LORNAY
ENVIRONMENTAL CONSULTING

Maintenance Management Plan

Erf 1490, Vermont, Hermanus, Caledon RD

02 June 2026

Consultant:

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Lornay Environmental Consulting Pty Ltd**|** Reg 2015/445417/07

Western Cape Government

ADOPTION OF A MAINTENANCE MANAGEMENT PLAN

Request for the adoption of a Maintenance Management Plan in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014.

APRIL 2024

DEPARTMENTAL DETAILS	
CAPE TOWN OFFICE: **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)** (City of Cape Town, West Coast District, Cape Winelands District & Overberg District)	**GEORGE REGIONAL OFFICE:** **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)** (Central Karoo District & Garden Route District)
The completed Form must be sent via electronic mail to: DEADPEIAAdmin@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 1) at: E-mail: DEADPEIAAdmin@westerncape.gov.za Tel: (021) 483-5829 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	The completed Form must be sent via electronic mail to: DEADPEIAAdmin.George@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 3) at: E-mail: DEADPEIAAdmin.George@westerncape.gov.za Tel: (044) 814-2006 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THE ATTACHED FORM:

1. Purpose

The purpose of this form is to provide baseline information for the adoption of a Maintenance Management Plan ("MMP) by the competent authority.

2. Administrative requirements

This form must be used to request the competent authority to adopt a Maintenance Management Plan in terms of the NEMA EIA Regulations, 2014.

3. Maintenance Management Plan information

3.1 This form is for the adoption of a MMP and only relates to the Listed Activities as contained in Listing Notice 1, 2 and 3 of the EIA Regulations, 2014 that make provision for the adoption of a MMP.

3.2 Please note that an MMP can only be considered for activities pertaining to maintenance related work. Construction work related to new or expanded structures or infrastructure beyond the existing footprint cannot be considered as part of the request for the adoption a MMP by the competent authority.

3.3 Construction work related to new or expanded structures or infrastructure beyond the existing footprint may trigger a listed activity in terms of the EIA Regulations, 2014 and environmental authorisation may be required. If this is the case an application for environmental authorisation must be submitted to the competent authority.

3.4 Notwithstanding the MMP possibly being defined or adopted by the Competent Authority, any other applicable statutory requirements must still be complied with (e.g. any obligations under the National Water Act, 1998 (Act 36 of 1998) or the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)).

3.5 The proponent must note that a MMP for a watercourse must be undertaken through consultation with the Department of Water and Sanitation and/or the relevant Catchment Management Agency (responsible water authority). This is to ensure compliance in terms of a Permissible Water Use as set out in the National Water Act, 1998 (Act No. 36 of 1998). It is recommended that this process for authorisation in terms of the National Water Act be clarified prior to the drafting and submission of the MMP.

3.6 The adoption of a MMP does not absolve the proponent from complying with any applicable legislation or the general "duty of care" set out in Section 28(1) of the NEMA that states, "*Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.*" (Note: When interpreting this "duty of care" responsibility, cognisance must be taken of the national environmental management principles contained in Section 2 of the NEMA.

3.7 Please note that the content of a MMP must include *inter alia*, the following:

- A description of the objectives of the MMP;
- A description of the relevant legislation and polices within which the MMP is prepared;
- A description of the site and a locality map;
- A description of the proposed maintenance activities;
- A description of the tasks that will be performed (method statement);
- A description of the potential impacts on the receiving environment and any management and/or mitigation measures to minimise the potential impacts associated with the maintenance activity;
- Any specialist inputs that were obtained; and
- The roles and the responsibilities of the role players who will be involved in the maintenance activity.

3.8. A public participation process must be undertaken as part of the request for the competent authority to adopt a MMP. As a minimum you will be required to:

- inform the surrounding neighbours, your local authority and the relevant water authority of your intentions (these interested and affected parties will be regarded as registered interested and affected parties);
- allow a minimum of 30 days as a commenting period for these interested and affected parties;
- obtain written comment from all relevant Organs of State and the Local Authority; and
- respond to comments received and the proof of the public participation including all comments received and responses provided thereto must be submitted to the competent authority.

4. General

4.1 *Submission of documentation, reports and other correspondence:*

The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant competent authority must be consulted.

The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

DEADPEIAAdmin@westerncape.gov.za

Directorate: Development Management (Region 1):
City of Cape Town; West Coast District Municipal area;
Cape Winelands District Municipal area and Overberg District Municipal area.

DEADPEIAAdmin.George@westerncape.gov.za

Directorate: Development Management (Region 3):
Garden Route District Municipal area and Central Karoo District Municipal area

General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

4.2 The required information must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. The tables may be expanded where necessary. Please make use contrasting colours in the answer blocks to improve the visibility and highlight information.

4.3 The quality, correctness and detail of information submitted by you is extremely important and it remains your responsibility to interrogate the specifics of your proposed development in order to report on the potential listed activities in this form.

4.4 This form is a guide to the information that must be submitted. Any additional information, pictorial evidence or explanations prompted by the form must be submitted along with this form in order to ensure that the competent authority does not need to request additional information from you. Incomplete forms will result in a request for additional information.

4.5 Unless protected by law all information contained in, and attached to this form, will become public information on receipt by the Department. Upon request, the Applicant/EAP must provide any interested and affected party with the information contained in or submitted with this Form.

Protection of Personal Information Act, 2013 (Act No. 4 of 2013) ("POPIA"):
Your attention is drawn to POPIA which is a comprehensive data protection legislation enacted in South Africa and came into effect on 1 July 2020. POPIA aims to give effect to the constitutional right to privacy, whilst balancing this against competing rights and interests, particularly the right of access to information. Please note that your personal information will only be used as far as it relates to the EIA process. By including your personal details in the Form and any subsequent reports and documents it will be deemed as giving consent to use this information as far as it relates to the EIA process.

4.6 This form is current as of **April 2024**. It is the responsibility of the Proponent/EAP to ascertain whether subsequent versions of the form have been released by the Department. Visit the Department's website at http://westerncape.gov.za/eadp to check for the latest version of this Form.

4.7 This form must be **duly dated and signed** by the Proponent and/or EAP (wherever applicable) and must be submitted to the Department at the details provided below.

4.8 Please note that it is an offence for a person to provide incorrect or misleading information in any form, including any document submitted in terms of the EIA Regulations to a competent authority or omits information that may have an influence on the outcome of a decision of a competent authority.

5. Circulars, Guidelines and Tools

The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, and guidelines must be taken into account when completing this Form.

ADOPTION OF A MAINTENANCE MANAGEMENT PLAN FORM

REQUEST FOR THE ADOPTION OF A MAINTENANCE MANAGEMENT PLAN IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) ("NEMA") AND THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2014.

APRIL 2024

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number/the extent of the maintenance activities)

Background

Lornay Environmental Consulting was appointed to apply for Environmental Authorisation for a proposed residential development as well as the proposed upgrade of the access road on Remainder of Erf 1489 and Erf 1490 in Vermont, Hermanus. However, this document is intended for the operational aspects of the development after the construction phase is complete. As part of the long-term management of the site, this document only applies to all maintenance and management activities on Erf 1490.

Purpose of the Maintenance Management Plan

The purpose of this Maintenance Management Plan (MMP) is to provide a structured framework for the long-term maintenance, and management of activities that may require environmental authorisation during the operational phase of the project. Specifically, the proposed upgrades of the access road located on Erf 1490, the application of this MMP is only applicable to Erf 1490 (Portion A).

This MMP covers the following aspects:

- → Existing lawfully established infrastructure – replacement of structures authorised on Erf 1490 which fall within the Regulated area of the wetland in response to general maintenance and emergency response.
- → Maintenance activities that would otherwise trigger a listed activity – sediment removal, erosion control and replacement of lawful structures within the regulated area.
- → Repeated, ongoing and long-term maintenance activities required to ensure the management of the wetland area.

Figure 1: Aerial Photo of the subject properties. The area circled in brown is proposed for upgrades, and it falls within the regulated area of a watercourse.

Site Overview

A portion (Portion A) of Erf 1490, which provides access to the proposed development on Erf 1489 will be formalised through upgrades by means of the tar road. The MMP will ocver any future actions required to the development which falls within the regulated area.

GENERAL REQUIREMENTS

1.1. Locality Map

A locality map must be attached to the Form, as Appendix A. The scale of the locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map. The map must include the following:

- an accurate indication of the project site position;
- road names or numbers of all the major roads as well as the roads that provide access to the site(s)
- a north arrow;
- a legend;
- the prevailing wind direction; and
- GPS co-ordinates (Indicate the position of the proposed maintenance activities on the site). The co-ordinates should be in degrees, minutes and seconds. The minutes and seconds should be to at least three decimal places. The projection that must be used in all cases is the Hartebeesthoek94 WGS84 co-ordinate system**. If maintenance activities will be undertaken along a stretch of a watercourse, the start, middle and end co-ordinates must be provided.**

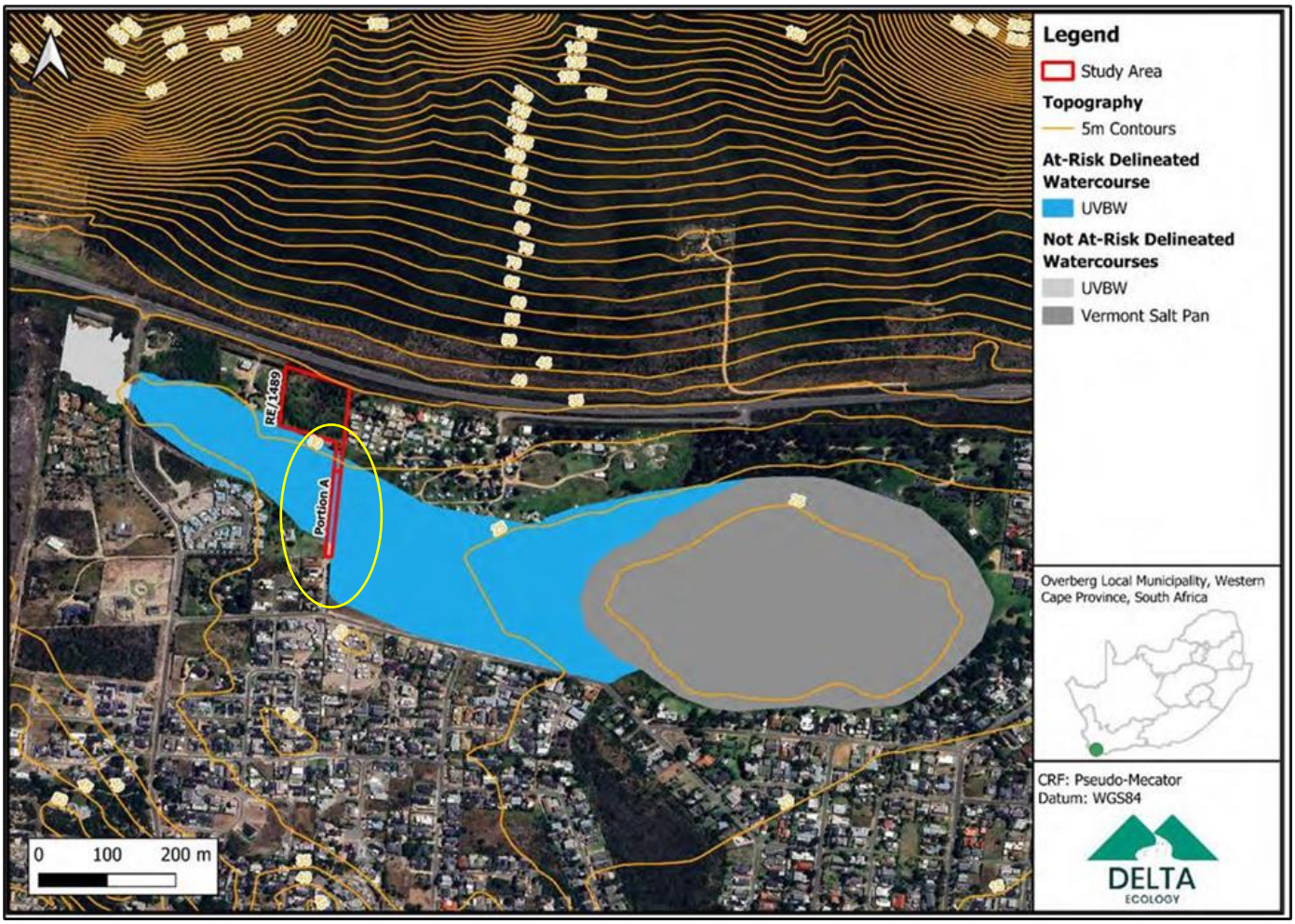

Figure 2: Location of Erf 1489 as well as split portion (Portion A) of Erf 1490 falling within the delineated Unchanneled Valley Botton Wetland.

PART 1: ADMINISTRATIVE DETAILS

SECTION A: DETAILS OF PROPONENT | EAP| LANDOWNER| MUNICIPALITY

Highlight the Departmental Region and District in which the intended application will fall		CAPE TOWN OFFICE (REGION 1)		GEORGE REGIONAL OFFICE (REGION 3)
		City of Cape Town	Cape Winelands District	Central Karoo District
		West Coast District	Overberg District	Garden Route District

Duplicate this section where there is more than one Proponent						
1.	Name of Proponent:	Westrand Inv 1015 (Pty) Ltd				
	Contact person name (if other):	Huw Jones				
	Company/ Trading name State Department/Organ of State:	Westrand Inv 1015 (Pty) Ltd				
	Company Registration Number:	1996/051425/23				
	Postal address & Postal code:	Private Bag X15 Postnet Suite 56, Hermanus			Code	7200
	Contact numbers:	Tel.	+27(0)	Cell:	+27(0) 066 304 5864	
	E-mail:	walker.plumbers@hermanus.co.za				
2.	Company of EAP/Specialists:	Lornay Environmental Consulting Pty Ltd				
	EAP / Candidate EAP / Specialist name:	Michelle Naylor				
	EAP / Specialists registration no:	2019/698				
	Postal address & Postal code:	Unit 5/1F Hemel & Aarde Wine Village, Hermanus			Code	7200
	Contact numbers:	Tel.	-	Cell:	083 245 6556	
	E-mail:	michelle@lornay.co.za				
Duplicate this section where there is more than one Landowner						
ERF 1489						
3.	Name of landowner:	Westrand Inv 1015 (Pty) Ltd				
	Name of contact person for landowner (if other):	Huw Jones				
	Postal address & Postal code:				Code	7200
	Contact numbers:	Tel.	-	Cell:	066 304 5864	
	E-mail:	walker.plumbers@hermanus.co.za				
ERF 1490						
4.	Name of landowner:	Edward Henry Gillespie				
	Name of contact person for landowner (if other):	Richard Kotzé				
	Postal address & Postal code:	PO Box 20, Hermanus, 7200				
	Contact numbers:	+27 (0) 84 513 2147				
	E-mail:	egillespie@overstrand.gov.za				
Duplicate this section where there is more than one Municipal Jurisdiction						
5.	Municipality in whose area of jurisdiction the proposed activity will be undertaken:	Overstrand Municipality				
	Name of contact person:	Penelope Aplon				
	Postal address & Postal code:	Magnolia Street, Hermanus			Code	7200
	Contact numbers:	Tel.	+27(0) 28 313 8000	Cell:	+27(0)	
	E-mail:	paplon@overstrand.gov.za				

PART 2: ADOPTION OF A MAINTENANCE MANAGEMENT PLAN

SECTION B: DETAILS OF THE PROPOSED MAINTENANCE ACTIVITY(IES)

1.	Provide a detailed description of the proposed maintenance activity(ies). (Please ensure that a method statement is included for each maintenance activity.)

The need for this Maintenance Management Plan (MMP) arose directly from the development application submitted for Erf 1489, Vermont. The MMP specifically responds to the requirement to upgrade the existing access road traversing Erf 1490 (Portion A), which is necessary to provide safe and functional vehicular access to the proposed residential development on Erf 1489.

The existing access road requires targeted upgrades to bring it to a standard suitable for residential access, while simultaneously ensuring that impacts on the sensitive ecological features present within and adjacent to the road corridor are avoided or minimised to the greatest extent practicable. Of particular concern is the Unchanneled Valley Bottom (UVB) wetland system that traverses the road corridor from west to east, ultimately draining toward the Vermont Salt Pan. As illustrated in Figure 2 above, the UVB wetland (mapped as an At-Risk Delineated Watercourse) extends across a significant portion of the study area, with Erf 1490 (Portion A) and the existing access road falling directly within this delineated wetland system. This wetland has been formally delineated and constitutes a sensitive aquatic feature that must be protected throughout all phases of the proposed works.

The Aquatic Biodiversity Impact Assessment (Van Zyl & Morton, 2025) confirmed the presence of a natural Unchanneled Valley Bottom (UVB) wetland directly adjacent to and partially coinciding with the existing access road on Erf 1490 (Portion A). The UVB wetland forms part of a 1.4 km long wetland system that originates to the west of the study area and drains into the Vermont Salt Pan approximately 420 m to the south-east. The wetland was assessed as being in a largely modified condition (Present Ecological State Category D), with a Moderate Ecological Importance and Sensitivity (EIS) rating, and a Recommended Ecological Category (REC) of D–C.

The majority of the wetland area coinciding with Portion A is considered to be relic or historical in nature, having lost functional wetland characteristics due to existing disturbances including infilling, roads, residential development, alien invasive vegetation, and canalization. A functional UVB wetland area was however confirmed to be present immediately downslope of and adjacent to the existing access road, characterised by obligate wetland species including *Juncus krausii* and *Cyperus textilis*, with facultative species including *Senecio halimifolius* and *Zantedeschia aethiopica* along the outer wetland margin. This functional wetland area was classified as being of High Aquatic Sensitivity and must be protected throughout all phases of the proposed road upgrade and associated maintenance activities.

The proposed road upgrade entails the replacement and improvement of the existing access road surface (Kolgans Close Road) along Portion A, which will be built to municipal standards and transferred to the municipality upon completion. The road will not be widened; the existing road surface will be removed and the underlying layers replaced with new materials (asphalt). Associated bulk services upgrades including sewer pipeline upgrades and water supply connections will also be undertaken within or adjacent to the road reserve.

Three primary aquatic impacts were identified by the Freshwater Specialist as being associated with the proposed works, namely: (1) disturbance of wetland habitat; (2) alteration of the flow regime of the UVB wetland; and (3) water quality impairment. All three impacts were assessed as Low significance following the implementation of the mitigation measures prescribed in this MMP. The Risk Assessment Matrix (RAM) prescribed by GN4167 of 2023 returned an overall Low Risk rating for the proposed development, subject to full implementation of mitigation measures.

The maintenance activities and associated method statements set out below give effect to these mitigation requirements and are designed to ensure that the functional integrity of the UVB wetland is maintained throughout and following the road upgrade works.

1. DESCRIPTION OF MAINTENANCE ACTIVITIES

This MMP covers all maintenance and repair activities of the built infrastructure which is located within the Regulated Area of the identified watercourse, specifically within the sections of the existing access road situated on Erf 1490 (Portion A). The activities addressed under this MMP are strictly limited to like-for-like maintenance and replacement works once the infrastructure is operational. No new development or expansion of infrastructure beyond the existing road footprint is included within the scope of this plan.

The scope of this MMP encompasses the following activity categories: infrastructure maintenance and repair; like-for-like replacement of existing road surface and drainage structures; sediment management; vegetation management within the road reserve; and associated rehabilitation actions required within the defined maintenance area.

Spatial Extent and GPS Coordinates

The maintenance activities governed by this MMP are confined to the defined road corridor traversing Erf 1490 (Portion A), as delineated in Figure 2. The GPS coordinates demarcating the extent of the maintenance area are provided in Table 1 below.

Table 1: Area extent applicable to this MMP

Area	Latitude	Longitude
1	34°24'29.08"S	19° 9'5.79"E
2	34°24'29.27"S	19° 9'6.99"E
3	34°24'36.43"S	19° 9'6.25"E
4	34°24'36.23"S	19° 9'4.95"E

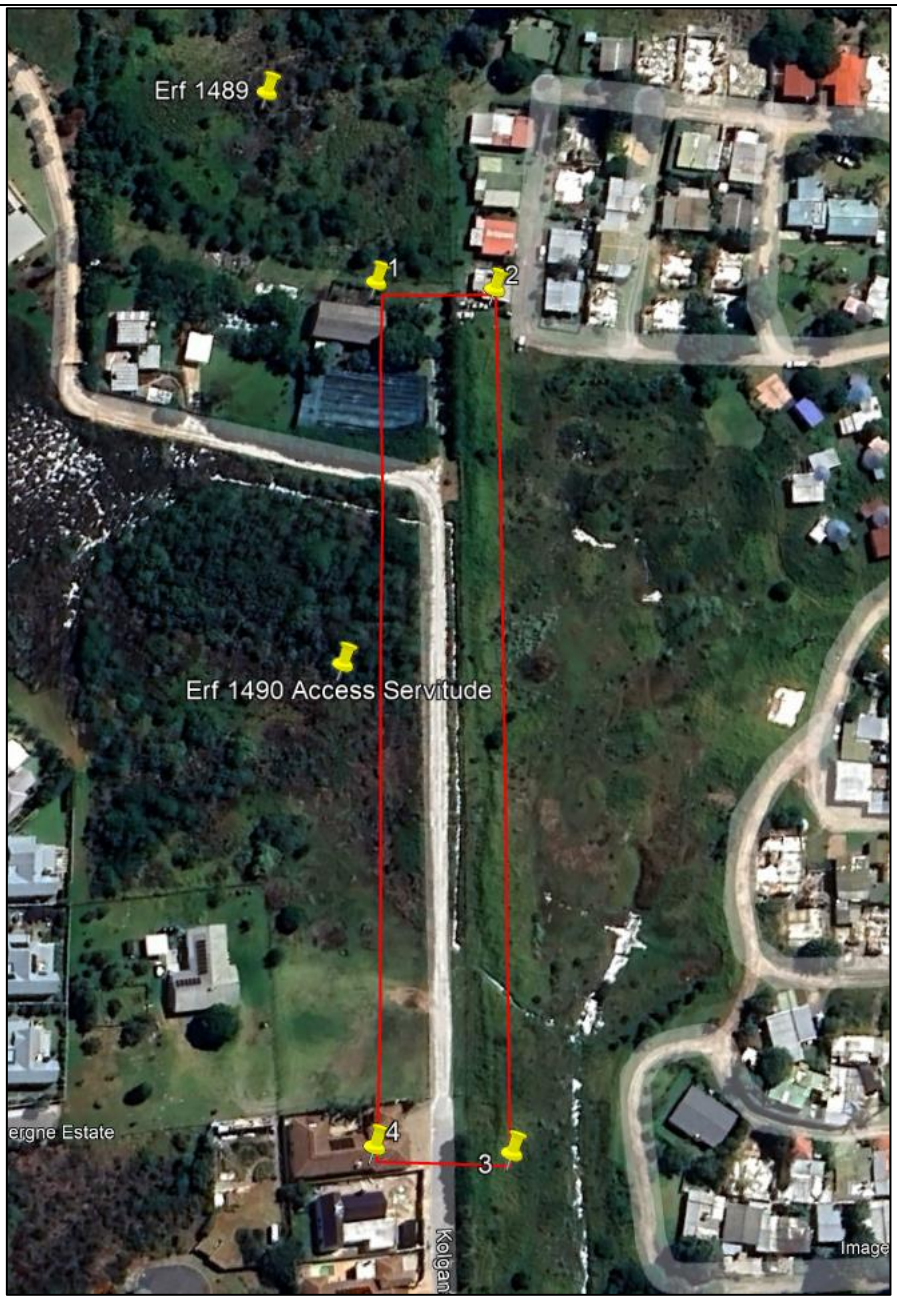

Figure 4: Spatial extent of the MMP Area

Maintenance Activities

This Maintenance Management Plan provides a structured framework to ensure that all maintenance and repair activities undertaken within the UVB wetland area specifically within the 32 m buffer zone of the delineated wetland boundary are carried out in a manner that:

- Minimises ecological disturbance to the UVB wetland system and its associated hydrological and biodiversity functions;
- Maintains the functional integrity of both the wetland system and the associated road infrastructure;
- Ensures that the hydrological connectivity between the UVB wetland and the Vermont Salt Pan is preserved at all times; and
- Reduces the need for additional Environmental Authorisation (EA) applications for routine and like-for-like maintenance works undertaken within the applicable area, subject to strict compliance with the conditions of this MMP.

The following maintenance activities are included within the scope of this MMP, all of which are limited strictly to the defined road reserve on Erf 1490 (Portion A). No activities involving new development, road widening, or expansion of infrastructure beyond the existing road footprint are permitted under this MMP.

1.1. Road surface replacement and upgrade

The existing access road on Erf 1490 (Portion A) comprises an approximately 4 m wide gravel and crushed shell-lined surface. The proposed upgrade entails the removal of this existing road surface and its underlying layers, followed by the installation of a new asphalt surface constructed to the applicable municipal road standards. All works will be confined strictly to the existing road reserve width of 4 m and will not encroach beyond the current road footprint into the functional UVB wetland area located downslope of and adjacent to the road corridor. The resurfacing of the road will be required periodically through its operational phase.

It is acknowledged that the existing road has already contributed to the disturbed condition of the UVB wetland, particularly in areas where the road historically encroached upon the wetland extent

1.2. Stormwater drainage infrastructure maintenance and Upgrades

The existing stormwater channel running along the access road within the UVB wetland area (as documented in the aquatic assessment) will be assessed, maintained, and where necessary upgraded to ensure effective stormwater management. Works will include the clearing of blockages, repair of damaged sections, and upgrades of appropriately sized culverts or open-bottom drainage structures to maintain natural sheet flow across the road reserve and to preserve hydrological connectivity within the UVB wetland. Multiple culverts or open-bottom structures are recommended by the Freshwater Specialist to maintain sheet flow and allow natural infiltration into wetland soils. All stormwater management structures will be maintained on an ongoing basis, and any build-up of silt or debris within drains or swales will be cleared to maintain continued functioning.

The majority of water currently flows through the wetland system through a single existing culvert located within the road reserve.

In order to facilitate improved water flow continuity throughout the UVB wetland system and to support the hydrological connectivity objectives of this MMP, the existing culvert will be upgraded in situ within its current footprint. The culvert upgrade will be undertaken as a like-for-like replacement, meaning that the replacement structure will be of equivalent or improved hydraulic capacity and positioned within the same location as the existing structure. Should the culvert sustain damage during or following the road upgrade works, the maintenance obligation under this MMP is likewise limited to like-for-like replacement of the culvert within its existing footprint, with no expansion of the crossing structure or alteration of its position permitted without prior written approval from the relevant Competent Authority and the appointed Environmental Control Officer (ECO). The maintenance and replacement of these culverts may be required from time to time during the operational phase.

This approach is consistent with the recommendations of the Freshwater Specialist (Van Zyl & Morton, 2025), who noted that the installation of multiple culverts or open-bottom structures within the existing road crossing may provide a net positive hydrological benefit by improving sheet flow distribution across the road reserve and restoring a degree of natural water flow connectivity that is currently impeded by the single-culvert configuration. Where practicable and as informed by detailed engineering design, this approach shall be considered as part of the culvert upgrade works, subject to the approval of the ECO and the Freshwater Specialist.

1.3. Sewer pipeline upgrade

The existing 110 mm diameter small bore sewer system will be upgraded to 160 mm diameter and 200 mm diameter outfall sewers to accommodate the proposed residential development. The sewer pipeline will run along the access road through Portion A. The pipeline upgrade will be designed and constructed in accordance with the relevant SANS/SABS specifications and will incorporate surge protection, scour valves, and surcharge containment measures as recommended by the Freshwater Specialist. The sewage system will be monitored and maintained in perpetuity following installation. In the event of damage or flooding, a replacement of the sewer pipeline will be undertaken, and therefore, only like for like replacement will be permissible. The periodic replacement, maintenance, repair or excavation for removal of blockages may be required from time to time during the operational phase.

1.4. Alien Invasive Plant (AIP) Control and Vegetation Management

Alien invasive plant species identified within the road reserve and adjacent disturbed areas including *Acacia mearnsii* (Black Wattle), *Acacia saligna* (Port Jackson), and *Pennisetum clandestinum* (Kikuyu grass) will be actively removed and controlled throughout and following the road upgrade works. All alien invasive plant removal will be undertaken in compliance with the requirements of the National Environmental Management: Biodiversity Act (NEM:BA) and the applicable Alien and Invasive Species (AIS) lists promulgated under GN 1003 of 2020. Areas disturbed by AIP removal will be re-vegetated with locally indigenous wetland margin and fynbos species. The continued alien vegetation management and removal will be required throughout operation and may result in temporary disturbance or excavation within the regulated area of the wetland.

1.5. Erosion Control and Sediment Management

Erosion control and sediment management measures will be implemented both during and following the road upgrade works to prevent the mobilisation and delivery of sediment into the adjacent functional UVB wetland. Measures will include the placement of silt fences and sediment basins in areas prone to sedimentation and erosion, the covering of exposed and unstable surfaces with geotextiles, brush packing, straw bales, or mulch, and the stabilisation of cleared or disturbed areas where required. Sediment traps and silt fences will be inspected and cleared after every heavy rainfall event. Stormwater runoff from the road surface will be managed through appropriately designed swales and drainage features to ensure that no sediment-laden runoff enters the downstream wetland system.

1.6. Rehabilitation of Disturbed areas

All areas disturbed during the road upgrade works that fall outside the permanent road footprint will be rehabilitated promptly upon completion of the relevant works phase. Rehabilitation will include re-contouring of disturbed ground, replacement of stockpiled topsoil, and re-vegetation using locally indigenous plant species appropriate to the surrounding wetland margin and Southwest Sand Fynbos habitat. The re-vegetation of disturbed areas within proximity to the functional UVB wetland will be prioritised, using locally appropriate wetland-margin species to support the recovery of hydrological and ecological function.

1.7. Timing of Works

- All activities will be undertaken outside of peak flow periods to minimise disruption.
- Vegetation clearing and sediment removal will be scheduled for late summer/early autumn when river flows are lowest or immediately after the event of flooding.

2. MONITORING AND REPORTING

Monitoring constitutes a fundamental component of this Maintenance Management Plan (MMP) and serves as the primary mechanism through which compliance with the prescribed maintenance and mitigation measures can be

evaluated, and through which the effectiveness of those measures in protecting the Unchanneled Valley Bottom (UVB) wetland system can be assessed on an ongoing basis.

The UVB wetland traversing and adjacent to the existing access road on Erf 1490 (Portion A) was assessed as being in a largely modified condition (Present Ecological State Category D) with a Moderate Ecological Importance and Sensitivity rating (Van Zyl & Morton, 2025). Given this context, and given that the proposed road upgrade works including the removal and replacement of the existing road surface, the upgrade of the existing culvert, and the installation of associated bulk services infrastructure will be undertaken in close proximity to or within the historical extent of this wetland system, rigorous and consistent monitoring is essential to ensure that the functional integrity of the adjacent wetland is not further compromised during or following the execution of these works.

The monitoring requirements set out in this section apply to the ongoing operational maintenance of the upgraded road infrastructure and associated drainage and services infrastructure.

2.1. Roles and Responsibilities

The following stakeholders bear defined responsibilities in relation to the monitoring and reporting requirements of this MMP:

- Competent Authority: Department of Environmental Affairs and Development Planning (DEA&DP)
- Applicant (Proponent)
- Project Manager
- Contractor
- Environmental Control Officer (ECO)
- Homeowners Association (HOA)
- Overstrand Local Municipality

2.1.1. The Competent Authority

In the Western Cape, the Department of Environmental Affairs and Development Planning (DEA&DP) is the competent authority responsible for overseeing compliance with the requirements and conditions of this Maintenance Management Plan once it has been adopted. DEA&DP may prescribe conditions relating to compliance auditing, monitoring and reporting obligations, as well as the review, amendment, and duration of validity of this MMP.

2.1.2. The Applicant

Westrand Inv 1015 (Pty) Ltd, hereinafter referred to as "the Applicant" or "the Developer", bears primary responsibility for ensuring full compliance with the conditions of this Maintenance Management Plan (MMP) during the construction phase of the proposed road upgrade works on Erf 1490 (Portion A). This responsibility is strictly limited to the initial construction phase of the road upgrade, comprising the removal and replacement of the existing road surface, the like-for-like upgrade of the existing culvert, and the installation of associated stormwater drainage infrastructure, all within the existing 4 m road reserve width. Upon the satisfactory completion of the road upgrade works and the formal transfer of the upgraded road infrastructure to the Overstrand Local Municipality, all responsibility for the ongoing maintenance, repair, and replacement of the road surface, culvert, and associated drainage infrastructure shall vest fully in the municipality, as set out in this MMP.

The Applicant's specific responsibilities during the construction phase are as follows:

- Appointment of ECO
- Submission of Form A before work
- Ensuring contractor compliance

2.1.3. Project Manager

Where a Project Manager is appointed, they will act as the Applicant's on-site representative and implementing agent. The Project Manager is responsible for ensuring that all maintenance and repair activities are conducted in accordance with this MMP, approved method statements, and all applicable environmental legislation and permit conditions.

2.1.4. The Contractor

The proposed maintenance works will either be undertaken by the appointed contractors (hereafter referred to as the "Contractor"). The Contractor is responsible for implementing all provisions of this MMP. If the Contractor encounters difficulties with the specifications, they must discuss alternative approaches with the Project Manager prior to commencing work. The Contractor must ensure that all personnel, including subcontractors (if applicable), are familiar with the MMP and their environmental responsibilities. The contractor will ensure:

Should the Contractor experience challenges in complying with the prescribed specifications or method statements, alternative approaches must be discussed with and approved by the Project Manager prior to implementation. The Contractor must ensure that all personnel involved in the works, including any subcontractors, are informed of the requirements of this MMP and are aware of their environmental responsibilities.

The Contractor will ensure that:

- The appointed contractor is responsible for the day-to-day implementation of all method statements and mitigation measures set out in this MMP during the active works onsite.
- The contractor must immediately report any pollution incidents, unforeseen wetland disturbances, or deviations from the approved construction footprint to the ECO.
- Sediment removal activities are carried out in accordance with accepted best-practice methods to prevent mobilisation of material and to minimise downstream impacts.

Responsibilities of the Contractor:

- Monitoring and verifying that environmental impacts are minimised.
- Implementing the required Method Statements.
- Reporting any incidents of non-compliance with the MMP to the Project Manager and/or the ECO.
- Rehabilitating any sensitive environments damaged due to negligence. Rehabilitation will be completed in accordance with the Project Manager's specifications.
- Ensuring all employees, contractors and subcontractors are aware of the MMP requirements and their environmental responsibilities.
- Prior to work commencing, meet with the Project Manager and/or ECO on-site to confirm designated maintenance areas, no-go areas, and the method statements requirements.
- Liaising with the Project Manager and/or ECO and to ensure environmentally sensitive work practices as outlined in the MMP.
- Keeping a copy of the MMP and all relevant environmental authorisations and licenses on-site.
- Ensuring appointed contractors and subcontractors repair any environmental damage caused by a breach of MMP specifications, at their own cost, to the satisfaction of the Project Manager and/or ECO.
- Providing environmental awareness training upon arrival on-site for all employees (permanent and temporary) and subcontractors working on the site for longer than two days.

2.1.5. The Environmental Control Officer

A suitably experienced ECO must be appointed prior to the commencement of maintenance or repair activities to monitor, guide and report on any initial repairs, ongoing maintenance activities and compliance with this MMP. The

ECO is responsible for monitoring compliance, providing support, and recommending corrective actions to the Proponent, Project Manager, and Contractor.

Responsibilities of the ECO:

- Conducting regular site inspections at a frequency agreed upon by DEA&DP, based on the activities taking place.
- Monitoring, reviewing and verifying compliance with the MMP based on the level of disturbance and activity duration.
- Assisting with initial environmental awareness training for the Contractor's site management staff (if required).
- Keeping a record of all activities on site, problems identified, transgressions noted, and a task schedule of tasks undertaken by the ECO.
- The ECO's findings and outcomes should be documented in the Environmental Monitoring Report submitted to DEA&DP as per their requirements.
- Providing guidance to the Project Manager and/or Contractor as required with regards to implementing the MMP.
- Keeping photographic records of the maintenance activities.

The Contractor and individual contractors may designate Environmental Officers to liaise with the ECO on environmental matters.

2.1.6. Homeowners Association (HOA)

A Homeowners Association (HOA) shall be established in accordance with the applicable provisions of the Sectional Titles Schemes Management Act (Act No. 8 of 2011) and the Community Schemes Ombud Service Act (Act No. 9 of 2011), or as otherwise required by the conditions of the relevant Environmental Authorisation and municipal planning approval applicable to the proposed residential development on Erf 1489, Vermont. The HOA shall be constituted as a legal entity with the authority and capacity to give effect to the environmental management obligations assigned to it under this MMP and any associated Environmental Management Programme (EMPr).

Membership of the HOA shall be compulsory for all registered owners of residential erven within the development, and the obligations of the HOA as set out in this MMP shall be binding upon all members. The HOA's environmental management responsibilities, as detailed below, shall be incorporated into the HOA's founding documentation, rules, and conduct standards, and shall be disclosed to all prospective purchasers of residential erven prior to transfer of ownership.

Responsibilities of the Homeowners Association:

- Upon the formal transfer of the upgraded access road (Kolgans Close Road, Portion A of Erf 1490) to the Overstrand Local Municipality in accordance with the conditions of the development approval, the primary responsibility for the structural and operational maintenance of the road surface itself will vest in the municipality. However, until such formal transfer has been affected, and in respect of all environmental management obligations associated with the road and its interface with the UVB wetland system, the HOA shall bear the responsibilities set out in this section.
- The HOA shall ensure that the road upgrade is completed to the required municipal road standards prior to the formal handover process and shall liaise with the Overstrand Local Municipality to facilitate the timely transfer of the road and associated infrastructure. The HOA shall retain copies of all compliance reports, monitoring records, and rehabilitation documentation compiled under this MMP and shall make these available to the municipality and to the relevant Competent Authority upon request.

2.1.7. Overstrand Local Municipality

It must be noted at the outset that, at the time of preparation of this MMP, it is not known whether the Overstrand Local Municipality has in place its own approved Maintenance Management Plan or equivalent environmental management framework governing the bulk services infrastructure relevant to Kolgans road and its associated infrastructure, namely the sewer pipeline network and water supply infrastructure associated with the Vermont service area. Should the municipality have such a plan in place, the provisions of that plan shall be read in conjunction with this MMP, and any conflicts between the two documents shall be resolved through consultation between the developer, the municipality, and the relevant Competent Authority.

In the absence of confirmed information regarding the municipality's own environmental management instruments applicable to this infrastructure, this MMP sets out the principles and obligations that are recommended to govern the municipality's role in relation to the proposed works, to the extent that those works interface with the delineated UVB wetland system on Erf 1490 (Portion A). These provisions are intended to be complementary to, and not in substitution of, any obligations that may separately vest in the municipality in terms of its own environmental authorisations, operational policies, or legislative obligations as a service authority.

Bulk infrastructure contributions and municipal-led works

In accordance with the conditions of the applicable development approval and the standard bulk infrastructure contribution framework of the Overstrand Local Municipality, the developer, Westrand Inv 1015 (Pty) Ltd, will be required to pay the applicable bulk services infrastructure contribution levies to the municipality as a condition of development approval. These levies are calculated to contribute to the cost of the bulk water supply and bulk sewer infrastructure required to accommodate the proposed development within the existing Vermont service network.

It is accordingly acknowledged and recorded in this MMP that the bulk services infrastructure works associated with this development comprising the upgrade and subsequent long term operational maintenance of the sewer and water network pipeline system and the connection of the development to the existing Vermont water supply network will be planned, designed, procured, and executed by the Overstrand Local Municipality as the responsible service authority, utilising the bulk infrastructure contribution levies paid by the developer together with any other municipal funding allocated to these works. The developer will not directly manage or oversee the bulk services installation works, as these fall within the municipality's operational mandate and technical jurisdiction.

Notwithstanding the above, the developer acknowledges that these bulk services works will be undertaken within or in close proximity to the delineated UVB wetland system on Erf 1490 (Portion A), and that their execution accordingly has the potential to impact on the ecological and hydrological integrity of the wetland. The developer therefore undertakes to bring the findings and recommendations of the Aquatic Biodiversity Impact Assessment (Van Zyl & Morton, 2025) and the requirements of this MMP to the formal attention of the Overstrand Local Municipality prior to the commencement of any bulk services installation works, and to request that the municipality give due consideration to these environmental management requirements in the planning and execution of the relevant works.

Ongoing operational responsibilities of the municipality:

- The upgraded sewer pipeline and water supply infrastructure are monitored and maintained on a regular basis in accordance with the municipality's standard infrastructure asset management protocols;
- Any leakage, blockage, or structural failure of the sewer or water supply infrastructure that may pose a risk of pollution or environmental damage to the adjacent UVB wetland system is identified and rectified promptly;
- Any future maintenance, repair, or upgrade works undertaken within the road reserve or the bulk services corridor on Erf 1490 (Portion A) are planned and executed in a manner that is consistent with the environmental management principles of this MMP and the findings of the Aquatic Biodiversity Impact Assessment (Van Zyl & Morton, 2025); and

- Where any future works within the road reserve or bulk services corridor are likely to have a significant impact on the UVB wetland system, the municipality obtains the necessary environmental authorisations prior to commencing such works.

2.2. Compliance Monitoring

Compliance monitoring constitutes an essential and non-negotiable component of this Maintenance Management Plan (MMP) and serves as the primary mechanism through which adherence to the prescribed environmental management requirements, method statements, and mitigation measures can be verified throughout all phases of the proposed road upgrade works on Erf 1490 (Portion A) as well as infrastructure upgrades including stormwater infrastructures, sewer and water lines. The compliance monitoring framework established under this section applies to all parties with defined responsibilities under this MMP, namely the Applicant (Westrand Inv 1015 (Pty) Ltd), the Overstrand Local Municipality, the appointed contractor, the Environmental Control Officer (ECO), and the Homeowners Association (HOA) established for the residential development on Erf RE/1489.

The scope of compliance monitoring under this MMP encompasses the following phases and components:

- All preparatory activities required prior to the commencement of road upgrade works;
- The active road works, covering the road surface replacement and upgrade, culvert upgrade, and installation of associated stormwater drainage infrastructure;
- The post-construction rehabilitation phase, covering the rehabilitation of all areas disturbed during the construction phase; and
- The ongoing operational phase, covering the routine maintenance and management of the upgraded road infrastructure and adjacent wetland interface following formal transfer to the Overstrand Local Municipality.

It is noted that compliance monitoring in respect of the bulk services infrastructure comprising the sewer pipeline upgrade and water supply pipeline installation falls within the operational mandate of the Overstrand Local Municipality as the responsible service authority. The compliance monitoring provisions applicable to the bulk services works are accordingly addressed in Section 2.1.7 of this MMP, which sets out the municipality's recommended environmental management obligations in relation to those works. The developer's obligations in relation to the bulk services works are limited to the payment of the applicable bulk infrastructure contribution levies to the municipality, as set out in Section 2.

2.3. Recording Maintenance Activities

The accurate and consistent recording of all maintenance activities undertaken within and adjacent to the road corridor on Erf 1490 (Portion A) constitutes a fundamental requirement of this Maintenance Management Plan (MMP). Comprehensive maintenance records serve multiple essential functions, including providing an auditable trail of compliance with the environmental management requirements of this MMP, enabling the early identification of recurring infrastructure defects or environmental risks, supporting the preparation of the compliance reports required under Section 1.3 of this MMP, and providing the relevant Competent Authority with the evidence necessary to assess whether the prescribed mitigation measures are being implemented effectively and are achieving the desired outcomes in relation to the protection of the adjacent Unchannelled Valley Bottom (UVB) wetland system.

All parties with maintenance responsibilities under this MMP namely the Applicant (Westrand Inv 1015 (Pty) Ltd) during the construction phase, the Overstrand Local Municipality following formal transfer of the road and bulk services infrastructure, and the Homeowners Association (HOA) in respect of its ongoing environmental management obligations are required to maintain accurate, up-to-date, and complete records of all maintenance activities undertaken within their respective spheres of responsibility, in the manner and to the standard prescribed in this section.

Form A and Form B (attached under **Annexure A** below) must be completed by the Contractor/Developer and the Overstrand Municipality for all activities to be undertaken in terms of this MMP. A copy of each completed form must

be retained by the Proponent for record-keeping. The DEA&DP may request to review maintenance activities and inspect maintenance sites based on the adopted MMP, with reasonable notice (i.e., 7 working days)

Form A: Pre-Maintenance Activity Recording

The Pre-Maintenance Activity Form is used to record details of a planned maintenance activity before it begins. The Proponent and/ Municipality must ensure that the Contractor completes this form prior to commencing any activity under this MMP. Form A must be completed and submitted to DEA&DP at least 7 working days before starting the maintenance activity.

Information required:

- Type of the maintenance activity (as per the adopted MMP).
- Description of the planned maintenance.
- Location of the maintenance activity (including photo references).
- Two photographs required from different viewpoints
- Coordinates for each photo location.

Form B: Post-Maintenance Activity Recording

The Post-Maintenance Activity Form is used to record details of a maintenance activity after completion. The Proponent must ensure that the Contractor completes this form at least 10 working days following the completion of the maintenance activity (ies).

Information Required:

- Type of the maintenance activity (as per the adopted MMP).
- Description of the completed maintenance.
- Location of the maintenance activity (including photo references).
- Reference the photographs.

3. METHOD STATEMENTS

The maintenance objectives for this site encompass the limited repair and upkeep of existing and upgraded infrastructure at clearly defined locations, where such interventions are necessary to ensure the continued functionality, safety, and operational integrity of the road and associated bulk services infrastructure. Where required, the controlled removal of accumulated sediment material from within and adjacent to the wetland crossing may be undertaken to maintain flow capacity and to reduce the risk of erosion or flooding, including following significant flood events.

Additional maintenance objectives include the stabilisation or re-profiling of road embankments and adjacent slopes that have become excessively steep or unstable as a result of erosion, in order to reduce ongoing erosion risk and support the long-term structural integrity of the road and associated infrastructure. Vegetation management forms a key component of the overall maintenance approach and includes the ongoing control and removal of alien invasive plant species within the road reserve and adjacent disturbed areas, as well as the re-establishment of locally indigenous vegetation within rehabilitated areas, to promote ecological resilience within and adjacent to the UVB wetland system.

All maintenance and management activities associated with the site shall be undertaken in strict accordance with the mitigation measures identified in the Aquatic Biodiversity Impact Assessment (Van Zyl & Morton, 2025) and the detailed method statements set out below, to ensure that potential environmental impacts on the adjacent UVB wetland system are effectively managed and minimised at all times.

3.1. The following Method statements are included in this MMP*:*

- Method Statement 1: Road Surface Replacement and Upgrade
- Method Statement 2: Stormwater Drainage Infrastructure Maintenance and Upgrade
- Method Statement 3: Sewer Pipeline Upgrade
- Method Statement 4: Alien Invasive Plant (AIP) Control and Vegetation Management
- Method Statement 5: Erosion Control and Sediment Management
- Method Statement 6: Rehabilitation of Disturbed Areas

Method Statement 1: Road surface replacement and upgrade

Description of the Maintenance Activities:

The currently existing road on Erf 1490 (Portion A) is covered in shells and requires upgrade to a standard suburban asphalt road in order to formalise it. The upgrades required involves resurfacing of this road into suitable and acceptable standards in order to facilitate access on Erf 1489. The road crosses a degraded portion of the delineated UVB Wetland, and thus the upgrades works and any future upgrades must be undertaken in such a way that there is minimal impact on the UVB wetland and without decremental impacts on the hydrological and functionality of this wetland system. The method statement for this activity is only restricted to like-for-like replacement of the road after the construction activities associated with the upgrades of the road have been undertaken which will be undertaken on ongoing operational phases. Ongoing maintenance activities will be required on the life cycle of this access roads.

Work Area:

All work areas set out in the **Section 1.**

Management Actions:

- Material maybe removed within the UVB wetland road crossing for further replacement and / or upgrade of the road.
- Replacement of the road after the flooding event or if washed away will be done in accordance with the acceptable standards specification, as such, like-for-like replacement of the road material must be undertaken and no widening of the road or reconstruction of the access road anywhere else outside the permitted footprint.
- Repairs of the road should be conducted during the dry period (November to April) when there is low or no flow in the wetland.
- Minimise the spatial extent of disturbance and the frequency of, or requirement for, maintenance activities. The disturbance footprint should be clearly demarcated. No activities should take place outside of this area.
- Manual labour is preferred to the use of mechanical equipment in order to minimise physical disturbance around the activity location.

Environmental Impacts or risks:

- Potential wetland habitat disturbance as a result of the road upgrade
- Alteration of the flow regime of the UVB wetland during upgrade of the road within the watercourse
- Water quality impairment from potential contaminants during the repair process.

Implementation of the Management Actions:

Party responsible for implementation:

- Applicant/Municipality/ Contractor/ Project Manager

Time period for implementation:

- Repairs should be conducted during the dry period (November to April) when there is low or no flow in the river.

Method Statement 2: Stormwater drainage infrastructure maintenance and upgrades

Description of the maintenance activity

The upgrading of the stormwater infrastructure in relation to the proposed development to facilitate acceptable water quality into the delineated wetland system will be undertaken. The surface hardening, including the upgrades of the existing roads, would result to increased stormwater runoff, velocity and increased flood peaks within the wetland. Given the surface hardening resulting from the road upgrade, the likelihood of stormwater runoff impacts on the adjacent wetland is increased and must be managed in accordance with the measures set out below. The maintenance and replacement of this infrastructure will be required from time to time.

Work Area:

All works associated with the stormwater drainage infrastructure upgrade and maintenance shall be confined to the road reserve footprint and the associated stormwater management infrastructure areas as set out in Section 1 of this MMP. No works shall be undertaken outside the defined road reserve footprint without prior written approval from the ECO and the relevant Competent Authority.

Management Actions:

- Repair and maintenance of stormwater infrastructure will be required
- Stormwater management must ensure that no runoff, which will impair the water quality and lead to increased sedimentation, may enter the downstream wetland area.
- Clean Stormwater which does enter the downstream wetland system should do so in a manner that ensures no erosion occurs specifically during storm events, such as through vegetated swales. Stormwater systems will require ongoing maintenance.
- Any build-up of silt or debris within stormwater drains or swales will need to be cleared to ensure the continued functioning of the systems.
- Any damage to stormwater infrastructure, and any flaws identified in the functionality of stormwater infrastructure, must be rectified immediately.
- An increase in stormwater runoff and velocities from exposed and compacted areas, particularly during peak rainfall periods, may result in the formation of erosion gullies and rills in the downslope wetland. In addition, destabilisation of soils during the removal of vegetation and excavation activities, as well as the stockpiling of soils may result in an increase in the runoff of sediment laden stormwater into the downslope wetland from the construction footprint, particularly during the rainy season.
- During operation, pollutants may enter the wetland via stormwater or sewage leaks (although highly unlikely). However, with the inclusion of stormwater design measures which allow for the infiltration and treatment of stormwater this impact can be greatly reduced.
- Design a SWMP which will allow for the infiltration and treatment of stormwater. All stormwaters must receive basic filtering and treatment prior to its release.

- Incorporate measures into the stormwater design to trap solid waste, debris and sediment carried by stormwater. Measures may include the use of curb inlet drain grates and debris baskets/bags.
- Stormwater generated from areas with a higher risk of contamination such as parking areas and roads (as applicable) must receive basic filtering and treatment prior to its release into surrounding areas.
- Stormwater systems must be monitored and maintained into perpetuity and collections of debris and solid waste removed from grates and baskets.

Environmental Impacts and risks:

- Increased stormwater runoff volumes and velocities resulting in erosion and sedimentation within the UVB wetland
- Water quality impairment of the UVB wetland due to polluted urban stormwater runoff
- Formation of erosion gullies and rills within the downslope wetland due to concentrated stormwater discharge
- Blockage of stormwater drainage infrastructure resulting in localised flooding and wetland disturbance.

Implementation of the Management Actions

Party responsible for implementation:

- Applicant/Municipality/ Contractor/ Project Manager

Time period for implementation:

- Repairs should be conducted during the dry period (November to April) when there is low or no flow in the river.

Method Statement 3: Sewer pipeline upgrade

Description of the maintenance activity

The existing 110 mm diameter small bore sewer system serving the study area will be upgraded to accommodate the proposed residential development on Erf RE/1489, Vermont. The upgrade entails the replacement of the existing small bore sewer system with a 160 mm diameter outfall sewer and a 200 mm diameter outfall sewer, running along the access road corridor through Erf 1490 (Portion A). The upgraded sewer pipeline will connect the proposed development to the existing 200 mm diameter outfall sewer in Malmok Street.

The pipeline upgrade will be planned, designed, and executed by the Overstrand Local Municipality as the responsible service authority, funded through the bulk infrastructure contribution levies paid by the developer, Westrand Inv 1015 (Pty) Ltd, in accordance with the conditions of the applicable development approval. All pipeline design and construction shall be undertaken in accordance with the relevant SANS/SABS specifications and the engineering standards of the Overstrand Local Municipality, and shall incorporate surge protection, scour valves, and surcharge containment measures as recommended by the Freshwater Specialist (Van Zyl & Morton, 2025).

All works associated with the sewer pipeline upgrade are strictly limited to the existing sewer corridor footprint running along the access road reserve through Portion A. No new sewer infrastructure beyond the existing corridor alignment is proposed. In the event of future damage to or failure of the upgraded sewer pipeline, only like-for-like replacement within the existing pipeline corridor will be permissible under this MMP. Any works that deviate from the existing pipeline alignment or that involve the installation of new or additional sewer infrastructure beyond the existing corridor footprint will require prior written approval from the relevant Competent Authority and, where applicable, a separate environmental authorisation process.

The upgraded sewage system shall be monitored and maintained in perpetuity by the Overstrand Local Municipality following commissioning and formal handover.

Work Area:

All works shall be confined to the defined sewer corridor footprint running along the access road reserve on Erf 1490 (Portion A) as set out in Section 1 of this MMP. The functional UVB wetland area located downslope of and adjacent to the road and sewer corridor shall be designated as a No-Go area for the full duration of all sewer pipeline works.

Management Actions:

- Designate the High sensitivity/functional UVB wetland area as a No-Go during the replacement or upgrades of the sewer pipelines as far as possible.
- Clearly demarcate the sewer corridor footprint prior to commencement of any activities and strictly prohibit the movement of vehicles and personnel outside the demarcated areas.
- Construct sewage pipelines in accordance with the relevant SANS / SABS specifications.
- Drip trays must be utilised at all fuel dispensing areas, and during the maintenance of existing sewer flow as possible.
- Design the pipelines to accommodate the operating and surge pressures.
- Provide surge protection e.g. air valves.
- Allow for scour valves along pipelines to ensure sewage pipelines can be emptied in a controlled manner if required.
- Allow for surcharge containment and emergency storage of 2 hours of peak flow at manholes located within areas upslope of the wetland. Containment/emergency storage may include a concrete box or earthen bund surrounding the manholes. The backup storage capacity of manholes may also be improved by raising the manholes by one meter.
- The sewage system must be monitored and maintained into perpetuity. The developer must confirm who will be responsible for this monitoring and maintenance as well as their roles.
- The site manager / ECO must check the No Go area for pollution/spills, erosion damage and sedimentation weekly and after every heavy rainfall event. Should pollution, erosion or sedimentation be noted, immediate corrective measures must be undertaken.

Environmental impacts and risks:

- Sewage spillage into the UVB wetland during construction, particularly during high rainfall
- Water quality impairment due to sewage spillage, sediment runoff, or cement leachate
- Temporary alteration of UVB wetland flow regime due to excavation works
- Downstream ecological impacts on Vermont Salt Pan and associated species

Implementation of Management actions:

Party responsible for implementation:

- Applicant/Municipality/ Contractor/ Project Manager

Time period for implementation:

- In accordance with municipal asset management protocols during operational phase

Method Statement 4: Alien Invasive Plant (AIP) Control and Vegetation Management

Description of the maintenance activity

Alien invasive plant species have been recorded within the road reserve and adjacent disturbed areas on Erf 1490 (Portion A), including *Acacia mearnsii* (Black Wattle), *Acacia saligna* (Port Jackson), and *Pennisetum clandestinum* (Kikuyu grass), as documented in the Aquatic Biodiversity Impact Assessment (Van Zyl & Morton, 2025). These species represent a significant threat to the ecological resilience and biodiversity value of the adjacent UVB wetland system and the Southwest Sand Fynbos vegetation community, and their spread is likely to be exacerbated by the ground disturbance associated with the road upgrade and associated bulk services installation works.

An ongoing alien invasive plant control and vegetation management programme shall accordingly be implemented within the road reserve, common areas of the development, and the UVB wetland buffer zone throughout and following the road upgrade works. All AIP removal activities shall be undertaken in compliance with the requirements of the National Environmental Management: Biodiversity Act (NEM:BA) (Act No. 10 of 2004) and the Alien and Invasive Species Regulations promulgated under GN 1003 of 2020. Areas disturbed by AIP removal activities shall be re-vegetated with locally indigenous wetland margin and fynbos species appropriate to the site conditions, to prevent the re-establishment of alien invasive species in cleared areas.

Work Area:

AIP control and vegetation management activities shall be undertaken within the road reserve on Erf 1490 (Portion A) and the UVB wetland buffer zone adjacent to the access road.

Management actions:

- Prior to the commencement of any road upgrade works, a baseline survey of alien invasive plant species present within the road reserve and adjacent UVB wetland buffer zone shall be conducted by a suitably qualified person, and the location and density of all identified AIP populations shall be mapped and recorded.
- The baseline AIP survey results shall inform the prioritisation of AIP removal activities and the selection of appropriate removal methods.
- All AIP species listed under the amended AIS Lists (GN 1003 of 2020) shall be removed or controlled within the road reserve, common areas, and UVB wetland buffer zone.
- AIP removal shall be undertaken using the most appropriate method for each species, which may include mechanical removal (cutting, hand-pulling, or uprooting), chemical treatment using registered herbicides applied by a suitably qualified person, or a combination of both methods.
- Where herbicide application is required, only herbicides registered for use in South Africa and approved for use in proximity to wetland environments shall be used. All herbicide application shall be undertaken by a suitably qualified and registered applicator, strictly in accordance with the product label instructions and applicable regulations. Herbicide application within the UVB wetland itself or within a 5 m buffer of the wetland edge shall not be permitted without prior written approval from the relevant Competent Authority.
- Cut stumps of woody AIP species shall be treated with an appropriate registered herbicide immediately following cutting to prevent resprouting.
- All AIP material removed from the site shall be disposed of in a manner that prevents its re-establishment, either by chipping, burning (where permitted), or disposal at a registered waste disposal facility.
- AIP control activities within the road reserve and UVB wetland buffer zone shall be conducted at a minimum frequency of twice per year, with additional interventions following significant disturbance events such as the road upgrade construction works, flooding, or storm damage.
- The first AIP control treatment shall be conducted immediately following the completion of post-construction rehabilitation works, to address any AIP establishment in disturbed areas during the construction phase.

- Follow-up AIP control treatments shall be conducted at six-monthly intervals thereafter, targeting any re-sprouting or re-seeding of previously treated AIP populations, as well as any new AIP incursions within the treatment area.
- The effectiveness of the AIP control programme shall be assessed during each treatment visit and documented in the HOA's Environmental Management Register.
- Indigenous vegetation clearance within the road reserve shall be restricted to the minimum necessary for road maintenance and safety purposes, and shall not extend into the No-Go area or the UVB wetland buffer zone.
- Indigenous vegetation removed during road maintenance works shall be retained where possible for use in post-works rehabilitation activities.
- Re-vegetation of disturbed areas shall be undertaken using locally indigenous plant species appropriate to the surrounding wetland margin and Southwest Sand Fynbos habitat.

Environmental impacts and Risks:

- Spread of AIP species into the UVB wetland following ground disturbance during road upgrade works
- Inadequate AIP removal leading to re-establishment of invasive species populations
- Displacement of indigenous vegetation by AIP species in the absence of ongoing management

Implementation of Management Actions:

Party Responsible for Implementation:

- Applicant/Municipality/ Appointed Contractor

Time Period for Implementation:

- Annually

Method Statement 5: Erosion Control and Sediment Management

Description of the Maintenance activity

The road upgrade works and associated bulk services installation on Erf 1490 (Portion A) will involve ground disturbance, surface excavation, and soil exposure within the road reserve, creating conditions conducive to erosion and the mobilisation of sediment into the adjacent UVB wetland system, particularly during and following rainfall events. The UVB wetland system drains into the Vermont Salt Pan approximately 420 m to the south-east, and sediment delivery to the wetland has the potential to impair water quality and reduce the functional integrity of the wetland and its downstream receptors.

Erosion control and sediment management measures shall accordingly be implemented both during and following all road upgrade and bulk services installation works, to prevent the mobilisation and delivery of sediment into the adjacent functional UVB wetland. These measures shall also apply to ongoing operational road maintenance activities where such activities involve the disturbance of the road surface or adjacent soils.

Work Area:

Erosion control and sediment management measures shall be implemented within and adjacent to the road reserve on Erf 1490 (Portion A), and at all points where stormwater runoff from the construction or maintenance area could potentially discharge toward the functional UVB wetland.

Management Actions:

- Silt fences and sediment basins shall be installed at all relevant locations within and adjacent to the road reserve prior to the commencement of any earthworks or surface disturbance activities, and specifically at all points where stormwater runoff could discharge toward the UVB wetland.
- The condition and placement of all erosion control measures shall be confirmed by the ECO prior to the commencement of any work
- The spatial extent of soil exposure and surface disturbance during road upgrade and maintenance works shall be minimised at all times, and exposed surfaces shall be protected or stabilised as promptly as possible following disturbance.
- Exposed and unstable surfaces, including cut slopes, fill areas, and road embankments, shall be covered with appropriate erosion control materials, including geotextiles, brush packing, straw bales, or mulch, as appropriate to the site conditions.
- Cleared or disturbed areas susceptible to erosion shall be stabilised with sandbags or stone pitching where required to prevent the formation of erosion gullies during rainfall events.
- Silt fences and sediment traps shall be installed in areas prone to erosion to retain sediment-laden runoff within the construction footprint and prevent its delivery to the UVB wetland.
- Silt fences, sediment basins, and sediment traps shall be inspected by the ECO or site manager following every significant rainfall event, and any accumulated sediment shall be removed by hand and disposed of appropriately. Damaged silt fences or sediment control structures shall be repaired or replaced immediately.
- All topsoil stripped from within the construction footprint shall be stockpiled separately from subsoil material, protected from erosion and compaction, and retained for re-use during post-works rehabilitation.
- Stockpiled soil materials shall be located outside the No-Go area and protected from erosion by covering with geotextile material or establishing temporary vegetation cover where the stockpile period exceeds two weeks.
- Upon completion of all road upgrade and maintenance works, all temporary erosion control measures including silt fences, sediment basins, and geotextile coverings shall be removed once re-vegetation of disturbed areas has been sufficiently established to provide adequate surface protection against erosion.
- All areas disturbed during the works shall be re-profiled to approximate natural gradients and re-vegetated with locally indigenous plant species to provide long-term erosion protection.
- Any erosion gullies or rills that develop within or adjacent to the road reserve following the completion of works shall be repaired promptly and re-vegetated to prevent their enlargement and the further delivery of sediment to the UVB wetland.

Environmental Impacts and Risks:

- Erosion of exposed road embankments and fill areas during rainfall events
- Sediment delivery to the UVB wetland during and following construction works
- Formation of erosion gullies in the downslope wetland due to concentrated stormwater discharge
- Loss of topsoil from stockpile areas during rainfall events

Implementation of Management Actions:

Party Responsible for Implementation:

- Applicant/Municipality/ Appointed Contractor

Time Period for Implementation:

- After the event of flooding.

Method Statement 6: Rehabilitation of Disturbed areas

Description of the Maintenance Activity:

All areas disturbed during the road upgrade works, bulk services installation, and associated maintenance activities on Erf 1490 (Portion A) that fall outside the permanent road surface footprint and pipeline trenches shall be rehabilitated promptly upon completion of the relevant works phase. Rehabilitation is a critical requirement of this MMP, as it serves to restore the ecological and hydrological function of disturbed areas, to prevent the establishment and spread of alien invasive plant species in disturbed soils, and to reduce the ongoing risk of erosion and sedimentation within and adjacent to the UVB wetland system.

Rehabilitation activities shall include the re-contouring of disturbed ground surfaces to approximate natural gradients, the replacement of stockpiled topsoil, and the re-vegetation of all disturbed surfaces using locally indigenous plant species appropriate to the surrounding wetland margin and Southwest Sand Fynbos habitat. The re-vegetation of disturbed areas in proximity to the functional UVB wetland shall be prioritised, using locally appropriate wetland-margin species to support the recovery of the hydrological and ecological function of the wetland interface.

Work Area

Rehabilitation activities shall be undertaken within all areas disturbed during the road upgrade and bulk services installation works on Erf 1490 (Portion A), excluding the permanent road surface footprint and the permanent pipeline trench corridors.

Management Actions:

- Upon completion of each phase of the road upgrade and bulk services installation works, the contractor shall immediately remove all construction waste, rubble, packaging, and temporary structures from the construction footprint, and shall restore the natural surface profile of all disturbed areas outside the permanent road and pipeline footprints.
- Stockpiled topsoil shall be returned to all disturbed areas outside the permanent footprints promptly following the completion of earthworks, and the topsoil layer shall be re-spread to an appropriate depth to support vegetation establishment.
- All disturbed surfaces outside the permanent road and pipeline footprints shall be re-contoured to approximate the pre-works natural gradients, to ensure the restoration of natural surface drainage patterns and to reduce the risk of erosion.
- All disturbed surfaces outside the permanent road and pipeline footprints shall be re-vegetated with locally indigenous plant species as promptly as possible following the completion of earthworks and topsoil replacement.
- Plant species selected for re-vegetation shall be appropriate to the specific microhabitat conditions of each area, including the surrounding Southwest Sand Fynbos habitat for upslope areas and locally appropriate wetland-margin species including graminoids such as *Juncus spp*. and *Cyperus spp*., and herbaceous species such as *Senecio halimifolius* for areas in proximity to the functional UVB wetland.
- Where practicable, plant material for re-vegetation shall be sourced from locally propagated indigenous nursery stock, with preference given to material grown from seed sources collected on or near the site.
- Indigenous vegetation removed from the construction footprint during the works including grasses and other herbaceous species shall be retained and replanted within rehabilitated areas where it is in a condition suitable for successful re-establishment.
- Disturbed areas within the UVB wetland buffer zone shall receive priority re-vegetation attention, and the selection of plant species for these areas shall be confirmed with the Freshwater Specialist prior to planting.
- The progress of re-vegetation within all rehabilitated areas shall be monitored by the ECO or the HOA's appointed environmental service provider on a monthly basis for a minimum period of 12 months following

completion of planting, to assess plant establishment rates and to identify any areas where re-vegetation has failed and requires remedial intervention.

- Any alien invasive plant species that establish within rehabilitated areas during the monitoring period shall be removed promptly as part of the AIP control programme described in Method Statement 4 of this MMP.
- Supplementary planting shall be undertaken in any areas where the initial re-vegetation has failed to achieve adequate plant establishment within six months of planting.
- The rehabilitation phase shall be formally declared complete by the ECO only once the following conditions have been met: all disturbed surfaces outside the permanent road and pipeline footprints have been satisfactorily re-vegetated with locally indigenous plant species; no significant erosion or sedimentation attributable to the works has been observed within or adjacent to the UVB wetland; and no alien invasive plant species have established within the rehabilitated areas at a density that poses a risk to the indigenous re-vegetation.

Environmental Impacts and Risk:

- Failure of re-vegetation in disturbed areas leading to prolonged soil exposure and erosion risk
- Establishment of alien invasive species in disturbed, rehabilitated areas
- Inadequate restoration of natural surface drainage patterns leading to ongoing hydrological disruption
- Insufficient ecological recovery of the UVB wetland interface due to inappropriate plant species selection

Implementation of Management Actions:

Party Responsible for Implementation:

- Applicant/Municipality/ Appointed Contractor

Time Period for Implementation:

- Immediately after the works have been done.

2.	Clearly describe the current state of the area where the maintenance activities will take place. (This must be supported by recent colour photographs)

The following description of the current state of the maintenance activity area is based on the findings of the site assessment conducted on 10 December 2024 as part of the Aquatic Biodiversity Impact Assessment (Van Zyl & Morton, 2025) undertaken for the proposed residential development on the Remainder of Erf 1489, Vermont, Western Cape. The assessment was conducted by Kimberley van Zyl (SACNASP Reg. No. 117097) and Robyn Morton of Delta Ecology. The description below covers the current condition of the access road corridor on Erf 1490 (Portion A), the delineated Unchannelled Valley Bottom (UVB) wetland system traversing and adjacent to the road corridor, and the broader study area within which the proposed maintenance activities will be undertaken.

This description must be read in conjunction with the colour photographic record presented in the Aquatic Biodiversity Impact Assessment (Van Zyl & Morton, 2025), which provides visual documentation of the current site conditions as observed during the December 2024 site assessment. Reference should specifically be made to Figures 5-1 through to 5-11 of that report, which document the delineated wetland, the existing access road, the vegetation communities, the soil conditions, and the stormwater infrastructure present within the study area.

Location and General Setting

The maintenance activity area is situated on Erf 1490 (Portion A), Vermont, within the Overstrand Local Municipality, Western Cape Province. The study area is bordered to the north by the R43 road reserve, to the west and south by low-density residential housing, and to the east by the Paradise Park holiday resort. The proposed residential development area on Erf RE/1489 is situated to the north of Portion A, with the existing access road (Kolgans Close Road) on Portion A providing the only vehicular access to Erf RE/1489 from the south.

The study area slopes gently in a southerly direction, with a gradient of less than 3% across much of the area. The highest point of the area is along the northern boundary at approximately 34 m above mean sea level (AMSL), while

the lowest point is along the southern boundary at approximately 29 m AMSL, coinciding with the access road corridor and the adjacent UVB wetland system. The mean annual rainfall received in the area is 587 mm, occurring predominantly during the winter months, with the highest mean rainfall occurring between May and August.

Current Condition of the Access Road — Erf 1490 (Portion A)

The existing access road on Erf 1490 (Portion A), known as Kolgans Close Road, is currently an informal, unmetalled road surface comprising compacted gravel and crushed sea shells approximately 4 m in width. The road provides the sole vehicular access route from the south to Erf RE/1489 and traverses the maintenance activity area from north to south along Portion A.

The road surface is in a degraded condition and does not meet the applicable municipal road standards required for a formal residential access road. The road has no formal kerbing, road markings, or stormwater management infrastructure beyond a basic open stormwater channel running alongside portions of the road corridor. The road currently crosses a degraded portion of the delineated UVB wetland system, with the majority of water flow through the wetland at this crossing point passing through a single existing culvert. The culvert is functional but has not been formally engineered or maintained to the standard required to adequately manage the hydrological demands of the wetland crossing.

The road corridor itself has contributed to the disturbed and degraded condition of the UVB wetland in the vicinity of Portion A, having historically encroached upon the natural wetland extent. This encroachment, combined with the infilling, compaction, and surface hardening associated with the road construction, has altered the natural flow regime, geomorphology, and vegetation communities of the wetland in this area.

Wetland Classification and Extent

A natural Unchannelled Valley Bottom (UVB) wetland was confirmed and delineated during the site assessment on 10 December 2024. The wetland forms part of a 1.4 km long wetland system that originates to the west of the study area and drains into the Vermont Salt Pan, located approximately 420 m to the south-east of the maintenance activity area. The wetland is classified as an inland, valley-floor, unchannelled valley bottom system, receiving water inputs through rainfall and interflow, with seasonality ranging from permanent to seasonal and temporary. The substrate consists of sandy loam with areas that have been infilled with foreign soils.

The wetland area directly coinciding with Erf 1490 (Portion A) and the existing access road corridor is considered to be relic or historical in nature, having lost all functional wetland characteristics as a result of the extensive disturbance associated with the existing road, residential development, infilling, excavation, and installation of culverts within the wetland area. This relic wetland area currently comprises the existing road surface, residential areas, associated gardens and lawns, and the gravel and shell-lined access road. Although sparse wetland vegetation — including individual specimens of *Cyperus textilis* — was noted within this relic area, it is the considered opinion of the Freshwater Specialist that this area has lost all wetland functionality and that no rehabilitation potential exists within the relic wetland extent due to the level of existing disturbance.

A functional UVB wetland area was however confirmed to be present immediately downslope of and adjacent to the existing access road corridor, with clearly defined wetland vegetation communities and hydromorphic soil characteristics indicative of ongoing wetland function.

Photo 1: The existing access road that will be upgraded.

Photo 2: Channel within the UVB wetland, adjacent to the entrance / access road.

Photo 3: Stormwater channel along the access road which will be upgraded, within the UVB wetland.

3.	Property location								Vermont, Hermanus															
4.	Erf/Farm name(s), number(s) and portion(s)								Erf 1490 (Portion A)															
5.	Property size(s) (m^2) of all proposed sites:								Erf 1490: 16416.9 m^2															
6.	SG Digit code(s) of the all the proposed property(ies)																							
Erf 1490		C	0	1	3	0	0	2	3	0	0	0	0	1	4	9	0	0	0	0	0	0		
7.	Coordinates of the proposed site(s) where the maintenance activity/ies will be conducted:																							

Area	Latitude	Longitude
	Erf 1490	
1	**34°24'29.08"S**	**19° 9'5.79"E**
2	**34°24'29.27"S**	**19° 9'6.99"E**
3	**34°24'36.43"S**	**19° 9'6.25"E**
4	**34°24'36.23"S**	**19° 9'4.95"E**

Note: If the maintenance activities will be undertaken along a linear stretch such as a watercourse, the start, middle and end co-ordinates must be provided.

SECTION C: POTENTIAL LISTED ACTIVITIES THAT YOU REGARD TO BE APPLICABLE TO THE PROPOSED MAINTENANCE ACTIVITY(IES)

All activities listed in terms of the EIA Regulations, 2014 that may be associated with the proposed maintenance activities must be provided below.

Activity No(s):	Provide the relevant **Activities** as set out in **Listing Notice 1**	Describe the portion of the proposed development 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 10 cubic metres from – a watercourse	Excavation and removal of sediments will be required during the operational phase of the development.
Activity No(s):	Provide the relevant **Activities** as set out in **Listing Notice 2**	Describe the portion of the proposed development to which the applicable listed activity relates.
	NONE	
Activity No(s):	Provide the relevant **Activities** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	The clearance of an area of 300 square metres or more of indigenous vegetation i. Western Cape i. Within any critically endangered or endangered ecosystem listed in terms of section	

Annexure A

FORM A | REPORTING FOR INTENT TO UNDERTAKE MAINTENANCE ACTIVITIES

Section A
Landowner Details

Name	Surname	Farm No.	Erf No.	Today's date

Section B
Details of the proposed maintenance activity

WUA/GA reference number and DEA&DP reference number for MMP	Activity Type:	Footprint area (m^2)	Volume of material (m^3)

Equipment to be used	Description of method for planned activity	Commencement date

Date of last flood event for site	Note any further damage and comments regarding the state of the site

Section C
Photographs of activity location before maintenance

Before A **Coordinates:** **S** **E**	
Before B **Coordinates:** **S** **E** **Date of photos taken:**	

FORM B | REPORTING FOR COMPLETION OF MAINTENANCE ACTIVITIES

Section A
Landowner Details

Name	Surname	Farm No.	Erf No.	Today's date

Section B
Details of the proposed maintenance activity

WUA/GA reference number and DEA&DP reference number for MMP.	Activity Type	Footprint area (m^2)	Volume of material (m^3)

Equipment to be used	Description of method for planned activity	End date

Date of last flood event for site:	Note any challenges or difficulties experienced in following the MMP method statement

Section C
Photographs of activity location before maintenance

Before A **Coordinates:** **S** **E**	
Before B **Coordinates:** **S** **E** **Date of photos taken:**	

SECTION B: DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")/SPECIALIST

I, MICHELLE NAYLOR	EAP / Specialist Registration Number:	2	0	1	9	/	6	9	8

as the appointed EAP / Specialist hereby declare/affirm that:

- my EAP / Specialist Registration is current and up to date, and will inform the proponent and Department if the registration should lapse;
- the information provided or to be provided as part of this form, is true and correct;
- I have disclosed/will disclose, to the Proponent, the specialist (if any), the competent authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document prepared or to be prepared as part of the request for the adoption of a Maintenance Management Plan;
- I have ensured/will ensure that information containing all relevant facts in respect of the request for the adoption of a Maintenance Management Plan was/will be distributed or was/will be made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were/will be provided with a reasonable opportunity to participate and to provide comments;
- I have ensured/will ensure that the comments of all interested and affected parties were/will be considered, recorded and submitted to the competent authority;
- I have ensured/will ensure the inclusion of inputs and recommendations from any specialists in respect of the request for the adoption of a Maintenance Management Plan, where relevant;
- I have kept/will keep a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014.

MNaylor

Signature of the EAP/Specialist:

24-05-2026

Date:

LORNAY ENVIRONMENTAL CONSULTING PTY LTD

Name of company (if applicable):