low with mitigation	• Prioritise work during dry months and/or low-flow periods • Conduct work by hand where possible and limit machinery to the minimum • When excavating in riverbed, loose material must be placed upstream of the structure if not outside the riparian area • Make use of silt traps, sandbags and/or erosion barriers during repairs/maintenance • Repair any erosion gulleys that may form during repair work • Ensure that machinery used to work in proximity to watercourses or in watercourse do not leak oil/fuel • Any mixing of concrete/cement must be done outside of the riparian area and area must be properly bunded • Ensure that work is done on a like-for-like basis to avoid increasing the permanent footprint beyond the status quo. • Stockpile broken / unusable materials outside of the riparian area	Improve hydrological functioning and stormwater performance. Reduce unsustainable maintenance. Extend lifespan and improve condition of the road/tracks. Improve accessibility for rangers using management tracks for alien clearing / fence management / species monitoring and fire management.

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
			• Stockpile new materials outside of the riparian area	
Repair of existing low-level crossings / Drifts (i.e. RedWoods bridge)	Slopes and embankments of watercourses / Hydrology / watercourses / riparian habitat / aquatic & terrestrial biodiversity	Siltation (sediment) Temporary disturbance of aquatic habitat Unwanted erosion Temporary disturbance of terrestrial habitat **IMPACT RATING:** Medium without mitigation Low-Medium with mitigation	• Prioritise work during dry months and/or low-flow periods • Conduct work by hand where possible and limit machinery to the minimum • When excavating in riverbed, loose material must be placed upstream of the structure if not outside the riparian area • Make use of silt traps, sandbags and/or erosion barriers during repairs/maintenance • Repair any erosion gulleys that may form during repair work • Ensure that machinery used to work in proximity to watercourses or in watercourse do not leak oil/fuel • Use temporary water diversion where necessary and restore flow once repairs have been completed • Any mixing of concrete/cement must be done outside of the riparian area and area must be properly bunded	Reduce unsustainable maintenance. Extend lifespan and improve condition of the road/tracks. Improve accessibility for rangers using management tracks for alien clearing / fence management / species monitoring and fire management.

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
			• Ensure that work is done on a like-for-like basis to avoid increasing the permanent footprint beyond the status quo. • Stockpile broken / unusable materials outside of the riparian area • Stockpile new materials outside of the riparian area	
Gabion walls & Cement stabilising	Slopes and embankments of watercourses / Hydrology / watercourses / riparian habitat / aquatic & terrestrial biodiversity	Siltation (sediment) Temporary disturbance of aquatic habitat Unwanted erosion Temporary disturbance of terrestrial habitat Visual intrusion in wilderness area / conservancy buffer **IMPACT RATING:** Low-Medium without mitigation Low with mitigation	• Prioritise work during dry months and/or low-flow periods • Conduct work by hand where possible and limit machinery to the minimum • Gabion walls only hand excavation and packing • Gabion walls to be covered with topsoil and revegetated where possible to reduce visual scaring • When excavating in riverbed, loose material must be placed upstream of the structure if not outside the riparian area • Make use of silt traps, sandbags and/or erosion barriers during repairs/maintenance • Repair any erosion gulleys that may form during repair work	Reduce unsustainable maintenance. Protect the road integrity. Improve accessibility for rangers using management tracks for alien clearing / fence management / species monitoring and fire management.

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
			• Ensure that machinery used to work in proximity to watercourses or in watercourse do not leak oil/fuel • Use temporary water diversion where necessary and restore flow once repairs have been completed • Any mixing of concrete/cement must be done outside of the riparian area and area must be properly bunded • Stockpile broken / unusable materials outside of the riparian area • Stockpile new materials outside of the riparian area	
Removal and disturbance of vegetation (brush cutting / trampling / removal of vegetation encroaching onto road/tracks)	Terrestrial biodiversity	Temporary disturbance and loss of vegetation that may expose areas to unwanted erosion Localised disturbance to terrestrial and aquatic vegetation during construction. Poaching of plants (especially succulents) Re-occurrence of invasive alien	• Restrict vegetation removal to minimum by giving preference to working by hand where possible and only clearing what is absolutely necessary to enable machinery to access a work area • Biomass may not be left in the watercourses, but must be removed and either chipped / used as brush pack material for rehabilitation and stabilising of exposed soil	Limit loss of vegetation Ensure that areas do not remain exposed post rehabilitation

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
		vegetation in disturbed areas. **IMPACT RATING:** Medium-High without mitigation Medium-Low with mitigation	• Stockpiling of material and/or site camps may not be done in areas containing intact natural vegetation • Workers must remain within the designated work area and may not wander into the adjoining natural veld • Special care must be taken to prevent bringing in materials contaminated with seed of Invasive Alien Plants (IAPs/weeds). Contractors shall not import construction materials such as sand, gravel or fill contaminated with seed of Invasive Alien Plants, or quarried from areas surrounded by Invasive Alien plant species such as Port Jackson or Rooikrans. • Middelmannetjie on 2-spoor tracks containing remnant natural vegetation must not be scraped/graded to reduce unwanted destabilisation / erosion and unnecessary loss of indigenous vegetation. • Site camp selection / stockpile areas must be agreed with the ECO and/or CapeNature	

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
			Rangers in advance and demarcated appropriately • Drivers may not drive into the natural vegetation / veld to turn-around or park unless it is within a designated area as agreed with the CapeNature Rangers or ECO • Workers must be briefed on the fact that work is undertaken within a Protected Area and that poaching / damaging fauna is not permitted • Rehabilitate affected work areas by reinstating topsoil, reshaping riverbanks, replanting or seeding with local indigenous species	
Impact on fauna (terrestrial and aquatic)	Terrestrial / Aquatic biodiversity	Temporary disturbance to fauna making use of watercourses for drinking or as corridors for movement Poaching of animals Injury to animals **IMPACT RATING:** Medium-Low without mitigation	• Limit the use of heavy machinery to reduce noise levels • Ensure that workers remain within the work area to prevent entering into remaining natural areas • No animal poaching permitted • Any injured animals must be captured and reported/delivered to the CapeNature office	Avoid unnecessary or long-term impact on fauna

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
		Low with mitigation	• Refrain from exceeding speed limits and ensure that all vehicles are licenses with drivers having the necessary permits/licenses to operate vehicles • Workers must be briefed on the fact that work is undertaken within a Protected Area and that poaching / damaging fauna is not permitted • Workers must keep food / drinks in containers/closed-up to prevent animals such as baboons / monkeys / jackal etc from accessing such items • All food items / waste must be collected on a daily basis and must be removed from the work area on a daily basis to prevent littering	
Impact on cultural heritage / archaeology / palaeontology	Heritage / Landscape	Possible damage to sites / features described as having heritage value **IMPACT RATING:** Low without mitigation Very-Low with mitigation	• Workers may not drive outside of dedicated roads / tracks unless authorised by CapeNature Rangers / ECO • Stockpiles of material and/or site camps must be in areas agreed with CapeNature / ECO • Workers must be briefed on the importance of heritage features	• Avoid detracting from cultural landscape

Intervention	Resource	Potential Risk/Impact	Management Action (mitigation measure)	Management Outcome
			to know that they may not damage such features	

7.3 GENERAL MANAGEMENT CONDITIONS

In addition to the impact specific management actions and outcomes, it is important for the Contractor to also adhere to the following general conditions to ensure that the repair/maintenance work does not result in unwanted environmental impacts:

1. CapeNature / Contractor must obtain **permission from the two (2) private landowners** across who's property the BarendKoen track runs, for any maintenance work that may be required enroute and/or on their property, in support of the track's maintenance i.e. gabions walls, prior to the undertaking of such maintenance work;
2. For all maintenance work in watercourse crossings the Contractor (when appointed) and/or CapeNature when conducting maintenance work themselves, must have **photographic record of 'before' and 'after' scenarios** to **prove and ensure compliance** with the principle of 'like-for-like' maintenance.
3. All areas falling outside of a maintenance area **must be considered as no-go areas**. No person / machine / materials may enter or utilise no-go areas without prior consent from the Reserve Conservation Manager or ECO as per designated locations.
4. The use of **demarcation must be used cautiously** to avoid unnecessary visual intrusion and/or create a hazard for roaming wildlife (marked wooden poles rather than danger/candy stripe tape or hoarding);
5. Fynbos is a fire prone vegetation type, therefore workers may **only smoke in designated areas** and may **not dispose of cigarettes** anywhere other than specific containers that may be provided for by the Contractor at all work areas;
6. **No open fires** are permitted at any of the work areas;
7. Workers must **make use of ablution facilities** i.e. mobile toilets which the Contractor must provide for at each working area within a designated location that may not be within the riparian area or watercourses;
8. The Contractor must ensure that the **mobile ablution facilities are kept functional at all times** and is **cleaned out regularly** to ensure that workers are able and willing to make use of the facility;
9. **Toilet tanks from mobile ablution facilities** may not be emptied, or the content disposed of anywhere other than a toilet i.e. at the Grootvaderbosch offices, or must be removed off-site for disposal at a wastewater treatment works;
10. Workers **may not relieve themselves in the veld / natural vegetation** and must make use of the ablution facilities provided by the Contractor;
11. Any **contaminated sand/soil/material from machinery** (oil / fuel) must be collected by the Contractor immediately after a spill is noticed and the contaminated material

must be kept separate to be disposed of according to hazardous material protocols and may not be disposed of in the Reserve;

12. Work materials (broken / used etc) **may not be discarded** anywhere in the Reserve and must be contained in a secure area as agreed with CapeNature / ECO for regular removal from the Reserve and lawful disposal;
13. Stationary vehicles must be **fitted with drip trays** and collected materials from drip trays must be kept separate and must be disposed of according to hazardous material protocols and may not be disposed of in the Reserve;
14. Any machinery that require refuelling on the Reserve must do with in **bunded / sealed surface areas** and any spills handled according to hazardous material protocols and may not be disposed of in the Reserve;
15. **No works stipulated in this EMMP may commenced** (unless it is deemed like-for-like) until such time as the EMMP is formally adopted and the necessary General Authorisation (GA) is obtained from the Breede-Olifants Catchment Management Agency (specifically for work in regulated areas of watercourses).
16. An **Environmental Control Officer (ECO)** must be appointed prior to any repair/maintenance work stipulated in terms of this EMMP and must conduct monthly inspection and report on works to the DFFE and CapeNature;
17. The Contractor must ensure compliance with relevant **Standard Operating Procedures** that CapeNature has for maintenance/work within the Reserve;
18. The Contractor must ensure compliance with **CapeNature's Generic Environmental Management Plan (EMP) for Road Maintenance**;
19. The Contractor must ensure compliance with the **Western Cape Government: Department of Infrastructure Standards.**
20. The ECO and Reserve Conservation Manager must **identify invasive alien vegetation** in any of the working areas which must be removed alongside repair/maintenance work.
21. The Contractor and CapeNature must ensure **continued removal of invasive alien vegetation** in the immediate working areas as identified by the ECO and/or the Reserve Conservation Manager;
22. The Contractor must **provide record of any imported material** to the appointed ECO in order to ensure that **material coming into the Reserve** is **free from potential invasive alien vegetation seeds** that could spread into the Reserve.

8 MONITORING AND REPORTING

Once adopted, this EMMP must be implemented by CapeNature and all responsible parties that may be involved, including the Resident Engineer, Contractor, Workers, Rangers and ECO.

8.1 ROLE AND RESPONSIBILITY OF THE ECO

- An appointed Contractor **must adhere** to the EMMP / Adoption Conditions / General Authorisation / NEMPAA Permit at all times;
- The Contractor **must address any non-compliance and/or transgressions** as per the instructions of the Conservation Manager / RE or appointed ECO;
- An appointed Contractor must inform the CapeNature Conservation Manager of the intent to commence with prescribed maintenance work **14-days prior** to conducting any of the work;
- An appointed Contractor must ensure that his **Health, Safety & Environmental Quality Officer is on-site full time** and said officer must report to the ECO on a weekly basis;
- An appointed Contractor must provide the ECO with a **monthly work schedule** in advance that must be **aligned with applicable Method Statements**, to ensure that the Reserve Conservation Manager and ECO can conduct site inspections in areas of planned repairs/maintenance to (a) identify turning points/laydown areas/parking areas/site camp, (b) identify areas containing potential sensitive plant species or heritage features that must be suitably marked/demarcated;
- The Conservation Manager (currently Mr Marius Brand: mbrand@capenature.co.za) **must be contacted at least 2 weeks in advance** before maintenance/repairs commences.
- In the Nature Reserve & Wilderness Area World Heritage Site, all conditions outlined by the **Conservation Manager** must be adhered to.
- The Contractor must submit Method Statements for all activities requiring environmental controls including, but not limited to:
    - Cleaning of Culverts / low-level crossings / drifts
    - Repairing of culverts/stormwater infrastructure / headwalls / wingwalls / gabions/ reno mattresses
    - Reshaping of embankments
    - Like-for-like replacement of structures/infrastructure in watercourses
    - Repair / replace of grass blocks / interlocking blocks / cement strips in watercourses
    - Clearing or trimming of vegetation (overgrown roads/tracks and watercourses)
    - Erosion control
    - Site Camp selection and setup

The following is provided as guidelines for some of the Method Statements:

- Site Camp Establishment:
    - Establishment of site camp –
        - Location of site camp to be identified by CapeNature official.
        - Location of site camp to be indicated on an aerial image.

  - Access to site camp –
    - Access points and roads to be identified by CapeNature official.
    - Access point and roads to be indicated on an aerial image.
  - Contents of site camp –
    - What items will be present in site camp.
  - Demarcation of site camp –
    - How will the site camp be demarcated i.e., with shade netting.
  - Sanitation –
    - How will ablution facilities be provided and maintained in the site camp.
    - How will sewage spills be prevented and managed.
  - Pollution control –
    - How will litter / refuse be managed.
    - How will hydrocarbon (oil & fuel) spills be prevented and managed.
    - How will fuel and oil be stored.
- Access to maintenance road sections –
  - Access points –
    - Access points and routes to be indicated on an aerial image and approved by CapeNature official (notably access across private landowner property).
  - Access protocols –
    - Speed limits.
    - Dust management.
    - Farm gate operations.
    - Landowner arrangements.
    - Foot and Mouth Disease protocols.
- Laydown / Stockpile Areas:
  - Identification of laydown / stockpile areas –
    - Location of possible laydown / stockpile areas to be identified by CapeNature official.
    - Location of laydown / stockpile areas to be indicated on an aerial image.
  - Establishment of laydown / stockpile areas –
    - Preparation of laydown / stockpile area prior to utilisation (i.e., are there any vegetation maintenance or topsoil removal required prior to laydown / stockpile area being utilised – CapeNature official to advise on every area to be utilised).
  - Demarcation of laydown / stockpile areas –
    - How will laydown / stockpile areas be demarcated i.e., with shade netting.
  - Contents of laydown / stockpile area –
    - What items will be stockpiled in laydown stockpile area.
  - Pollution control –
    - How will litter / refuse be managed.
    - How will hydrocarbon (oil & fuel) spills be prevented and managed.
    - How will fuel and oil be stored.
  - Rehabilitation of laydown / stockpile areas –

        - How will the laydown / stockpile areas be returned to the same state as it was before utilisation.
- Work areas:
    - Vehicle movement on maintenance roads –
        - Turning circles (i.e., no new turning circles to be created). Vehicles may only turn in areas designated by CapeNature official.
        - How will the bypass / turning areas be demarcated while in used.
        - How will the bypass / turning areas be rehabilitated after use.
    - Work area limits –
        - All work to be limited to existing road footprint. Please note that these roads area intended to be only one vehicle's width.
        - Should any work be required outside the existing road footprint (i.e., infilling of erosion gulleys on the side of the road), it must first be discussed with the Engineer, ECO and CapeNature official to approve method / design of works required.
    - Sanitation –
        - How will ablution facilities for workers be provided, moved and maintained on maintenance roads.
        - How will sewage spills be prevented and managed on maintenance roads.
    - Pollution control –
        - How will litter / refuse be managed on maintenance roads.
        - How will hydrocarbon (oil & fuel) spills be prevented and managed on maintenance roads. What protocols will be implemented should a spill occur.
- Vegetation maintenance:
    - Work area limits –
        - All vegetation maintenance to be limited to existing road footprint plus 0.5m - 1m on either side of the road. Please note that these roads area intended to be only one vehicle width. Therefore, areas that are already wider than one cars width due to historical use, must only be brushcut to one cars width plus 0.5m - 1m on either side of the road. No vegetation removal (i.e., disturbance of soil) is allowed outside of tyre tracks and/or areas where infrastructure must be reinstated/installed.
    - How will vegetation maintenance be undertaken –
        - Machinery to be used (brushcutters and machetes). Cut vegetation stems as close to ground surface as possible – do not leave sharp sticks sticking out the ground which will damage vehicle tyres & be a hazard to pedestrians.
        - Biomass to be distributed into the surrounding area by hand as instructed by CapeNature official. No mounds of biomass to be created alongside the road as this will result in die-down of vegation.
- Concrete works:
    - Concrete mixing –
        - Where will concrete be mixed on site.
        - How will concrete be mixed on site (i.e., with a cement mixer or by hand).

- Cement bag storage –
  - Where will cement bags be stored.
  - How will cement bags be stored to prevent pollution.
  - How will empty cement bags be disposed of.
- Pollution control –
  - How will cement powder / wet cement / concrete spills be prevented.
  - How will cement powder / wet cement / concrete spills be cleaned up once identified.

8.2 ROLE AND RESPONSIBILITY OF CAPENATURE

- As the managing agent for the Reserve mandated to uphold and ensure compliance with their PAMP, Generic EMP for Roads Maintenance, NEMBA and NEMPAA provisions, CapeNature must furthermore ensure compliance with this EMMP whether they conduct the repair/maintenance themselves, or appoint a Contractor to undertake maintenance work;
- CapeNature must instruct any Contractor to suspend work in the event of non-compliance with this EMMP/NEMPAA approval and/or General Authorisation (GA) once obtained.
- In the Grootvadersbosch Nature Reserve & Boosmansbos Wilderness Area World Heritage Site, all conditions outlined by the Conservation Manager must be adhered to;
- CapeNature must issue the necessary Zone Permit to any appointed Contractors and brief them on the restrictions applicable within such zoning areas in the Reserve.

8.3 FREQUENCY OF INSPECTIONS

CapeNature operates under their own Protected Areas Environmental Management Plan (PAMP) as well as internal Standard Operating Procedures (SOPs) that enables and empowers Rangers with the necessary knowledge to assist with on-site monitoring for the duration of the maintenance contract.

It is anticipated that CapeNature will have representation at work areas on a regular basis to prevent unwanted damage to the receiving environment and ensure the safety of their staff and visitors alike.

In light of the presence of Rangers who will be overseeing repair/maintenance work at the Reserve regularly, it is recommended that the appointed **ECO conduct site inspections on a monthly basis**. However, if the ECO finds that the Contractor is non-compliant with the EMMP and/or conditions of adopt thereof, ECO inspections may be increased in consultation with CapeNature.

8.4 REPORTING

The ECO must report on progress with the repairs/maintenance:

- To the Reserve Manager on a weekly basis (Contractor Health Safety & Environmental Officer must provide weekly reports to the ECO to compile and submit);
- To the DFFE and Reserve Manager on a monthly basis.

Monthly monitoring reports must be submitted to the DFFE and CapeNature monthly and as a minimum, must report on:

- Site inspections
- Maintenance/repair activities undertaken
- Environmental performance of the Contractor
- Incidents / Corrective actions
- Recommendations for improvement of the EMMP

Once the repair/maintenance work in the Reserve is completed, the ECO must compile a Completion Statement within one (1) month from end of work and submit the Completion Statement to the DFFE and CapeNature.

9 STAKEHOLDER ENGAGEMENT

This EMMP is submitted as a draft report for review and comment by key stakeholders, including mandated Authorities, Organs of State and members of the public for a period no less than 30-days extending from 30 April – 1 June 2026.

- Newspaper advert has been placed in the SuidKaap Forum calling for I&APs to participate and comment on the document;
- Site Notices have been put up at the Grootvaderbosch Nature Reserve office;
- Electronic copy of the document is available and can be downloaded from www.cape-eaprac.co.za (listed under 'Active Projects') and a hard copy is available at the Grootvadersbosch Nature Reserve office.

Following the outcome of the stakeholder engagement process, this draft EMMP will be updated to reflect submissions received and all submissions will be considered and responded to in order to capture potential outstanding information / oversights or corrections that may be necessary.

The Final MMP containing the submissions received during the stakeholder engagement process, will be submitted to the Competent Authority for review and decision-making.

All submission must be made, in writing or orally to the addresses below, and must reach us no later than 1 June 2026 in order for such submissions to be considered:

Cape Environmental Assessment Practitioners (Pty) Ltd

c/o Louise-Mari van Zyl (Registered EAP, Reg Nu 2019/1444)

Email: louise@cape-eaprac.co.za

Tel: 044-8740365 (verbal communication / comments will be captured)

10 REFERENCES

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