LORNAY
ENVIRONMENTAL CONSULTING

Operational Environmental Management Plan

Proposed Residential Development, Erf 1446, Vermont

June 2024

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STATEMENT OF INDEPENDENCE

Lornay Environmental Consultants nor any of the authors of this report have any material present or contingent interest in the outcome of this report, nor do they have any financial or other interest which may affect the independence of the author(s) or Lornay Environmental Consulting. The consultant fees paid to Lornay Environmental Consulting for the completion of this report is in line with standard professional fees and daily rates. The settling of the professional fee is not dependent on the outcome of the report.

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1. INTRODUCTION

The Environmental Management Plan (EMP) outlined here serves as a guiding document for the operational phase of the proposed development of the residential erven in Erf 1446, Vermont, Overstrand Municipality.

This EMP provides detailed mitigation measures and prescriptive guidelines, designating specific individuals or organizations responsible for tasks during the operation and decommissioning phases of the development. Its purpose is to minimize or avoid potential environmental impacts during operation. The EMP is a dynamic document, subject to periodic updates as on-site activities evolve. As an integral part of the Basic Assessment process, once approved by the Competent Authority, the EMP holds legal binding status.

2. OPERATIONAL ACTIVITIES

The subdivision of the property to create residential erven, it is proposed as follows:

Single Residential: These erven will be used for single-family homes.
General Housing: These erven will be used for townhouses.
Public Open Space: These erven will be used for public open space, such as a park or playground.
Road and Parking: These erven will be used for a road and parking.

The operation of the subdivision of the property to create residential erven is proposed as follows:

Operation

- General single residential activities
- Town housing activities
- Maintenance of infrastructure, gardens, paving, open spaces, transport zones etc.
- Implementation of the mitigation measures and management of the high sensitivity of biodiversity on terrestrial ecosystem support areas.

Decommissioning

Decommissioning is not applicable.

3. KEY TERMS AND ABBREVIATIONS

BAR	Basic Assessment Report
CARA	Conservation of Agricultural Resources Act (Act No. 43 of 1983)
DEA&DP	Department of Environmental Affairs and Development Planning (Western Cape)
EA	Environmental Authorisation
ECA	Environment Conservation Act (Act No. 73 of 1989)
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEM:BA	National Environmental Management Biodiversity Act (Act No. 10 of 2004)
NEM:WA	National Environmental Management Waste Act (Act No. 59 of 2008)
PPE	Personal Protective Equipment
SDS	Safety Data Sheets
SHE	Safety Health and Environmental

Basic Assessment - Process followed to receive Environmental Authorisation from the Competent Authority, necessitated by NEMA. Basic Assessment Report (BAR) is drafted in line with the legislation.

Competent authority - The Department of Environmental Affairs and Development Planning (DEA&DP).

Developer / Applicant – JP van Gemert Testamentary Trust

Environmental Control Officer (ECO) - a suitably qualified person to be appointed by the Developer / Applicant, to oversee the implementation of the EMP and Environmental Authorisation through the operational phase and into decommissioning (if applicable)

Environmental Management Plan (EMP) - this document, approved by the competent authority, to control the implementation of the works on the site in such a way as to ensure that they do not result in undue or reasonably adverse impacts on the environment

General waste - Waste that does not pose an immediate hazard or threat to health or to the environment, and includes domestic waste, building and demolition waste, business waste and inert waste

Hazardous waste - Any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment. Infectious mortalities are also considered hazardous

Project manager - Overall responsible and accountable person for the site during the construction, operation and decommissioning of the facility. This role may fall onto the Home Owners Association

Project Management team - The responsibility of the EMP implementation resides with this team. This team includes a Project Manager and appointed contractors and consultants. This role may fall onto the Home Owners Association

Safety, Health and Environmental Officer (SHE Representative) - A representative from each contractor, appointed as a Safety Health and Environmental Officer, assisting the construction manager on Safety, Health and Environmental aspects of the project on the construction site.

Site Manager **–** the employee of the applicant responsible for the day-to-day control of all activities and operation on site, if applicable. In this instance the site manager is the erf owner.

4. ENVIRONMENTAL CONTROL ON SITE

4.1. Approach

The Table below illustrates the various approaches to be undertaken to manage potential scenarios as a result of the operation of the activity on site:

Table 1: Impact management

Avoidance	Avoiding activities that could result in adverse impacts and/or resources or areas considered sensitive.

Prevention	Preventing the occurrence of negative environmental impacts and/or preventing such an occurrence having negative impacts.
Preservation	Preventing any future actions that might adversely affect an environmental resource.
Minimisation	Limiting or reducing the degree, extent, magnitude or duration of adverse impacts through scaling down, relocating, redesigning and/or realigning elements of the project.
Mitigation	Measures taken to minimise adverse impacts on the environment.
Enhancement	Magnifying and/or improving the positive effects or benefits of a project.
Rehabilitation	Repairing affected resources, such as natural habitats or water resources.
Restoration	Restoring affected resources to an earlier (possibly more stable and productive) state, typically, 'background' or 'pristine' condition. These resources may include soils and biodiversity
Compensation	Compensating for lost resources, and where possible, the creation, enhancement or protection of the same type of resource at another suitable and acceptable location.

Environmental Control Officer

Should a body corporate or similar management structure be created, typical ECO duties can fall under them. However, in the absence of such an organisation or competent person, the role of the ECO falls on the landowner.

The following is a list of typical responsibilities of an ECO or acting ECO:

- To environmentally educate and raise the awareness for environmental education on site and to facilitate the spread of the correct environmental attitude during operation
- To review method statements and to determine the most environmentally sensitive options
- To oversee the implementation of environmental procedures set out in this document and the EA
- To attend meetings, as required and report on environmental issues
- To receive notices and minutes of all operational meetings regarding the environmental and operational activities, changes, renovations, complaints, problems etc.
- To take immediate action where infringements are recorded
- To keep an up-to-date record of operations, as they relate to environmental issues
- To be contactable by the public regarding matters of environmental concern during the operation

In this instance, the applicable ECO / owner, should also monitor landscaping, upkeep and maintenance, general tidiness, refuse disposal, management of the open space / remainder of the site and water use.

The Environmental Authorisation (EA) as well as a copy of the approved Environmental Management Plan (EMP) for Operation, should also be accessible.

5. ENVIRONMENTAL AWARENESS

It is important to ensure that any contractors and employees (and new owners) associated with the operation of the proposed activity receive the appropriate level of training and awareness to ensure that continual environmental due diligence and conservation is applied at all levels of operation. Employees, contractors and sub-contractors as well as the erf owner, must be made aware of their responsibilities in terms of relevant legislation, guidelines, as well as this EMP and EA. The Homeowners Association can enforce the above.

5.1. Aim of the Environmental Awareness

- Promote environmental education and conservation on site
- Inform employees and any new contractors on the applicable environmental procedures and plans

5.2. Environmental Awareness Training and content

- Staff should be trained on the implementation of emergency procedures where applicable
- Definitions as used in this EMP should be provided
- How and why environmental protection is necessary, should be explained
- Management measures required to prevent environmental impacts should be outlined
- Awareness should be made of emergency and spills response procedures
- Awareness should be made of the content of the Architectural and Landscape Guideline document.

In this particular scenario, a general brief regarding general environmental principles such as reduce, reuse and recycle, as well as protection of flora and fauna, would be beneficial.

Environmental training should be implemented at the onset of operation and repeated at regular intervals or as required. The Homeowners Association should take ownership of the above.

6. LEGISLATIVE REQUIREMENTS

A Basic Environmental Assessment process was applicable in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) regulations (2014) (as amended). Appendix 4 of the NEMA EIA Regulations (GN. R982) sets out the minimum requirements for the drafting of an Environmental Management Plan (EMP). This EMP has been created in fulfilment of these prescribed requirements for the construction phase of the activity. The implementation of this EMP will be a condition of approval of the Environmental Authorisation (EA). Failure by the applicant, to comply with this EMP, will therefore constitute an offence, and the applicant and / or the appointed contractors can be held liable for penalties and / or legal action. It is therefore important that a copy of this EMP be issued to each contractor, preferably at the appointment stage, in order to allow for the costs of implementing the EMP, to be included in cost proposals. This will also ensure that the contractor is aware of his responsibilities prior to appointment and commencement. Each appointed contractor involved in the project, as well as the project manager (as applicable), will be required to sign for and thereby acknowledge contents of, the approved EMP and therefore abide by the specifications of the document and any amendments thereto.

Other applicable legislation

The Constitution of The Republic of South Africa (Act 108 of 1996)

The Constitution of the Republic of South Africa states that everyone has a right to a non-threatening environment and that reasonable measures are applied to protect the environment. This includes preventing

pollution and promoting conservation and environmentally sustainable development, while promoting justifiable social and economic development.

National Environmental Management Act (Act 107 of 1998)

The National Environmental Management Act (NEMA), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the relevant competent authorities. NEMA is a National Act, which is enforced by the Department of Environmental Affairs (DEA). These powers are delegated in the Western Cape to the Department of Environmental Affairs and Development Planning (DEA&DP).

National Environmental Management: Biodiversity Act (Act 10 of 2004)

Chapter 4 of the National Environmental Management: Biodiversity Act, 2004 (NEMBA) deals with threatened and protected ecosystems and species. The need to protect listed ecosystems is addressed (Section 54). Section 73 deals with Duty of Care relating to invasive species, while Section 76(2) calls for development of invasive species monitoring, control and eradication plans by all organs of state in all spheres of government, as part of environmental management plans required in terms of Section 11 of NEMA.

National Environmental Management: Waste Act (Act No. 59 of 2008)

The National Environmental Management: Waste Act (NEM:WA) provides for specific waste management measures (disposal and storage) and the remediation of contaminated land.

National Environmental Management: Air Quality Act (Act No. 39 of 2004)

Section 32 provides provision for the control of dust, section 34 provides provision for the control of noise and section 35 provides provision for the control of offensive odours, all which may be experienced during the construction or operation of an applicable development.

Environment Conservation Act (Act No. 73 of 1989)

The Environment Conservation Act (ECA) provides provision for the prevention of littering by employees and subcontractors during construction and the maintenance phases of development.

Occupational Health and Safety Act (Act No. 85 of 1993)

Section 8 outlines the general duties of employers to their employees and section 9 outlines the general duties of employers and self-employed persons, to persons other than their employees.

Hazardous Substances Act (Act No. 5 of 1973)

This Act provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances.

7. OPERATIONAL PHASE IMPACTS AND MITIGATIONS

7.1. Activity-specific impacts and mitigations

During the operational phase of the proposed development, the following activity-specific impacts and mitigations have been identified:

7.1.1. JP van Gemert Testamentary Trust

JP van Gemert Testamentary Trust will oversee the operation of the development. The trust will have various responsibilities, including:

7.1.2. Management of open space and ecological support areas

During the operational phase, JP van Gemert Testamentary Trust will manage open spaces and ecological support areas with the following considerations:

Open spaces must be kept free of alien vegetation to preserve biodiversity and maintain a natural state.
Instead of clearing the entire site for development, sensitive plants will be replanted in open spaces to prevent species loss and enhance ecological connectivity.
Strict prohibition of dumping or stockpiling activities in these designated areas to safeguard the ecological integrity of the site.

The recommendations of the Botanical Specialist must be implemented by the JP van Gemert Testamentary Trust:

Given that relatively little mitigation is possible and that quite substantial biodiversity will still be lost (even if not of High or Medium negative significance) it is recommended that the applicant make a sizeable conservation contribution (donation) to a local conservation group (Vermont – Hermanus area) that is involved with alien invasive vegetation management and control, as this is a major threat to the remaining habitat in the region.

7.1.2 Private Gardens

In managing the operational phase, specific guidelines are outlined for private gardens:

- Private gardens should predominantly consist of indigenous plants, with limited hardened surfaces and paved areas.
- Gardens are to be meticulously maintained, ensuring they remain free of alien vegetation.
- Encouragement to limit the use of aggressive lawns and gardens to promote sustainable landscaping practices.

8. OPERATIONAL PHASE IMPACTS AND MITIGATIONS

8.1. Activity specific impacts and mitigations

The following activity specific impacts have been identified for the operational phase of the proposed development:

Table 2. Activity specific impacts and mitigations

IMPACT	DESCRIPTION	MITIGATION	MONITORING	RESPONSIBILITY
Botanical	The main operational phase impact would be loss of current moderate levels of ecological connectivity across the site (essentially only W-E connectivity now available), and associated habitat fragmentation. This will affect both fauna and flora.	- All milkwoods (*Sideroxylon inerme*) above 1m and many of the other indigenous trees on site taller than 1m have been surveyed and shown in Figure 1b of the terrestrial biodiversity report. It is understood that some (maybe 35%) of these will be lost to road and bulk service development, but the others should remain and survive within designated erven, although another 50% may be lost during house development. The applicant must obtain the relevant permits if any milkwoods (a Protected Species) are to be damaged or lost during the site development process, and subsequently by new erf owners if during the construction phase. - Search and Rescue must be undertaken for all reptiles and any other fauna, notably tortoises, frogs, skinks and chameleons, during the site preparation, and especially when any earthworks and trenches are being dug or left open. This should be undertaken by an appointed ECO on a daily basis, until the site has been cleared (apart from the milkwoods and other designated trees) and the	-Monitor operations including gardens, open spaces and other relevant areas.	The responsibility for implementing these mitigation measures and monitoring operations lies with the owner of the property

		services are installed. Rescued animals should be released inside the adjacent Hoek van der Berg Nature Reserve (with relevant permission). - Search and Rescue for all translocatable geophytes should be undertaken prior to site development. Suitable candidates include about 500 *Chasmanthe aethiopica* (cobraflower) bulbs, and about ten *Haemanthus coccineus* (poeierkwas). These should be translocated to similar habitat in the adjacent Hoek van de Berg NR, after permission has been obtained to do so, and should be undertaken by someone with experience in plant translocations. - Given that relatively little mitigation is possible and that quite substantial biodiversity will still be lost (even if not of High or Medium negative significance) it is recommended that the applicant make a sizeable conservation contribution (donation) to a local conservation group (Vermont – Hermanus area) that is involved with alien invasive vegetation management and control, as this is a major threat to the remaining habitat in the region.		
Dust	Dust impact generated from the site clearing and site preparation during the operation phase.	- Maintain ground cover for as long as possible to reduce the total area exposed to wind. - Do not clear the entire plots and rather clear buildings sites only.	-monitor operations	Owner as applicable

	Risk- nuisance for residences adjacent to the sites.	- Ensure speed limits on site are kept to minimum - Wet dry and dusty surfaces using non-portable water. - Staff to wear correct PPE if the dust is generated for long time.		
Noise	Typical Noise impacts associated with the operation of a residential dwelling and group of residential dwellings. Risk – disturbance to surrounding landowners and employees	-Ensure noisy activities take place in line with municipal bylaw. - Provide protective wear for workers i.e. ear plugs. -Ensure silencers are fitted to noisy machinery -Machinery to be kept in good working order	-Monitor operations	Owner as applicable
Visual	Typical Visual impacts associated with the operational phase of a residential dwelling or group of residential dwellings Risk – visual impact of operation within landscape and suburb	-Ensure infrastructure and dwellings are maintained on a regular basis (i.e gardens are tidy, lawns are cut, dwellings are painted, refuse areas are secured and tidy etc. -Ensure any on site storage is kept tidy and secured to prevent spread by wind or rain -Keep artificial lighting to a minimum -Encourage good housekeeping to ensure daily operations result in a well-kept site -Restrict operational activities to impacted areas only -Indigenous trees can be planted to screen the activities	-Monitor operations	Owner as applicable

Job creation	Job creation and skills transfer during operation Risk – labour not sourced locally, therefore local benefit and skills transfer is limited	-Ensure labour and contractors are sourced locally as far as possible -Encourage educational opportunities to employees.	-Ensure employees are sourced locally as far as possible by checking staff appointments -Encourage the use of local service providers as far as possible	Owner as applicable
Ecological	Loss of ecological connectivity and species movement across and between the site. Loss of low to medium sensitive botanical areas and vegetation. Risk of alien vegetation due to landscaping and poor management	- All milkwoods (Sideroxylon inerme) above 1m and many of the other indigenous trees on site taller than 1m have been surveyed and shown in Figure 1b. It is understood that some (maybe 35%) of these will be lost to road and bulk service development, but the others should remain and survive within designated erven, although another 50% may be lost during house development. The applicant must obtain the relevant permits if any milkwoods (a Protected Species) are to be damaged or lost during the site development process, and subsequently by new erf owners if during the construction phase. - Search and Rescue must be undertaken for all reptiles and any other fauna, notably tortoises, frogs, skinks and chameleons, during the site preparation, and especially when any earthworks and trenches are being dug or left open. This should be undertaken by an appointed ECO on a daily basis, until the site has been cleared (apart from the milkwoods and other designated trees) and the services are installed. Rescued animals should be	Monitoring the ecological aspects is essential to ensure that the preferred layout and other mitigation measures are effective.	Owner as applicable

	released inside the adjacent Hoek van der Berg Nature Reserve (with relevant permission). - Search and Rescue for all translocatable geophytes should be undertaken prior to site development. Suitable candidates include about 500 Chasmanthe aethiopica (cobraflower) bulbs, and about ten Haemanthus coccineus (poeierkwas). These should be translocated to similar habitat in the adjacent Hoek van de Berg NR, after permission has been obtained to do so, and should be undertaken by someone with experience in plant translocations.		

8.2. General operational impacts and requirements

8.2.1. Health and Safety
Responsibility – Owner

Correct Personal Protective Equipment (PPE) must be worn at all times by the personnel on site. Personnel must be trained on the use of PPE. Each contractor should employ their own Safety Officer to monitor the safety conditions during the operations. Suitable warning and information signage should be erected. The handling of hazardous materials should only be done by trained personnel. Safety Data Sheets (SDSs) must be readily available for all hazardous substances on site and employees should be aware of the risks associated with any hazardous materials used. All provisions of the Occupational Health and Safety Act (Act No. 85 of 1993) must be complied with. In the event of an emergency relating to a hazardous substance, procedure details in the SDSs should be immediately implemented.

8.2.2. Fire risk management
Responsibility - Owner

A Fire Officer should be identified, who shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedure to be followed. The Fire Officer shall ensure that there is basic fire-fighting equipment available on site at all times. Any fires should be reported to the fire officer immediately.

8.2.3. Fuels and hazardous materials
Responsibility - Owner

Fuels and flammable materials which may be required on site during operation, are to be suitably stored in a designated area. Impervious materials are to be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks. Quantities of fuels and hazardous materials stored on site should be appropriate to the requirement for these substances on site.

8.2.4. Erosion Control
Responsibility - Owner

Action should be taken to prevent erosion of soils on site. Should any erosion be detected on site, the cause of such erosion should be identified, and appropriate remedial action must be immediately implemented.

8.2.5. Architecture / Design
Responsibility - Owner

Dwellings and infrastructure to comply with bylaws. Owners should aim to ensure buildings are in line with architectural norms for the area and do not have a negative contribution to the area as a whole.

8.2.6. Water Use
Responsibility – Owner

The following water saving principles are recommended for the site and can be implemented over time or as and when current infrastructure requires replacing:

- Rainwater storage tanks can be installed to collect runoff rainwater. Rainwater tanks should be installed in such a way as to prevent visual or landscape intrusion

- Shower and wash basin taps should be fitted with flow reduction devices, aerators and motion sensors to maximise water conservation and reduce wastage
- All internal and external taps on site should be regularly inspected and maintained to prevent water wastage through drips and leaks
- All new toilets should be fitted with a dual flush system, reduced flow should be implemented on existing infrastructure if dual flush is not possible
- Grey water from showers, baths, basins and washing machines, should be collected or redirected for reuse (gardening, outside washing etc.)
- Endemic and indigenous plants should be used for gardens and landscaping to minimize water demand i.e. water wise landscaping
- Should irrigation be required, these should be on timed systems and active at low evaporation hours (early morning, late evening)
- Drains should be fitted with grease traps which remove oils and solids from waste water, to improve the quality of the effluent waste water for reuse
- Dry brushing and / or sweeping should be used in preference to water cleaning, where possible (cleaning pathways, machinery etc.)
- Alien invasive vegetation should be removed from the property to promote healthy and functioning rivers, ground water and wetlands, where applicable
- Efficient water use habits should be encouraged across the property
- Sewerage systems should be regularly monitored and maintained to prevent leaks and pollution of groundwater.

8.2.7. Electricity

The following electrical saving principles are recommended:

- Regular light bulbs to be replaced with energy saving bulbs in all structures
- The use of solar power should be maximised as far as possible
- Energy saving geysers should be installed
- Solar water heaters should be installed
- Proper insulation should be used on all new structures and renovations, in order to reduce the need for heating and cooling of dwellings
- Programmed lighting should be implemented to prevent lights being left on unnecessarily

8.2.8. Sewerage

Municipal infrastructure for the responsibility of the municipality

8.2.9. General waste and refuse

General waste is transferred to the municipal waste site by the municipality as scheduled. Waste minimisation strategies should be implemented through avoidance, reduction, reuse, recycling, recovery, treatment or responsible disposal. On-site bins should be animal and weather-proof. Refuse areas should be secure and screened to avoid visual impacts. Refuse areas should provide for waste sorting (tins, glass, paper etc.). No waste should be stored or disposed of on-site.

8.2.10. Site maintenance and repairs

Renovations and maintenance should be conducted in line with a maintenance schedule to ensure that renovations are done effectively with reduced wastage. When using paints, cleaners, and other solvents for maintenance, preference should be made for environmentally friendly products, water-based paints, and avoidance of harsh chemicals. No building materials or products used during renovations should be disposed of on site.

8.2.11. Alien vegetation management

No alien vegetation should be used for landscaping. Alien vegetation should be removed on a continual basis.

8.2.12. Internal roads and footpaths

Limited to approved areas only. No adhoc paths to be created particularly in open spaces.

8.2.13. *Fauna*

To safeguard the wild fauna on the site, the following measures will be implemented:

- All wild fauna on the site will be protected.
- Feeding of wild animals is strictly prohibited.
- Edible refuse should be appropriately disposed of to avoid attracting and impacting wildlife.
- The use of poisons or traps should be avoided as much as possible.
- In the case of 'problem' animals, professional help, such as Cape Nature, will be contacted for appropriate assistance.

9. NON-COMPLIANCE

The Environmental Authorisation (EA) stipulates that, *"Non-compliance with a condition of this Environmental Authorisation and the EMPr may render the holder liable to criminal prosecution."* It is therefore important that the conditions are adhered to as outlined in the EA and EMP. A Penalties scheme can be used during construction for transgressions.

Transgressions relate to actions by the contractor whereby damage or harm is inflicted upon the environment or any feature thereof and where any of the conditions or specifications of the EMP and EA have been infringed upon. In the instance of environmental damage, the damage is to be repaired and rehabilitated using appropriate measures, as far as possible and as directed by appropriate specialists, if required. These remedial actions are for the account of the contractor or other guilty party as identified by the Project Manager, applicant or ECO. Where non-repairable damage is inflicted upon the environment or non-compliance with any of the EMP / EA obligations is registered, the Contractor may face a monetary penalty to an amount specified by the Project manager / ECO. The Project manager / ECO reserves the right to implement a first offence warning.

If excessive infringement with regard to any of the specifications is registered, the applicant / project manager, reserves the right to terminate the contractor's contract.

10. COMPLIANCE AND MONITORING

The monitoring of works on site is necessary to demonstrate compliance with the specifications of the EMP and EA and to allow for problems or issues of non-compliance to be identified and remedial actions implemented.

Monitoring should include visual checks by the owner / operator / ECO, as applicable, on a regular basis. The implementation of regular monitoring will ensure that environmental impacts can be detected early and remedial action implemented. The following activities need regular monitoring:

- Actions which impact negatively on the high sensitivity botanical areas
- Landscaping is limited to allow natural vegetation to thrive
- Water saving principles are being implemented and adhered to
- Refuse areas are tidy and no refuse is visible on or around the property
- Stockpiles are screened and kept for bare minimum
- Buildings are maintained on a regular basis and in line with architectural character of the area
- Riverbanks and watercourses are not negatively impacted by daily activities on site

10.1. Environmental control sheets

Environmental Control Sheets to be used by the ECO on a weekly basis to monitor activities to ensure compliance with recommendations. The ECO should familiarise themselves with the full set of recommendations for the site and reasons for these recommendations, as well as understand the site and constraints analysis and be able to identify the constraints / No Go areas.

Table 3. Environmental Control Sheets for operation

					RECORD OF PERFORMANCE		
TASK	**ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION**	**FREQUENCY**	**TARGET / OUTCOME**	**RESPONSIBILITY**	**COMPLETED YES/ NO**	**DATE**	**COMMENT**
OPERATION							
Botanical	• All milkwoods (*Sideroxylon inerme*) above 1m and many of the other indigenous trees on site taller than 1m have been surveyed and shown in Figure 1b of the botanical specialist report. It is understood that some (maybe 35%) of these will be lost to road and bulk service development, but the others should remain and survive within designated erven, although another 50% may be lost during house development. The applicant must obtain the relevant permits if any milkwoods (a Protected Species) are to be damaged or lost during the site development process, and subsequently by new erf owners if during the construction phase.	This action should be implemented as required, and the high sensitivity botanical areas should be continuously monitored and maintained	Maintain high sensitivity botanical areas in their natural state in perpetuity, ensuring their long-term conservation and protection.	Management / ECO /Owner			

	• Search and Rescue must be undertaken for all reptiles and any other fauna, notably tortoises, frogs, skinks and chameleons, during the site preparation, and especially when any earthworks and trenches are being dug or left open. This should be undertaken by an appointed ECO on a daily basis, until the site has been cleared (apart from the milkwoods and other designated trees) and the services are installed. Rescued animals should be released inside the adjacent Hoek van der Berg Nature Reserve (with relevant permission). • Search and Rescue for all translocatable geophytes should be undertaken prior to site development. Suitable candidates include about 500 *Chasmanthe aethiopica* (cobraflower) bulbs, and about ten *Haemanthus coccineus* (poeierkwas). These should be translocated to similar habitat in the adjacent Hoek van de Berg NR, after permission has been obtained to do so, and should be undertaken by someone with experience in plant translocations.						

Ecological	- All milkwoods (*Sideroxylon inerme*) above 1m and many of the other indigenous trees on site taller than 1m have been surveyed and shown in Figure 1b. It is understood that some (maybe 35%) of these will be lost to road and bulk service development, but the others should remain and survive within designated erven, although another 50% may be lost during house development. The applicant must obtain the relevant permits if any milkwoods (a Protected Species) are to be damaged or lost during the site development process, and subsequently by new erf owners if during the construction phase. - Search and Rescue must be undertaken for all reptiles and any other fauna, notably tortoises, frogs, skinks and chameleons, during the site preparation, and especially when any earthworks and trenches are being dug or left open. This should be undertaken by an appointed ECO on a daily basis, until the site has been cleared (apart from the milkwoods and other designated trees) and the services are installed. Rescued animals should be released inside the adjacent Hoek van der Berg Nature Reserve (with relevant permission). - Search and Rescue for all translocatable geophytes should be undertaken prior to site development. Suitable candidates include about 500 *Chasmanthe aethiopica* (cobraflower) bulbs, and about ten *Haemanthus coccineus* (poeierkwas). These should be translocated to similar habitat in the adjacent Hoek van de Berg NR, after permission has been	As required, ensuring continuous protection and maintenance of high-sensitivity ecological areas.	The target is to maintain high-sensitivity ecological areas in perpetuity, preserving these areas and mitigating adverse effects on wildlife.	Management/ECO			

	obtained to do so, and should be undertaken by someone with experience in plant translocations.						

Dust	- maintain ground cover for as long as possible to reduce the total area exposed to wind - Do not clear the entire plots and rather clear building sites only - ensure speed limits on site are kept to a minimum - wet dry and dusty surfaces using non-portable water. - Staff to wear correct PPE if the dust is generated for long time. METHOD: Check the implementation of mitigation measures.	As required	Minimal impact on the area's surroundings.	Management/ ECO			
Noise	- Ensure noisy activities take place in line with municipal bylaw - Ensure silencers are fitted to noisy machinery - Machinery to be kept in good working order - Generators to be located in generator rooms to dampen the sound METHOD: Check the implementation of mitigation measures	As required	No impacts to adjacent landowners	Management / ECO / Owner			
Job creation, skills transfer, invest on the area	- Ensure labour and contractors are sourced locally as far as possible - Encourage educational opportunities to employees - Encourage patrons to visit other local and surrounding tourism offerings METHOD: Include in contract documents and business model	As required	Maximise jobs for local communities Investment in the local economy	Management / ECO / Owner			
Health & Safety	- Appoint officer as required METHOD: Appoint H&S steward	As required	Avoid / prevent H&S incidents	Management / ECO / Owner			
Fire	- Implement fire management requirements as outlined in the EMP and Conservation Management Plan	As required	Avoid / prevent fire incidents	Management / ECO / Owner			

	METHOD: Appoint Fire Officer / chief, implement recommendations of management plan						
Fuels and hazardous material	- To be suitably stored - Bulk deposits to be bunded METHOD: Inspect on a regular basis	As required	Avoid / prevent spills and leaks	Management / ECO / Owner			
Erosion	- Monitor construction and rehabilitated areas METHOD: Inspect on a regular basis	As required	Prevent erosion	Management / ECO / Owner			
Water	- Monitor for water wastage (dripping taps, leaking pipes etc) METHOD: Implement water saving measures	As required	Reduce water usage and introduce water saving principles	Management / ECO / Owner			
Electricity	- Monitor electricity usage METHOD: Implement electrical saving measures	As required	Reduce electrical consumption	Management / ECO / Owner			
Sewage and sewerage infrastructure	- Check areas surrounding sewage tanks for signs of eutrophication and leaking tanks - Install 75 % float level alarm to indicate when provision needs to be made to empty tanks METHOD: Monitor for spills and leaks from conservancy tank, install and monitor float level alarms	As required	Avoid sewerage spills and contamination	Management / ECO / Owner			
General waste and refuse	- Implement recycling and reuse as far as possible - Ensure waste storage areas are in line with requirements to prevent adverse impacts on people, the environment and animals METHOD: -Monitor waste disposal areas	As required	A clean site, with reuse and recycling encouraged	Management / ECO / Owner			
Site management and renovations	- Renovations and maintenance should be conducted in line with a maintenance schedule to ensure that renovations are done effectively with reduced wastage. When using paints, cleaners and other solvents for maintenance, preference should be made for environmentally friendly products, water-based paints and avoidance of harsh chemicals. No building materials or products used during renovations should be disposed of on site	As required	A aesthetically pleasing site with schedule maintenance as required	Management / ECO			

Alien vegetation management	- Remove alien vegetation from the property to allow for the regeneration of indigenous species in line with an Alien Management Plan METHOD: Implement Alien Management Plan	As required	A quality site and remainder, reduce alien vegetation seedbank	Management / ECO / Owner			
Fauna	- No feeding of wild animals - No killing of wild animals METHOD: Seek professional assistance for 'problem' animals	As required	The target is to have functional ecological corridors and prevent harm to fauna. This involves responsible behaviour regarding wild animals and professional assistance when needed.	Management / ECO / Owner			

11. ENVIRONMENTAL AUDITS

The purpose of auditing is to determine and monitor compliance with the EMP and EA and measure its effectiveness in mitigating environmental impacts. In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder of the EA must conduct environmental audits in order to determine compliance with the conditions of the EA and EMP. Environmental Audit Reports should be submitted to the Competent Authority or as stipulated in the EA. The audit reports should be prepared by an independent person. The audit report should also provide recommendations regarding the need to amend the EMP.

The objective of the environmental audit report is to:

- Report on the level of compliance with the conditions of the EA and the EMP
- Report on the extent to which the avoidance, management and mitigation measures outlined in the EMP, achieve the objectives and outcomes of the EMP
- Identify and assess any new impacts and risks as a result of the activity
- Evaluate the effectiveness of the EMP
- Identify shortcomings in the EMP
- Identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMP

An environmental audit report should contain the following:

- Details and expertise of the independent person who prepared the environmental audit report
- A declaration that the auditor is independent
- An indication of the scope of, and the purpose for which, the environmental audit report was prepared
- A description of the methodology adopted in preparing the environmental audit report
- An indication of the ability of the EMP to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity as well as to ensure compliance with the provisions of environmental authorisation and EMP.
- A description of any assumptions made, and any uncertainties or gaps in knowledge
- A description of any consultation process that was undertaken during the course of carrying out the environmental audit report, if required
- A summary and copies of any comments that were received during any consultation process
- Any other information requested by the competent authority.

Environmental audits are not likely to be undertaken for the current operational activities due to the nature of the activity.

12. CONCLUSION

The Environmental Management Plan (EMP) has been formulated within the framework of the Basic Assessment process, aiming to enforce effective mitigation and management measures throughout the operational phase of the project. It is designed to uphold the conditions outlined in the Environmental Authorization (EA) and serve as a comprehensive guide for all project phases. The EMP serves as a crucial tool for acknowledging environmental needs, ensuring the minimization of potential negative impacts, and assigning responsibilities for environmental controls. This plan is intended to be utilized in tandem with the Environmental Authorization to ensure the sustainable and responsible execution of the proposed development.

12. DECLARATION OF ACCEPTANCE

I, _____ (name), representing _____ (company name), have read and understood the above Environmental Management Plan and hereby acknowledge its contents and requirements as a framework for the environmental performance during the operational phase of the development.

Signed: _____ Date: _____

APPENDIX A : PREFERRED LAYOUT PLAN