LORNAY

ENVIRONMENTAL CONSULTING

ENVIRONMENTAL MANAGEMENT PROGRAMME

PROPOSED REZONING AND SUBDIVISION FOR MIXED USE DEVELOPMENT ON ERF 878, RIEBEEK KASTEEL, SWARTLAND

April 2026

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APPLICANT: Silver Solutions 3371 CC

TITLE: Proposed Rezoning and Subdivision for Mixed Use Development on Erf 878, Riebeek Kasteel, Swartland

REFERENCE: EMP/ERF-878

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STATEMENT OF INDEPENDENCE

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

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ACKNOWLEDGEMENT

The preparation of this Environmental Management Programme (EMPr) represents a collaborative endeavour built upon the contributions of the current and previously appointed professionals. Lornay Environmental Consulting (Pty) Ltd, as the current Environmental Assessment Practitioner (EAP), hereby acknowledges the foundational work conducted to date by the previously appointed EAP, Charel Bruwer of Enviro Africa. Charel provided the baseline information for this In-Process reporting phase which has been used to guide the finalisation of this project.

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KEY TERMS AND ABBREVIATIONS

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

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

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

Contractor - the main or specialised contractors as appointed by the developer / applicant for the execution of the works, including all sub-contractors

Environmental Control Officer (ECO) - a suitably qualified person to be appointed by the Developer / Applicant, to oversee the implementation of the EMP and environmental agreement until the completion of works on the site

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

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

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

Project manager - Overall responsible and accountable person for the site during the construction, operation and decommissioning of the facility.

Project Management team - The responsibility of the EMP implementation resides with this team. This team includes a Project Manager and appointed contractors and consultants.

Safety, Health and Environmental Officer (SHE Representative) – Applicant / developer will appoint one Safety Health and Environmental Officer, assisting the construction manager on Safety, Health and Environmental aspects of the project on the construction site.

Site Manager **–** the employee of the main contractor responsible for the day-to-day control of all activities and operation on site.

Sub-contractor and Contractor - Any provider of services, goods or people to the Applicant / Developer, for the construction, operation or decommissioning.

LEGISLATIVE REQUIREMENTS

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

Other applicable legislation

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

The Constitution of the Republic of South Africa states that everyone has a right to a non-threatening environment and that reasonable measures are applied to protect the environment. This includes preventing pollution and promoting conservation and environmentally sustainable development, while promoting justifiable social and economic development.

National Environmental Management Act (Act 107 of 1998)

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

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

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

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

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

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

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

Environment Conservation Act (Act No. 73 of 1989)

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

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

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

Hazardous Substances Act (Act No. 5 of 1973)

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

1. INTRODUCTION

Lornay Environmental Consulting (Pty) Ltd has been appointed by Silver Solutions 3371 CC ,the "applicant" to ensure compliance with the regulations set forth in the National Environmental Management Act (NEMA, Act 107 of 1998), as amended, along with the Environmental Impact Assessment Regulations of 2014, as amended. This appointment pertains to the proposed rezoning and subdivision for Mixed Use Development on Erf 878, Riebeek Kasteel.

This Environmental Management Programme (EMPr) forms part of the conditions as set out in the conditions and recommendations as detailed in the DEA&DP Environmental Authorisation. This EMPr binds all contractors, sub-contractors and other persons working on the site to adhere to the terms and conditions of the EMPr throughout the construction and operation of the development on Erf 878, Riebeek Kasteel. Any other site-specific additional activities decided and agreed upon at the "On Site Start-Up Meeting" (OSSM) must be included to form part of the EMPr as this is a "living document" that needs to be modified where necessary as the project progresses where it will lead to an improvement in the protection of the environment.

The Environmental Management Programme (EMPr) established herein is binding on the applicant and all successors in title or future developers, whether they assume ownership in whole or in part. This binding agreement covers the proposed development on the subject property as detailed in this application and any future amendments to the approved layout or development plan. Additionally, it extends to all property owners within the development.

Submission of this EMPr is in accordance with the requirements for a Basic Assessment as stipulated by NEMA. This Environmental Management Plan (EMP) serves as a guideline document for both the construction and post-construction phases of the project, specifically for roads, services, homes, and all proposed development infrastructure on the aforementioned property.

The EMP outlines mitigation measures and is prescriptive in nature, identifying specific individuals or organizations responsible for executing particular tasks during both construction and post-construction phases. The primary objective is to ensure that potential environmental impacts during construction and post-construction are minimized or entirely avoided. The EMP is a dynamic document that may require periodic updates to accommodate evolving site activities. Compiled as part of the Basic Assessment process, the EMP becomes legally binding once approved by the Competent Authority. It should be read in conjunction with the attached Architectural and Landscape Guideline Document.

Ensuring compliance with the Environmental Management Programme (EMPr) is essential during the construction phase, which involves vegetation clearing. A completion audit will likely be required at the end of the construction phase, including the installation of civil services, home building, and driveway construction, as stipulated by the Environmental Authorisation (EA).

This EMP has been drafted in accordance with the requirements outlined in Section 24N of the National Environmental Management Act (NEMA), Act 107 of 1998.

EMPr Circulation List

Full copies of this EMPr should be made available for the ECO, ESO, Site Engineer and/or Contractor. Appendices should also be made and circulated where relevant.

1.1. The affected environment

Erf 878 in Riebeek Kasteel is bordered by Kerkstraat on the west, Hoofstraat on the north, Fontein Street on the east and agricultural development to the south. The Erf is ~11 ha in size and has no development infrastructure, services or structures at present. These services will all be supplied by the Swartland Municipality, subject to the services levies accruable to the municipality. The erf carries a zonation of Agriculture Zone 1 and has previously been subjected to extensive agricultural use covering the whole property.

Erf 878 has an elevated small hillock on the southern lower third of the property at a maximum height of 180 m AMSL. From this high point the topography slopes down to a height of 37 m to the lowest point in the north-western corner of the property at 143 m AMSL along the northern border of the property runs a drainage depression that drains extensive developed agricultural fields located on the lower mountain slopes to the west, consisting mostly of vineyards. Drainage from the mountain slopes has also created a small narrow storm water channel through the middle of the property that surfaces as a fountain that emerges above-ground in the middle of the property during the wet winter runoff months but otherwise dries up during the dry summer months. All water that drains from and across Erf 878 is transported by small stormwater channels located on the northern end of Erf 878 through a series of agricultural irrigation farm dams, via narrow drainage channels between the extensively developed surrounding agriculture to connect ultimately with the Berg River.

2. DEVELOPMENT PROPOSAL

The proposal incorporates the establishment of various development erven covering a development footprint of approximately 11 hectares. This development will be undertaken in 5 phases in terms of Chapter VI, Section 75(g)(vi) of the Swartland Municipal Land Use Planning By-Law, 2020. The final preferred layout (Alternative 4) consists of the following components:

- **Single Residential Zone 1 (Low Density**):
    - 50 erven with extents of between ±839 m² to ±2103 m² located along the slopes of Riebeek Hill,
    - Covering a total extent of **40989 m².**

- **General Residential Zone 2 (Town Housing):**
    - 24 erven with extents between ± 237 m^2 to ± 582 m^2, accommodating medium-density residential opportunities within the retirement village component.
    - Covering a total extent of **7031 m^2**

- **General Residential Zone 3 (Flats):**
    - 7 Erven with extent between 689 m^2 to 2082 m^2
    - Covering a total extent of 8038 m^2

- **Resort Zone 3: (Wedding Venue – relocated to lower site position)**
    - 1 erf with an extent of **7603 m^2**

- **Business Zone 1: (General Business)**
    - 1 erf with a total extent of **172 m^2** to be utilized as a small-scale retail node (farmstall typology) along the R311.

- **Open Space Zone 2 (Private Open Space):**
    - 8 erven with total extent of **26396 m^2**
    - These erven encompass the natural seepage areas, landscaped open space, and stormwater discharge and ecological buffers.

- **Transport Zone 2 (Roads):**
    - 3 Erven with a total extent **14251 m^2**
    - This includes the internal road network that provides access throughout the development

Proposed bulk infrastructure:

The Swartland Municipality has confirmed that there is sufficient service capacity to service the development, see Letter in **Appendix E4,** as follows:

Water

The bulk water allocation from the Western Cape Water Supply Scheme for Swartland Municipality's Swartland System is 7900ML/a. The current abstraction is in the order of 6241.2ML/a. The additional water demand of the proposed development is 369ML/a. The availability of bulk water is therefore confirmed.

To resolve regional capacity constraints, the developer is committed to a development contribution toward municipal reservoir storage capacity upgrades for Riebeek Kasteel, as required to accommodate the proposed development.

Sewer

Effluent from the proposed development will be treated at the Riebeek Valley WWTW. The WWTW has a hydrological capacity of 1.9 ML/day and an organic treatment capacity of 1500 kgCOD/day. The current flow received at the works is 0.6 ML/day and the organic loading rate is 607kg COD/day. The anticipated flow from the proposed development is 0.081 ML/day and the anticipated organic load is 32 kg COD/day. There is therefore sufficient treatment capacity.

The developer is further committed to a development contribution for bulk sewer outfall upgrades along Pieter Cruythoff Avenue, resolving identified capacity constraints in the existing system.

Solid waste

Normal refuse of the proposed facility will be handled at the Highlands Landfill and sufficient capacity exists to service the proposed development.

The establishment of a Master Homeowners' Association for the application area in terms of Chapter IV, Section 39(1) of the Swartland Municipal Land Use Planning By-Law, 2020, is proposed. The constitution and design guidelines will be submitted at a later stage for approval.

Stormwater

1. External Stormwater Context and Capacity

→ **Existing Watercourse:** A natural stormwater course runs along the northern boundary of the site, flowing from west to east via an underground culvert crossing Kerkstraat.

→ **System Constraints:** The Swartland Municipality has confirmed that there is **no additional capacity** within the existing external municipal system.

→ **Management Mandate:** All post-development runoff must be attenuated on-site to **pre-development flow rates** before being discharged into the municipal system.

2. Internal Stormwater Network Design

→ **System Components:** The internal network will consist of **open swales**, an underground gravity pipe network, roadside channels, and inlet structures.

→ **Piping Specifications:** All municipal installations must use **Class 100D Concrete spigot and socket pipes** with a minimum nominal diameter of **300mm**.

→ **Hydraulic Standards:** Pipes are designed for a minimum self-cleansing velocity of **0.9 m/s** when half-full, with manholes spaced at a maximum of **90m**.

→ **Minor Network Capacity:** The internal system is engineered to manage and convey up to a **1:10 year rainfall event**.

→ **Overland Flow Routes:** For rainfall events exceeding a 1:10 year return period, internal roads, walkways, and channels are designed to act as **overland flow routes** to convey runoff to the attenuation facility or designated escape points.

3. Attenuation and Water Quality Management

→ **Design Volume:** The system is required to retain a storage volume of **991 m³**, sized to attenuate a **1:50-year peak post-development storm event**.

→ **Outflow Control:** The maximum attenuated outflow rate is restricted to the **1:2-year pre-development peak flow**.

→ **Bio-filtration and Treatment:**

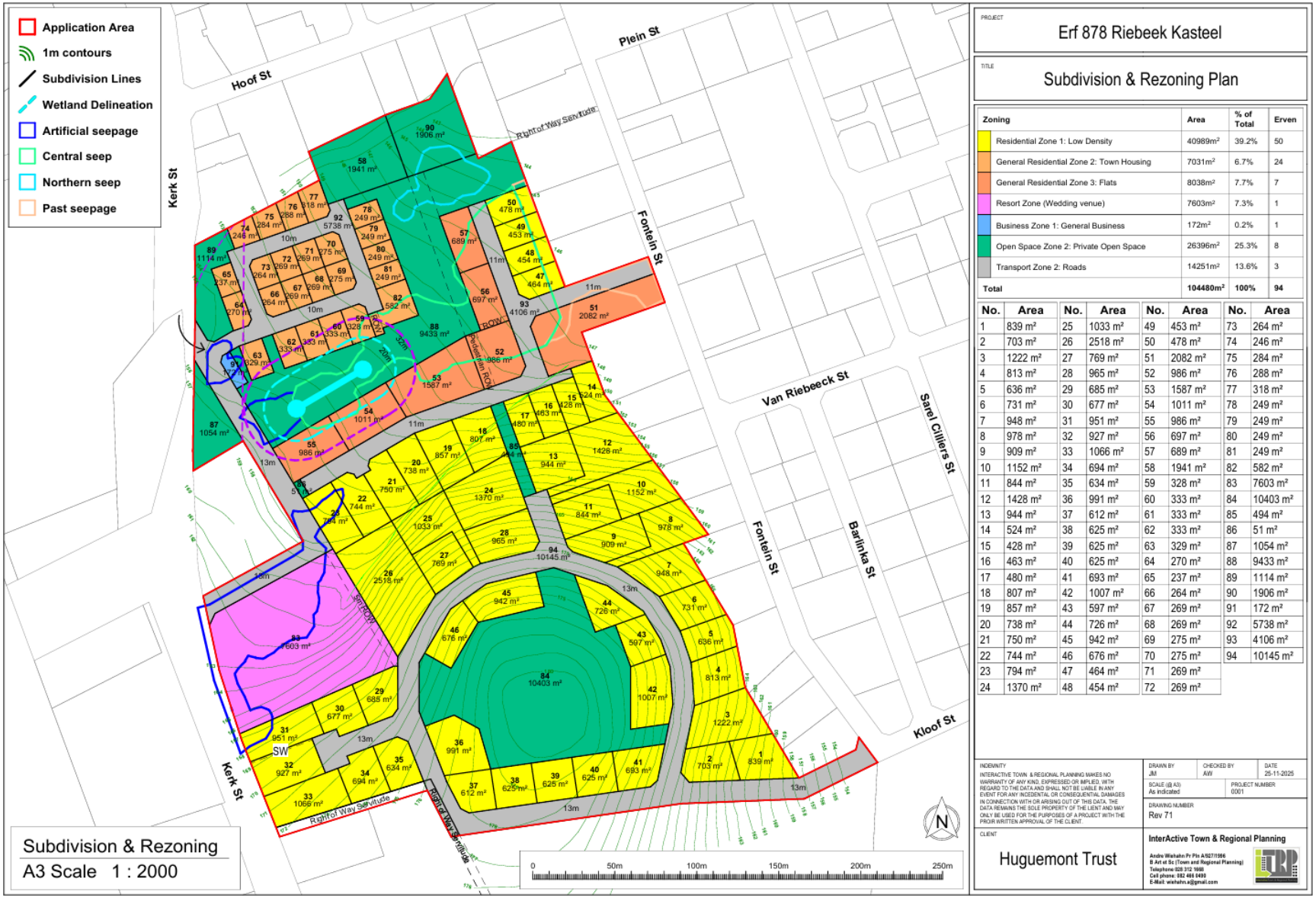
- The attenuation dam and internal swales will be planted with **indigenous vegetation** to function as **bio-filters**, reducing nitrogen and phosphorus content.
- **Stilling basins** at inlets will facilitate the settling of suspended solids to prevent them from entering external infrastructure.
- The system is designed to promote **on-site infiltration** into subsurface water reserves.

4. Geotechnical Considerations for Drainage

→ **Northern Soil Profile:** Due to high moisture content and potential for **seasonal waterlogging** in the northern portion of the site, **conventional fin-type subsurface drainage** must be provided next to all roads.

→ **Drainage Depth:** The invert of these drains must be placed below the contact between soil types, typically at or below a depth of **0.9m**, to ensure effective groundwater interception.

→ **Spring Management:** Additional ad-hoc subsurface drainage may be required to intersect and control specific seepage flows related to the on-site spring/fountain



PROJECT

Erf 878 Riebeek Kasteel

TITLE

Subdivision & Rezoning Plan

Zoning	Area	% of Total	Erven
Residential Zone 1: Low Density	40989m²	39.2%	50
General Residential Zone 2: Town Housing	7031m²	6.7%	24
General Residential Zone 3: Flats	8038m²	7.7%	7
Resort Zone (Wedding venue)	7603m²	7.3%	1
Business Zone 1: General Business	172m²	0.2%	1
Open Space Zone 2: Private Open Space	26396m²	25.3%	8
Transport Zone 2: Roads	14251m²	13.6%	3
Total	**104480m²**	**100%**	**94**

No.	Area	No.	Area	No.	Area	No.	Area
1	839 m²	25	1033 m²	49	453 m²	73	264 m²
2	703 m²	26	2518 m²	50	478 m²	74	246 m²
3	1222 m²	27	769 m²	51	2082 m²	75	284 m²
4	813 m²	28	965 m²	52	986 m²	76	288 m²
5	636 m²	29	685 m²	53	1587 m²	77	318 m²
6	731 m²	30	677 m²	54	1011 m²	78	249 m²
7	948 m²	31	951 m²	55	986 m²	79	249 m²
8	978 m²	32	927 m²	56	697 m²	80	249 m²
9	909 m²	33	1066 m²	57	689 m²	81	249 m²
10	1152 m²	34	694 m²	58	1941 m²	82	582 m²
11	844 m²	35	634 m²	59	328 m²	83	7603 m²
12	1428 m²	36	991 m²	60	333 m²	84	10403 m²
13	944 m²	37	612 m²	61	333 m²	85	494 m²
14	524 m²	38	625 m²	62	333 m²	86	51 m²
15	428 m²	39	625 m²	63	329 m²	87	1054 m²
16	463 m²	40	625 m²	64	270 m²	88	9433 m²
17	480 m²	41	693 m²	65	237 m²	89	1114 m²
18	807 m²	42	1007 m²	66	264 m²	90	1906 m²
19	857 m²	43	597 m²	67	269 m²	91	172 m²
20	738 m²	44	726 m²	68	269 m²	92	5738 m²
21	750 m²	45	942 m²	69	275 m²	93	4106 m²
22	744 m²	46	676 m²	70	275 m²	94	10145 m²
23	794 m²	47	464 m²	71	269 m²		
24	1370 m²	48	454 m²	72	269 m²		

DRAWN BY	CHECKED BY	DATE
JM	AW	25-11-2025

SCALE (@ A3): As indicated

PROJECT NUMBER: 0001

DRAWING NUMBER: Rev 71

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3. TERMS OF REFERENCE

The primary objective of this Environmental Management Programme (EMPr) is to identify, manage, and mitigate any potential negative environmental impacts that may arise during the construction and subsequent operation of the proposed development of Erf 878 Riebeek Kasteel. The EMPr serves as a guiding document to ensure that the construction and post-construction phases of the development are carried out in an environmentally responsible manner, in compliance with relevant legislation and best practices.

3.1. Scope of the Report

- → This EMPr applies to all construction and post-construction / operational activities associated with the proposed development, including site preparation, building construction, driveways, and any associated infrastructure.
- → It must be made available to all contractors, subcontractors, and relevant stakeholders involved in the project, ensuring that it forms an integral part of all tender documentation and contracts.

3.2. Binding Requirements

→ The provisions of this EMPr are binding on the applicant/owner, all contractors, subcontractors, and any third parties acting on their behalf.
→ The applicant/owner is responsible for ensuring that all contractors and subcontractors are fully informed of the environmental requirements contained within this document.
→ Failure to comply with the EMPr's requirements by any party involved in the construction will result in appropriate penalties, and the contractor will be obligated to remedy any environmental damage caused by their actions or the actions of their subcontractors.

3.3. Responsibilities and Accountability

→ The contractor is accountable for the environmental performance of the site and must ensure that all activities are conducted in accordance with the environmental standards and guidelines set out in the EMPr.
→ The contractor must also take proactive steps to prevent environmental damage and address any environmental issues that may arise during construction.
→ In the event of environmental harm or non-compliance, the contractor will be required to restore the affected areas and bear any costs associated with remediation or penalties imposed.

3.4. Implementation and Compliance Monitoring

→ Regular site inspections and audits will be conducted to monitor compliance with the EMPr. Any non-compliance will be recorded, and corrective actions will be mandated to mitigate environmental risks.
→ Contractors and subcontractors are required to cooperate fully during audits and inspections, and all personnel must receive appropriate environmental training to ensure adherence to the EMPr's guidelines.

4. ENVIRONMENTAL CONTROL ON SITE

4.1. Approach

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

Table 1: Impact management

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

4.2. Organisational Structure and Responsibilities

The Applicant and their appointed contractors will be responsible for the construction phase of each house, internal and access roads and associated infrastructure. All construction related staff are to be briefed on the requirements of the EA and EMP and copies of these documents are to be kept on site during all phases of construction.

Environmental Control Officer

Due to the sensitivity of the site, it is recommended that an ECO be appointed for the construction phase of the development. ECO site visits should take place for the duration of the construction phase as per the conditions of the Environmental Authorisation. This will ensure that the additional conditions contained in the EA, EMP and BAR are implemented.

The responsibilities of the ECO during the construction phase of the project, will include, but not be limited to, the following:

→ To environmentally educate and raise the awareness of the Contractors and their staff and to target responsible individuals as key players for environmental education and to facilitate the spread of the correct environmental attitude during the contract work
→ To review method statements and to determine the most environmentally sensitive options
→ To oversee the implementation of environmental procedures set out in this document
→ To attend site contractor's meetings, as required and report on environmental issues
→ To receive notices and minutes of all site meetings
→ To maintain an open and direct channel of communication with the construction team and site manager
→ To take immediate action on site where clearly defined no-go areas are violated, or in danger of being violated, and to inform the site manager immediately, of the documents and the action taken
→ To keep an up-to-date record of works on site, as they relate to environmental issues in the site diary.
→ To be contactable by the public regarding matters of environmental concern during the construction phase.

Project Manager

In addition to the ECO, the Project Manager will be responsible for the following:

→ All activities relating to the construction phase
→ Delegate activities in accordance with the EMP
→ Communicate design changes and technical issues to the team timeously
→ Ensure that all contractors are managing their team adequately and abiding by the conditions of the EMP and EA
→ Ensuring that the Contractors are aware of the conditions of the EMP and EA

Contractor

The Contractor (including sub-contractors) will be responsible for:

→ Familiarising themselves with the EIA and EMP
→ Complying with the EMP and EA commitments and any other legislative requirements as applicable
→ Adhering to any instructions issued by the Project Manager or the Safety, Health and Environmental (SHE) Officer, if applicable
→ Submitting an environmental report at designated site meetings on the environmental incidents that have occurred, if applicable
→ Arranging that all employees and those of the subcontractors receive appropriate training prior to the commencement of construction, taking cognisance of this EMP and EA

4.3. Site documentation and reporting

Site logbook

A logbook should be kept on a construction site for the purposes of recording on-site instructions and as a general record of environmental issues. The logbook should be kept for a minimum of two years after the activity is completed for the relevant authority to review if deemed necessary. A photographic record of before and after construction should also be kept for visual reference purposes. The logbook should also contain the following sections:

Environmental Site Instruction

The Environmental Site Instruction section will be used for the recording of general site instructions relating to the protection of environmentally sensitive or potentially impacted areas or features on the site as applicable, by the ECO / site manager / construction team.

Site Diary

The purpose of this section will be to record the comments of the ECO / site manager / contractor etc., as they relate to activities on the site. The diary should also hold the complaints register, received from onsite personnel and the general public, Environmental Incident Register, disposal certificates for waste and sewage, non-conformance information, and written corrective active instructions.

Monitoring Section

The purpose of this section will be to record the comments of the ECO / site manager / contractor, during construction, relating to the implementation of the mitigation measures as well as waste, recycling, landscaping and renewable energy measures used during the construction. The findings of all inspections and internal audits should be structured into instructive reporting, providing information to all responsible personnel. Corrective actions must be clearly defined where required. Within the reporting function a structured review component will be enforced. This review function will assist in prescribing necessary corrective actions. During construction, the ECO / Project management team, will be responsible for onsite monitoring to ensure that the contractor abides by the conditions of the EA and EMP.

The Environmental Authorisation (EA) as well as a copy of the approved Environmental Management Plan (EMP) for Construction, should also be accessible on site at all times.

5. ENVIRONMENTAL AWARENESS

It is important to ensure that the contractors and employees associated with the proposed activity receive the appropriate level of training and awareness to ensure that continual environmental due diligence and conservation is applied at all levels of work carried out on site. Employees, contractors and sub-contractors must be made aware of their responsibilities in terms of relevant legislation, guidelines, as well as this EMP and EA.

The environmental conditions should be included in the contracts issued to the contractors, making them aware of the potential environmental impacts and risks associated with the proposed development as well as what measures are expected of them whilst conducting work on site. The importance of implementing the conditions in the EMP and the necessity of good housekeeping practices, will be made known to the contractors and employees.

5.1. Aim of the Environmental Awareness Plan

→ Promote environmental education and conservation on site.
→ Inform employees and contractors on the applicable environmental procedures and plans.

5.2. Environmental Awareness Training and content

→ All personnel should undergo induction, which as a minimum should include Safety, Health and Environmental awareness.
→ All attendees should sign an acknowledgement register upon receiving and understanding the induction
→ Construction and operational staff should be trained on the implementation of emergency procedures where applicable
→ Definitions as used in this EMP should be provided
→ How and why environmental protection is necessary, should be explained
→ Management measures required to prevent environmental impacts should be outlined
→ Emergency and spills response procedures should be outlined

Environmental conditions in the induction should focus on the following:

→ Good house-keeping practices
→ Air quality (Dust)
→ Waste Management
→ Odour/vermin Control
→ Proper use of sanitation facilities; and
→ Chemicals and materials storage, use and handling.

Environmental training should be implemented at the onset of the construction and can be done verbally or in written format. Proof of training should be kept on record.

6. COMMENCEMENT OF WORKS

The site project contractors must receive the EMPr as well as any other further additional information that pertains to site conditions and / or amendments or deviations from original site plan at the tender stage as far as possible in order for the service provider to cost the implications of the EMPr and EA conditions into their tender. This EMPr must form part of the Contractors Contract. A copy of the EMPr must be on site at all times and available for presentation to any authority requesting to see such document. No work on site may take place until the following has been complied with. Work also refers to camp establishment, earthmoving activities and any preliminary construction activities until:

- → EMPR has been approved by the relevant authorities, if this is a condition set in the Environmental Authorization.
- → On-Site Start-Up Meeting has been held
- → Site and No-Go areas have been demarcated
- → Contractors are in possession of the EMPR and other relevant documentation
- → Contractors signed the Declaration Of Understanding
- → All mandatory site equipment is in place
- → On Site Environmental Education & Awareness training session has taken place with all relevant construction personnel present.

7. CONDITIONS OF AUTHORISATION

The Environmental Authorisation (EA), once issued, will be included here and will be mandatory for all contractors, sub-contractors, agents, consultants, and construction personnel working on the property.

8. COMMENCEMENT / SITE START UP

The mandatory on-site start-up meeting that is conducted should preferably take place 14 days but not less than 5 working days prior to commencement of any site/camp establishment, earthworks and/or construction activities. This meeting may also relate to additional discussed information that must be complied with during the entire construction phase.

A Start-Up Meeting Report must be generated and must include all site-specific issues and arrangements as discussed and agreed on at the On-Site Start-Up Meeting.

The On-Site Start-Up Meeting additional information pertains to specific site construction agreements that was discussed on site by all the relevant parties and agreed upon and must be included in the On Site Start-Up Meeting Report. (The arrangements and agreements must fall within the conditions as set out in the Relevant DEA&DP Environmental Authorisation

At the on-site start-up meeting (OSSM) the following issues must be addressed:

- → The EMP & other relevant site documents
- → Project to be discussed and all uncertainties are cleared
- → Method statement/s to be discussed
- → Power line installation access routes (if applicable)
- → Road and construction area to be demarcated
- → Materials stockpile and lay down areas to be demarcated

- → Method of stockpiling to be discussed
- → Fire fighting procedures
- → Mandatory fire fighting equipment & fire preventative measures
- → Integrated waste management approach and intentions
- → Placement, type and service of toilets to be agreed upon
- → Placement and type of rubbish bins and removal of rubbish to be agreed upon
- → Labour overnight camp to be demarcated and services agreed upon (if applicable)
- → Environmental Education and awareness training session to all contractors & onsite staff/labour

The following people must attend the On-Site Start-Up Meeting:

- → Main contractor's representative.
- → Site supervisor/foreman
- → Appointed Environmental Control Officer (ECO)
- → Contractor's Environmental site officer (ESO)

Minutes of the OSSM will be condensed to a report format and circulated to all attendees of the above-named meeting for their perusal and comments if needed. A non-response is deemed to be an acceptance of the contents and agreements of the Report.

9. METHOD STATEMENTS

Method Statement(s) must be submitted to the ECO by the appointed contractors during all phases of development. The Method Statement must be provided to the ECO prior to commencement of any construction activities. Any amendments to the Method Statement must be lodged with and approved by the ECO. The method statements must include the following information:

- → Construction procedures and location of the construction site including description of the work to be undertaken; sketch maps can be used
- → Start date and duration of the procedure
- → Materials, equipment and labour to be used
- → How materials, equipment and labour would be moved to and from the site as well as on site during construction
- → Storage, removal and subsequent handling of all materials, excess materials and waste materials of the procedure
- → Emergency procedures in case of any potential accident / incident which could occur during the procedure
- → Mitigation measures that will be employed
- → Compliance / non-compliance with the EMP Specification and motivation if non-compliant

It is the contractor's responsibility to ensure that Method Statements are submitted 7 working days prior to commencement.

9.1. Method statements required

Based on the specifications in this EMPr and the activities approved in the EA, the following method statements (MS) are required, as a minimum. Note that additional method statements may be requested as and when required by the ECO

Method Statement 1: Site layout and establishment

A layout plan indicating works required and the location of the construction camp, i.e. all offices, accommodation facilities, batching areas, storage and stockpiling areas, workshops and all other areas / facilities required for the undertaking of activities required for completion of the project / phase of construction. The plan must include the location and layout of waste storage, ablution facilities, stockpiling and spoil areas and hazardous material storage areas. Details on dune and beach works must be included if applicable to the phase of construction. The decommissioning and removal of these facilities on completion of construction works must also be detailed.

Method Statement 2: Site and vegetation clearing

The Contractor must submit a site clearing method statement for all areas where the Contractor is required to, or intends to, clear vegetation within the development footprint. The method statement must clearly indicate what is to be cleared and how this will be done and where and how cleared material will be stored or disposed of. This method statement will also detail the setting aside of topsoil for rehabilitation / landscaping.

Method Statement 3: Materials batching and storage

The Contractor is to submit a method statement detailing the concrete batching areas and cement storage, methods of transport, and disposal after use including packaging products as applicable. other materials required should also be detailed.

Method Statement 4: Traffic control

The Contractor is to submit a method statement detailing how and where vehicles will move across the site during a particular phase of construction. This is particularly relevant to sensitive sites such as the dunes and beach. Cognisance must be taken of any no-go areas.

Method Statement 5: Solid waste / waste management

The Contractor is to submit a method statement containing details regarding solid waste control including storage, type and quantity of onsite bins, bin clean-out schedule, rubble disposal or reuse, rubble removal and frequency and other waste management requirements.

Method Statement 6: Wastewater

The Contractor is to submit a method statement detailing how wastewater will be collected from all wastewater generating areas, as well as storage and disposal methods, as applicable. If the Contractor intends to carry out any on-site wastewater treatment, this must also be included.

Method Statement 7: Dust

The Contractor is to submit a method statement which outlines how potential dust and windblown sand will be monitored and addressed on site. The contractor must consider the recommendations herein.

Method Statement 8: Landscaping / Rehabilitation

Should the contractor be responsible for any landscaping and rehabilitation of construction areas, the methods need to be detailed and submitted to the ECO for approval. This is particularly relevant to works in the dune and coastal areas.

It must be noted that additional Method Statements will be required and can be requested by the ECO as the need arises.

Table 2. Example of Method Statement and content. Contractor may have their own Method Statement template.

PROJECT: _____		
Method Statement title:		
Date:		
Description of activities:	*Brief description of work to be undertaken*	
Frequency / duration:	*How often will the works be required*	
Commencement date:	*When*	
Location on site:	*Where*	
Required materials, machinery and equipment:	*What*	
Details of how actions will be carried out:	*Detailed description of the activities, step by step detail, methods*	
Storage of materials:	*Description of materials required and how and where they will be stored*	
Storage and disposal of waste:	*Description of materials required and how and where they will be stored*	
Contractor Details:		
APPROVAL		
	ECO	**CONTRACTOR**
Signature:		
Date:		

10. CONSTRUCTION AND POST-CONSTRUCTION IMPACTS AND MITIGATIONS

10.1. Botanical Assessment findings

The Botanical Assessment conducted for the proposed development on Erf 878 (<11.1 ha), located within the urban edge of Riebeek Kasteel, provides a detailed evaluation of the site's vegetation and ecological context.
Key findings of the assessment include:

Vegetation Type and Conservation Status

- → The site is situated within Swartland Shale Renosterveld, a critically endangered vegetation type identified by the SA Vegetation Mapping (2018). Approximately 90% of this vegetation type has been transformed, against a conservation target of 26%, rendering these targets unachievable.
- → The site itself is entirely degraded due to historical and ongoing agricultural activities, primarily dryland cultivation of commercial crops spanning over a century. Although cultivation ceased 10–15 years ago (or longer), the land has been used for grazing by small antelope (e.g., springbok), with some hardy pioneer species re-establishing in previously disturbed areas.

Site Condition and Development Footprint

- → The proposed development will result in the transformation of approximately 11.1 ha of degraded natural veld into urban erven, with the footprint confined almost exclusively to already transformed areas which were found to exhibit little potential for rehabilitation.
- → No unique habitats (e.g., heuweltjies) or protected/endangered plant species were observed. The most notable botanical feature is the presence of a few young *Olea europaea* (wild olive) trees at the foot of a small hill.

Critical Biodiversity Areas (CBA) and Ecological Support Areas (ESA)

- → According to the Western Cape Biodiversity Spatial Plan (WCBSP), a small area on the hilltop is designated as a CBA, and the Krom River, bordering the site to the north, is identified as an ESA. However, site inspections confirmed that both the CBA and ESA are degraded, with no undisturbed natural veld remaining.
- → The Krom River, while compromised by surrounding urban and agricultural impacts, represents the only potential ecological corridor. Google imagery suggests that the section adjacent to Erf 878 is relatively better preserved compared to other nearby stretches, though still degraded.

Alien Vegetation

Alien invasive species, including *Acacia mearnsii* (black wattle), *Melia azedarach* (syringa), and *Populus alba* (white poplar), were observed. The white poplar, located near the Krom River, poses a significant risk due to its potential to form dense stands via root suckers, which could obstruct water channels, increase siltation, and reduce stream flow.

Impact Assessment

- → The proposed footprint will be relatively small (<12 ha) within the urban edge and impacting only on transformed natural veld.
- → The No-Go option is not likely to result in a "no-impact" scenario, for it will have a negative socio-economic impact (and slow degradation may still continue).

- → Without mitigation, the development's cumulative impact is rated as Medium-Low, primarily due to potential effects on the Krom River, CBA, and ESA. With appropriate mitigation, this can be reduced to Very-Low.
- → The "No-Go" option would not result in a "no-impact" scenario, as it would entail negative socio-economic consequences while degradation of the site may persist.

Impact management and mitigation measures:

- → All construction must be done in accordance with an approved construction and operational phase Environmental Management Plan (EMP), which must include the recommendations made in this report.
- → A suitably qualified Environmental Control Officer must be appointed to monitor the construction phase in terms of the EMP and any other conditions pertaining to specialist studies.
- → The layout of the development footprint should take the sensitivity of the Krom River into account and should aim to establish a suitable corridor along this river system in order to allow for potential rehabilitation of this ecosystem.
- → The olive trees identified on site, should be considered for replanting into green belts or gardens.
- → All listed alien invasive tree species must be removed from the site, while special care must be taken with the removal of white poplar (in order to ensure it does not enter the river system.
- → Lay-down areas or construction sites must be located at least 30m away from the Krom River corridor;
- → An integrated waste management approach must be implemented during construction.
    - Construction related general and hazardous waste may only be disposed of at suitably approved waste disposal sites.

10.2. Aquatic Biodiversity Assessment Findings

The assessment highlights the presence of a fountain located on site, and desktop resources also indicate that a portion of the Krom River runs along the northern boundary. During site investigation, it was identified by the specialist that the Krom river was confirmed to intersect the northern boundary of the development site. Additionally, two seep wetlands were also identified onsite, both of which are sustained by groundwater emergence in the form of springs. The assessment notes that the seep wetland 1 historically would have extended to the east, downslope of the site, but the development of the roads and residential areas resulted in the canalization of this flow.

Several patches of artificial seepage dominated by *Pennisetum clandestinum* (kikuyu grass) were observed, primarily along the western boundary. The artificial nature and negligible ecological importance / sensitivity of these features resulted in their exclusion from the assessment.

Anticipated impacts

The proposed development will result in the disturbance of 100 m^2 of a seep wetland.

Impact mitigation measures identified:

- → Alternative 4 has been specifically engineered to avoid the functional portions of Seep Wetland 2 and the Krom River corridor. Permanent loss of aquatic habitat is strictly limited to approximately 100 m^2 (0.01 ha) of the already degraded lower portion of Seep Wetland 1, required to accommodate essential road infrastructure. All watercourses are assessed as PES Category E (Seriously Modified).

- → **Avoidance and Demarcation:** The functional portions of the wetlands and the Krom River must be strictly demarcated as "No-Go Areas" during both construction and operational phases to prevent unauthorized activities, equipment storage, or stockpiling within sensitive zones.
- → **Buffer Implementation:** Mandatory buffer areas must be established and maintained, consisting of 15–20 m for the seep wetlands and 10 m for the above-ground sections of the Krom River.
- → **Hydrological Connectivity:** Post-development throughflow from the remnant Seep Wetland 1 must be facilitated via indigenous vegetated earthen swales connecting to the Krom River to maintain habitat and hydrological connectivity.
- → **Stormwater Control:** No direct or untreated stormwater discharge is permitted into watercourses; runoff must be managed through vegetated swales, detention ponds, and flow dissipaters to ensure diffuse, treated release.
- → **Sediment and Erosion Management:** Stormwater infrastructure must incorporate sediment traps and debris grates, and all systems must be monitored for erosion and siltation after heavy rainfall events throughout the project lifecycle.
- → **Sanitation Safety:** The development must connect to the municipal mainline or utilise fully contained conservancy tanks; no on-site sewage treatment, irrigation with effluent, or soak-aways are permitted.
- → **Emergency Containment:** Manholes located upslope of watercourses must include emergency storage or bunded containment to provide a two-hour peak flow buffer in the event of a surcharge.
- → **Operational Oversight:** The Homeowners Association (HOA) must implement a long-term management plan that includes monthly monitoring of buffer health and the control of Alien Invasive Plant Species (AIPS).
- → **Specialist Mandate:** A formal geohydrological assessment must be conducted as part of the Water Use Authorisation (WUA) process.

Residual risks following the implementation of the above mitigation measures are assessed as "Low," and the development is recommended for authorisation under a General Authorisation (GA).

- → Monitor the proposed development and adjacent remnant watercourses for erosion and sedimentation after heavy rainfall events. Any erosion noted must be immediately addressed. Rehabilitation measures may include the removal of accumulated sediment by hand, filling of erosion gullies and rills, the stabilisation of gullies with silt fences, riprap, and the revegetation of stabilised areas.
- → 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.
- → 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 must receive basic filtering and treatment prior to its release into surrounding areas. Treatment methods may include sand filter traps and oil-water separators which will require maintenance.
- → Stormwater systems must be monitored and maintained into perpetuity and collections of debris and solid waste removed from grates and baskets. The developer must confirm who will be responsible for this monitoring and maintenance as well as their roles.
- → Municipal water supply should be used if possible. Tie into mainline sewage if possible or use fully contained conservancy tanks serviced by truck. No sewage treatment, irrigation or soak-aways should be contemplated.
- → Repair all sewage leaks as soon as reasonably possible after detection. Inspection of all sewage pipes should be conducted by a plumber once every 10 years (or as per Engineering guidelines / specifications).
- → Construct sewage pipelines in accordance with the relevant SANS / SABS specifications.
- → Design the pipelines to accommodate the operating and surge pressures.

- → Provide surge protection e.g air valves.
- → Allow for scour valves along pipelines in order 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 remnant watercourses. 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.
- → Undertake initial clearing in the early dry season (November to January) if possible.
- → Locate site camps, laydown areas, stockpile areas, construction material, equipment storage areas, vehicle parking areas, bunded vehicle servicing areas and re-fuelling areas in designated areas of already hardened surface or disturbed areas located outside of the No Go areas (remnant watercourses and buffers). These areas should preferably be located on level ground in a previously disturbed area of vegetation approved by the ECO. Cut and fill must be avoided where possible during the set-up of the construction site camp.
- → Any dumping / littering within the No Go areas is strictly prohibited. Spoil material must be appropriately disposed of at a registered waste disposal facility.
- → Topsoils and subsoils removed from the construction footprint must be stored separately at the designated stockpile area for future rehabilitation.
- → Vegetation clearance should be restricted to the relevant development components and indigenous vegetation cover should be maintained as far as practically possible.
- → Vegetation which is considered suitable for rehabilitation activities after construction (such as indigenous grasses and other herbaceous species) should be carefully removed from the construction footprint and stored at an appropriate facility for use in later rehabilitation activities.
- → An ECO must inspect the construction footprint on a weekly basis and must take immediate measures to address unforeseen disturbances to the remnant watercourses and buffers. Any disturbed / compacted areas falling outside of the demarcated construction footprint must be immediately rehabilitated. Depending on the extent of damage the method of rehabilitation may require input from an aquatic specialist / suitably qualified contractor.
- → Erosion should be monitored for and addressed immediately, especially after rainfall events. Implement erosion control measures if / where required. Examples of erosion control measures may include:
    - Covering steep/unstable/erosion prone areas with geotextiles.
    - Covering areas prone to erosion with brush packing, straw bales, mulch.
    - Stabilizing cleared/disturbed areas susceptible to erosion with sandbags
- → Constructing silt fences / traps in areas prone to erosion, to retain sediment-laden runoff. Silt fences must be adequately maintained. Furthermore, the farm manager must monitor sediment fences / traps after every heavy rainfall event and any sediment that has accumulated must be removed by hand.
- → Fuel, chemicals, and other hazardous substances should preferably be stored offsite, or as far away as possible from the no-go areas. These substances must be stored in suitable secure weather-proof containers with impermeable and bunded floors to limit pilferage, spillage into the environment, flooding, or storm damage.
- → All construction machinery and vehicles used within the site should be regularly serviced.
- → Inspect all storage facilities, vehicles, and machinery daily for the early detection of deterioration or leaks and strictly prohibit the use of any vehicles or machinery from which leakage has been detected.
- → Mixing and transferring of chemicals or hazardous substances must take place outside of the remnant watercourses and its associated buffer area, and must take place on drip trays, shutter boards or other impermeable surfaces.
- → Drip trays must be utilised at all fuel dispensing areas.

- → Vehicles and machinery should preferably be cleaned off site. Should cleaning be required on site it must only take place within designated areas outside of remnant watercourses and its associated buffer areas and should only occur on bunded areas with a water/oil/grease separator.
- → Dispose of used oils, wash water from cement and other pollutants at an appropriate licensed landfill site.
- → Avoid the use of infill material or construction material with pollution / leaching potential. Where possible, in situ earthen materials must be used during construction in order to reduce the risk of leachate from imported materials contaminating the remnant watercourses.
- → Concrete should preferably be imported as "ready-mix" concrete from a local supplier. Should onsite concrete mixing be required it must not be done on exposed soils. Concrete must be mixed on an impermeable surface in an area of low environmental sensitivity identified by the ECO outside of the no-go area. Surplus or waste concrete must be sent back to the supplier who will dispose of it.
- → Construct temporary bunds around areas where cement is to be cast in situ.
- → Clean up any spillages immediately with the use of a chemical spill kit and dispose of contaminated material at an appropriately registered facility.
- → Dispose of concrete and cement-related mortars in an environmental sensitive manner (can be toxic to aquatic life). Disposal of any of these waste materials into the stormwater system or the remnant watercourses is strictly prohibited.
- → Washout must not be discharged into the no-go area or the stormwater system. A washout area should be designated, and wash water should be treated on-site.
- → Provide portable toilets where work is being undertaken (1 toilet per 10 construction workers). These toilets must be located within an area designated by the ECO outside of the no-go areas, should preferably be located on level ground, and must be regularly serviced and maintained.
- → Provide an adequate number of bins on site and encourage construction personnel to dispose of their waste responsibly.
- → Waste generated by construction personnel must be removed from the site and disposed of at a registered waste disposal facility on a weekly basis.
- → In line with the NEMBA, all AIPS listed under the amended AIPS Lists (DEFF: GN1003, 2020) must either be removed or controlled on land under the management of the proponent. An AIPS control plan must therefore be compiled which includes measures to control and prevent the proliferation of AIPS during the construction phase.
- → Residents, or tenants, should be made aware of the Wetland Offset or Remnant Seep Wetland 1 within the site. Should any pollution events occur, such as spills of petrol, etc. the spread to the wetland area should be prevented, by applying / covering with absorbent materials. In no circumstance should pollutants enter the SW system or the remnant watercourses on site.

Due to the low residual risks associated with Alternative 4, and the successful avoidance of Seep Wetland 2 and the Krom River corridor, the development is recommended for authorisation under a General Authorisation (GA) process. Permanent loss of aquatic habitat is strictly limited to approximately 100 m² (0.01 ha) of the already degraded lower portion of Seep Wetland 1, required to accommodate essential road infrastructure. This must be confirmed as a condition of EA.

10.3. Heritage Impact Assessment Findings

10.3.1. Archaeological Findings

A field study conducted revealed:

- → A small number of Early Stone Age (ESA) and Middle Stone Age (MSA) flakes and chunks in a degraded and disturbed context, either embedded in gravel or on the surface of a gravel road circling the site.
- → A few isolated stone pieces were identified in the strips of land that have been Brush cut near a small stream/wetland.
- → No formally retouched tools (e.g., bifaces, points) or evidence of early human occupation/settlement.
- → A fragment of a late 19th/early 20th-century blue and white willow pattern glazed floor tile found among rubble in the northeastern site portion (Point 029).
- → Grading: Archaeological remains are deemed Not Conservation Worthy due to their small number, isolation, and disturbed context.
- → Graves: No graves were identified during the assessment.

Anticipated Impact

The site has been heavily transformed by historical agriculture, and the anticipated impact on tangible archaeological heritage resources is expected to be very low.

Impact Management Measures

Given the low significance and degraded context of the findings:

- → No specific conservation or mitigation measures are recommended for the archaeological remains identified during the site visit.
- → The lack of graves or significant occupation evidence eliminates the need for further protective actions in those respects.

10.3.2. Visual Impact Assessment

Key Issues

1. The site lies on the R311 and is best seen from this major route
2. The site is not easily seen from the town of Riebeek-Kasteel
3. The site is split between a lower/northern portion and an upper/southern portion
4. The historical grid of Riebeek-Kasteel remains intact
5. Ridgelines constrain views of the site from the south and north
6. Land use constrains views of the site from the east/town as does the grid.

Impact Assessment

The revised layout and landscaping with careful consideration has created a scheme that blends well into the old village as it connects onto the prominent R311 cultural route. Sometimes the white/light-coloured walls seem a bit bright and could be toned down to a greener option that will blend in better with the lush vegetation and general leafiness of the landscape.

Mitigation Recommendations

- → Site Development Plan: The layout must align with the historic town grid and respond to site contours, as per the approved Alternative 4 (Rev 71). A strict no-go area is established for all building footprints above the 170m–175m contour line to protect the Riebeek Hill ridgeline. A permanent, unobstructed view corridor must be maintained from the R311 toward the Dutch Reformed Church steeple. The site above the 170m–175m contour is retained as significant Open Space (public Hill Park). The residual visual significance is assessed as Moderate.

10.4. Traffic Impact Assessment Findings

The following technical summary details the findings and recommendations of the Traffic Impact Study (dated 28 November 2025) conducted for the proposed development on Erf 878, Riebeek Kasteel. This assessment is a critical component in securing development rights by demonstrating that the project will have a manageable impact on the local transport network.

1. Findings of the Traffic Impact Assessment

- → **Trip Generation:** The development is projected to generate a worst-case total of 236 weekday AM peak hour trips and 456 PM peak hour trips. These figures include the potential future "Business 1" retail component to ensure a conservative assessment of traffic impacts.
- → **Intersection Performance:** Capacity analyses conducted using AutoJ software indicate that the majority of affected intersections currently operate, and will continue to operate, at an acceptable Level of Service (LOS A or B). The assessment concludes that the proposed development traffic will have limited to no impact on the functionality of adjacent roads and intersections.
- → **Sight Distances:** Field assessments confirmed sufficient sight distances (>100m) at most proposed access points, including the intersections at Main Street (Access 2) and Fontein Street (Access 3 and 4). A sight distance constraint of approximately 75m was identified northbound at the R311 intersection (Access 1), necessitating specific mitigation.
- → **Public and Non-Motorized Transport:** The Riebeek Kasteel CBD is currently well-served by minibus-taxi services, and no additional public transport facilities are required. Existing pedestrian infrastructure within the CBD provides a viable base for integration.
- → **Manoeuvrability:** Vehicle tracking simulations confirm that the internal road layout can easily accommodate standard passenger cars, municipal refuse trucks, and emergency vehicles.

2. Impact Management and Mitigation Measures

To facilitate the additional development traffic and ensure safety, the following engineering and management measures are required:

- → **Intersection Upgrades:**

- **Intersection 2 (Main Street/Maree Street):** Establishment of a fourth leg from the south to accommodate Access 2.
- **Intersection 5 (Fontein Street/Access 3):** Establishment of a third leg from the west to accommodate Access 3.
- **Intersection 6 (Fontein Street/Kloof Street):** Extension of Kloof Street westwards to form a third leg for Access 4.
- **Intersection 7 (R311/Farm Access/Access 1):** This intersection must be 4-way stop-controlled. This measure is required to mitigate the 75m northbound sight distance limitation and serve as a speed deterrent on the R311, improving pedestrian safety.

→ **Access and Road Design:**

- Four primary access points will be established, each featuring one lane for entry and one for exit.
- All internal access roads will have a minimum road surface width of 6 meters to allow for safe bidirectional flow.

→ **Pedestrian Infrastructure:** New sidewalks must be constructed throughout the development and linked directly to the existing sidewalk network of the Riebeek Kasteel CBD to promote non-motorized transport.

→ **Operational Management:**

- On-site refuse removal must be integrated into the development's operational plan.
- Parking provision must strictly adhere to the requirements of the Town Planning Scheme.

These traffic mitigation measures ensure that the development aligns with provincial and municipal transport standards, supporting the successful acquisition of development rights.

10.5. Clearing of Vegetation, Stripping & Conservation of Topsoil

A Method Statement will be required which details the methods to be used for vegetation clearing. All cleared areas must be stabilised as soon as possible. Burning of cleared vegetation on site is prohibited. The burying of cleared vegetation or use as part of backfill or landscape shaping is prohibited unless written approval is obtained from the ECO.

Cleared vegetation may be used for mulch or slope stabilisation on the Site. Should bulk vegetation be removed from the designated working areas (footprint area) then tall vegetation shall first be removed through brush cutting and chipping of larger shrub material; this may be added to the topsoil material stockpiles as mulch. Unless otherwise agreed upon, only indigenous plant material shall be used for this purpose.

Prior to any activities within the demarcated work areas, topsoil material shall be removed to a depth of 150-300mm or deeper if specified by the engineer in consultation with the ECO and stockpiled in a designated area for use in rehabilitation of the site post construction. Any area where the topsoil will be impacted by construction activities, including the construction offices and storage areas, must have the topsoil stripped and removed and covered with herbaceous vegetation (other than alien species), overlying grass and other fine organic matter and stockpiled for subsequent use in rehabilitation.

Topsoil storage areas must be convex and should not exceed 2m in height. The Contractor must ensure that the material does not blow or wash away. Topsoil must be treated with care, must not be buried or in any other way be rendered unsuitable for further use (e.g. by mixing with spoil) and precautions must be taken to prevent unnecessary handling and compaction. In particular, topsoil must not be subject to compaction greater than 1 500 kg/m² and must not be pushed by a bulldozer for more than 50 m. Trucks may not be driven over the stockpiles.

Topsoil from different soil types must be stockpiled separately and replaced in the same areas from which they were taken if this proves to be the case. Specific attention should be given to the areas that may house rare and threatened species. Topsoil areas must be demarcated in order to ensure the safekeeping of topsoil and to separate different stockpile types.

10.6. Appropriate use of Machinery

Contractor must at all times carefully consider what machinery is appropriate to the task while minimizing the extent of environmental damage. The contractor may not operate any machinery including a fuel driven compressor outside the demarcated area. Where practical, all maintenance of plant and machinery on site must be performed in workshops. If it is necessary to do maintenance outside of a workshop area, the Contractor must obtain the approval of the Engineer and the ECO prior to commencing activities.

All vehicles and equipment must be routinely inspected for fuel and oil leaks and kept in good working order and serviced regularly. Leaking equipment must be repaired immediately or removed from the Site. When servicing equipment, drip trays must be used to collect the waste oil and other lubricants. Drip trays must also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles). Drip trays should be kept free of water that will float the oil to overspill. All drip trays/bunds to attain a 120% capacity of the plant fuel/oil capacity.

Appropriate 2.5kg (minimum requirement) dry powder SABS approved and service certified fire fighting extinguishers must be easily available at strategic points on the site such as the site office, fuel stores, etc.

10.7. Demarcation and fencing

Final site demarcation must be carried out with all relevant parties (who will be responsible) present for the day-to-day activities on the site and may include;

- → The Client or his delegated Representative
- → Environmental Consultant
- → Main Contractor or his delegated Representative
- → Sub-contractor
- → Environmental Control Officer
- → Environmental Site Officer (if applicable)

The proposed site will be demarcated prior to the commencement of any construction or earth-moving activities and this includes site establishment, the moving of construction material or any other items onto the site, etc. The site will be demarcated with appropriate strong steel dropper poles. A single strand of orange baler twine or danger tape wound around wire is to be attached to the dropper poles to indicate boundaries and no-go areas for site personnel and vehicular movement. Orange plastic square mesh must fence off all excavations deeper than one metre. Alternative fencing may be decided upon dependent on site requirements.

The construction area i.e. road, stockpile areas and development footprint etc. must be demarcated and fenced off with steel dropper poles and orange baler twine approximately 1m high is considered adequate. The demarcation will be agreed on during the start-up meeting. All fencing and fence placement/positioning must be approved by the ECO on site. Work areas and access routes must be clearly demarcated to minimise environmental impact. Steel dropper poles and orange baler twine has proven to be the most environmentally friendly means of on site demarcation.

In the event that sensitive features are threatened by construction activities, temporary fencing off of these areas (for individual areas such as trees or rocks) or the construction area (when working in a mainly natural environment) is recommended.

The Contractor must maintain in good order all demarcation, fencing and barriers for the duration of construction activities, or as otherwise instructed. Any temporary fencing removed for the execution of any portion of the works is to be reinstated by the Contractor as soon as practicable. The Contractor at the end of the contract must remove all demarcation, fencing or barriers not forming part of the final works on Site. Once in place the demarcation barriers must be maintained and may not be moved or altered without consultation with the site ESO and the main contractor.

10.8. "NO-GO" Areas

''No-go" areas, if so, designated by the EMPr, Environmental Authorisation or other, are certain pre-determined areas that must be demarcated and avoided by machinery and personnel. The contractor is responsible to ensure that no person, machinery, equipment enter the "No-Go" areas at any time during the contract period.

Areas of special importance will be decided upon between the Engineer, Contractor and the ECO and demarcated as "No go" areas on a site plan and fenced off. Such areas are out of bounds to the Contractor and his staff, sub-contractors and their staff or suppliers and their staff and to any other person involved in the construction, without the written permission specified by the ECO.

The No Go areas can be declared at any point, as required.

10.9. Water, Storm water, Erosion & Sedimentation Control

The Contractor must take appropriate and active measures to prevent erosion resulting from his own construction activities and operations as well as storm water control measures to the satisfaction of the ECO. During construction the Contractor must protect areas susceptible to erosion by installing all the necessary temporary and permanent drainage works as soon as possible

Occupants on site must have access to safe drinking water. Water to be supplied by the contractor shall be from a legal source and comply with recognised standards for potable and other uses. It is the responsibility of the Contractor to meter his water use on site by means of appropriate measurement.

It is illegal to discharge water into a public stream if the quality does not conform to the required health or water standards. Other measures as may be necessary must be taken to prevent the surface water from being concentrated in streams and from scouring the slopes, banks or other areas. All potential hazardous fluids/materials must be protected from the rain to prevent them being washed into storm water channels. All such measures must be discussed with and approved by the ECO.

10.10. Fuel, Tar Compounds and Oil

Preferably no fuels and flammable materials are to be stored on the site. If fuels and flammable materials are to be stored on site, the following Basic Guidelines will be applicable:

- → These areas must comply with general fire safety requirements.
- → All vehicles, equipment, fuel and petroleum services and containers must be maintained in a good condition that prevents leakage and possible contamination of soil or water supplies. Drip trays are to be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks
- → All plants/fuel tanks must have a bund or drip tray present (whichever is applicable) to use in the event off accidental spillage of oils and fuels and must contain a capacity level of 120% of the capacity of the plant fuel and oil tanks.
- → A suitable leak proof container for the storage of oiled equipment (filters, drip tray contents and oil changes etc.) must be established.
- → Fuels and oils must be safely located in a designated area out of harms way from the elements and safety and fire prevention must be strictly adhered to.
- → All spills are to be recorded in the ESO diary.

Fuel Storage proposals must be cleared by the ECO before any storage or stockpiling takes place.

10.11. Hazardous Substances

If potentially hazardous substances are to be stored on site, the Contractor must provide a Method Statement detailing the substances/materials to be used, together with the storage, handling and disposal procedures of the materials to the Engineer and the ECO.

Paints

No paint products may be disposed of on Site and brush/roller wash facilities must be established to the satisfaction of the Engineer and the ECO. Oil based paints and chemical additives and cleaners such as thinners and turpentine must be strictly controlled. A Method Statement detailing the paint management procedures is required.

Hazardous building materials

Hazardous building materials (e.g. asbestos, fibre claddings, refrigerants, coolants, sub-station cooling oils, etc) must be identified and dealt with in accordance with the relevant safety and health legislation. All such material must be separated on Site and disposed of at appropriate licensed disposal sites. The Contractor must supply the ECO with a certificate of disposal. Hazardous materials should be stored under lock and key in designated areas with properly displayed and visible warning signs.

10.12. Concrete Works

The Engineer (in collaboration with the ECO) must indicate the permitted location of batching plants (including the location of cement stores and sand and aggregate stockpiles), if these are to be present on Site, on a site plan. A Method Statement indicating the layout and preparation of such facilities may have to be submitted.

Cleaning of equipment and flushing of mixers must not result in pollution of the surrounding environment. All wastewater resulting from batching of concrete must be disposed of via the contaminated water management procedure. Used cement bags must be stored in weatherproof containers to prevent wind dispersion and water contamination. Used cement bags must be disposed of on a weekly basis via the solid waste management system and must not be used for any other purpose. Cement bags may not be disposed of on-site but must be removed on a weekly basis to an approved dumpsite.

All visible remains of excess concrete must be physically removed and disposed of on completion of cement work. Washing the remains into the ground is not acceptable. All excess aggregate must also be removed.

The following recommendations must be implemented to minimise impact.

- → The concrete mixing must take place on top of boarding and/or sheeting so as to protect the ground. This board and or sheeting must be removed from the site once the mixing is complete.
- → Concrete batching to take place at identified areas only in consultation with the ECO.
- → Cement contaminated water may not enter a natural or man-made water system e.g. trench, channel or dam. Preventative measures include establishing sumps from where contaminated water can be either treated in situ or removed to an appropriate waste site.
- → Dry mixing batching areas to be carefully placed in consultation with the ECO.
- → If possible appropriate ready-mix concrete must be used.
- → Cement bags are to be stored securely out of harm's way from the elements (wind and rain). Bags must be covered and placed on plastic sheeting.
- → Sand and stone to be stored on plastic if it is stored outside the future fenced off site.
- → Excess or spilled concrete must be confined within the works area and then removed to a waste site.
- → Wash-down areas must be confined to within the concrete batching area only.

In the event of Ready-Mix concrete deliveries taking place on site the site foreman must ensure that no wash-down of ready-mix trucks takes place on or around the site, or, as a last resort, at the concrete batching area where concrete wastewater may be contained into the existing bunding pit. Any alternative method of disposal must be approved based on Method Statement to be submitted for the approval of the ECO via the ESO.

10.13. Fires and smoking

No fires are allowed on site. If smoking is to be allowed on site, then arrangements must be made for disposal of cigarette butts. No smoking will be allowed outside the agreed upon areas. Adequate firefighting equipment according to the fire hazard during the construction period must be available on site and in good working order (at least one type ABC (all purpose) 10 kg extinguisher and two fire beaters per working area). The persons on site must be trained in the use of such equipment.

The main contractor must provide a list of all authorities involved in firefighting in the region. This list must include emergency contact numbers and must be visible from outside at the site office. It is required that contractors have available [if there is cell phone reception] the emergency telephone numbers of the nearest local Fire Fighting Station and that an emergency firefighting re-action plan has been drawn up with onsite workers and the resident landowner.

Welding, gas cutting or cutting of metal will only be permitted inside the working areas. The Contractor must pay the costs incurred to organizations called to put out any fires started by personnel under his control. The Contractor must also pay any costs incurred to reinstate burnt areas as deemed necessary by The Client.

10.14. Emergency Procedures

It is the responsibility of the contractor to assess the potential risks to the environment because of the project. As such, the contractor must have the necessary standard emergency operating procedures in place to deal with any potential emergency such as oil spills or fire.

All staff should be made aware of the necessary basic emergency procedures in the event of an emergency including injuries to staff. The appropriate equipment and identified personnel to deal with such basic emergencies should be available on site.

Fire: The Contractor must advise the relevant authority of a fire as soon as one starts and must not wait until he can no longer control it. The Contractor must ensure that his employees are aware of the procedure to be followed in the event of a fire.
Spills: The Contractor must ensure that his employees are aware of the procedure to be followed for dealing with spills and leaks, which must include notifying the Engineer, the ECO and the relevant authorities. Treatment and remediation of the spill areas must be undertaken to the reasonable satisfaction of the ECO and Local Authority.

10.15. Dust Control

The Contractor must take all reasonable measures to minimize the generation of dust as a result of construction activities (including dust generated on haul roads) to the satisfaction of the ECO and Local Authority.

10.16. Solid Waste Management

No on-site burying or dumping of any waste materials, vegetation, litter or refuse must occur. The Contractor must provide problem animal and-weather proof bins with lids of sufficient number and capacity to store the solid waste produced on a weekly basis. The lids must be kept firmly on the bins at all times. Bins must not be allowed to become overfull and must be emptied at least once a week. Waste from bins may be temporarily stored on Site in a central waste area that is weatherproof and scavenger-proof and which the Engineer and the ECO has approved.
All solid waste must be disposed of off-site at an approved landfill site in terms of the National Environmental Management: Waste Act (Act No. 59 of 2008). The Contractor must supply the ECO with a certificate of disposal. All hazardous waste must be disposed of at a licensed hazardous waste site.

The Contractor must be responsible for the establishment of a refuse control system that is acceptable to the ECO. Disposal arrangements must be made in advance and cleared with the ECO before construction starts. The Contractor must make provision for workers to clean up the Contractor's camp and working areas on a daily basis so that no litter is left lying around and so that the site is in a neat and tidy state. The Contractor must remove from site the refuse collected at least once a week. This requirement must be strictly enforced and special note taken of the penalties applicable in the case of non-compliance.

10.17. Toilets & Ablution Facilities

The Contractor must provide suitable sanitary arrangements near the construction site for all site employees. A minimum of one toilet must be provided per 15 persons at each working area (station) or as stipulated and approved in the Method Statement. The toilet must be within easy reach (max 300m) of the working area and be in good working condition and cleaned on a daily basis. Toilet paper must be provided and emptied on a weekly basis or when full or when instructed by the ECO on site, whichever is the appropriate action.

Disposal arrangements must be made in advance and cleared with the ECO before construction starts. Sanitation provision and servicing must be to the satisfaction of the ECO. The Contractor must ensure that toilets are emptied prior to any builders' holidays, and/or weekends. Toilets must be of a neat construction and must be provided with doors and locks and must be secured to prevent them blowing over.

No burying of any waste material on or near the construction site nor anywhere on the surrounding property is permitted.

10.18. Stockpiling

Any stockpiling of gravel, cut, fill or any other material including spoil must only be allowed in degraded areas or areas below the future cover of buildings and tar or paved parking surface. The Contractor must indicate the proposed areas for such operations and method of undertaking such operations in a Method Statement to be submitted to the ECO for approval before any such activity begins. Any area used for stockpiling and not covered by building development must be returned to at least the state they were in before stockpiling and it must be ensured that the erosion potential of these areas is not increased.

The Contractor must ensure that the material does not blow or wash away or mix with each other. If the stockpiled material is in danger of being washed or blown away, the Contractor must cover it with a suitable material, such as hessian, netting or plastic.

10.19. Preparation of Building Material

The Contractor must ensure that any delivery drivers are informed of all procedures and restrictions (including "no go" areas) required to comply with the Specifications. The Contractor must ensure that these delivery drivers are supervised during off-loading, by someone with an adequate understanding of the requirements of the Specifications

All manufactured and/or imported material must be stored within the demarcated area, and, if so required, out of the rain. All lay down areas outside of the construction camp must be subject to the Engineer and the ECO’s approval in such a way as not to cause a nuisance or environmental damage. All building materials are to be prepared at the batching plant, to enable the effects of cement and other substances, and the resulting effluent to be more easily managed.

It is essential that any imported material i.e. base material for road works, building sand, bedding base sand for pipe / cable lines etc. must be screened and of which the origins must be identified prior to arriving at the receiving environment, this must be approved by the Engineer / ECO.

10.20. Discharge of construction water

Potential pollutants of any kind and in any form must be kept, stored, and used in such a manner that any escape can be contained and the water table not endangered. This particularly applies to water emanating from runoff from fuel depots/workshops/truck washing areas. Wash down areas must be placed and constructed in such a manner so as to ensure that the surrounding areas are not polluted.

Contaminated water includes water that is carrying excess sediment due to construction activities. The contractor, being responsible for the construction and effective containment and maintenance of settlement ponds must ensure that the surrounding environment is not adversely affected because of construction activities. Contaminated water storage facilities must not be allowed to overflow and appropriate protection from rain and flooding must be implemented. Contaminated water that is removed from site must be disposed of at a facility approved by the ECO and Local Authority. No contaminated

water that does not meet the water quality standards and criteria under the National Water Act may be released into a natural system, whether it is to surface or groundwater

All cement effluent from mixer washings, and run-off from batching areas and other work areas must be contained in suitable sedimentation ponds. Sedimentation ponds must be allowed to dry out on a regular basis to allow for solid material to be removed. This material must be disposed of in a suitable manner, depending on the nature of the material, and to the discretion of the ECO.

10.21. Contractors Temporary Camping Site & Eating Areas (Site camp in our report)

The Contractor must designate eating areas for the approval of the ECO, which must be clearly demarcated. No eating of meals must take place outside these designated areas without the approval of the Contractor/ECO. No washing in dams or streams are allowed. The feeding or leaving of food for animals is strictly prohibited. Sufficient waste bins must be present in this area and emptied regularly, at least weekly. Waste bins are to be provided with lids that are wind proof.

The contractor must supply cooking facilities that are suitable for the environment and are not liable to cause the outbreak of fires. No overnight camping/staying on site is allowed. If overnighting is necessary for security purposes, then it must be cleared with the Engineer and ECO on site.

10.22. Traffic, Access Routes & Haul Roads

The Contractor must control the movement of all vehicles and plant including that of his suppliers so that they remain on designated routes. In addition, such vehicles and plant must be so routed and operated as to minimise disruption to regular users of the routes not on the Site. On gravel or earth roads on Site, the vehicles of the Contractor and his suppliers must not exceed a speed of 25 km/h. On public roads adjacent to the site vehicles will adhere to municipal and provincial traffic regulations.

As far as possible any access routes/haul roads must utilise existing roads or tracks. Any new access roads/haul roads must be designed to minimise erosion and must run across slopes and not directly up-hill. All temporary access routes must be rehabilitated at the end of the contract to the satisfaction of the ECO. Method Statements for any new access/ haul roads must be submitted.

10.23. Site Clean Up and Rehabilitation

The Contractor must ensure that all structures, equipment, materials and facilities used or created on site for or during construction activities are removed once the project has been completed. The construction site must be cleared and cleaned to the satisfaction of the ECO. Immediately after the demolition of the camp site, the contractor shall restore the site to its original state, if required, paying particular attention to it's appearance relative to the general landscape. If the site is to be utilised as part of the approved development, the Contractor will restore the site to the specification approved by the Client, ECO and Engineer.

This shall include but not be limited to:

- → Earthworks to reinstate the physical characteristics of the site. Here attention to the natural vertical and lateral heterogeneity in landform shall guide the reinstatement of natural areas.
- → Replacement of topsoil material – care shall be taken to ensure that the same material that was removed from each area is replaced in the same or similar area, since this will carry the seed complement appropriate for re-establishment of each plant community type.

- → Final landscaping by machine, but landscaping by hand may be required in many areas under rehabilitation.
- → Re-seeding and/or replanting of rehabilitated areas, depending on the Specification.
- → The Contractor shall not be permitted to use fertilisers or pesticides unless cleared in a Method Statement and approved by the ECO.

It is imperative that any potential erosion problems are addressed. This may require subsequent site visits to monitor the efficacy of erosion control measures.

10.24. Land Management

Vehicles accessing the construction site must be made aware of driving in hazardous road conditions, sharp bends, narrow roads, bad weather, on or near children or domestic animals along the road if this is applicable. Vehicle movements should be kept to a minimum during rain to avoid damage to access roads and oil erosion must be always prevented along the access roads and around construction areas.

No fences or gates on the relevant construction property must be damaged. A decision on the open or closed status of all access gates to the property (construction site) must be taken with a view to manage the movement of domestic and/or wild animals on the site. Access by unauthorised personnel should also be controlled.

10.25. Building Plan Approval Process

- → The registered owner will be required to submit final building plans / any future alteration plans to the Riebeeck Hill Homeowners Association and Design Review Committee (DRC) for scrutiny prior to the construction of any building on the property. The plans shall be in accordance with the requirements of the local authority, National Building Regulations (SANS 10400), as well as the requirements prescribed within this document
- → It is encouraged that concept plans be submitted prior to finalization for initial comment and advisement by the RHHOA & DRC
- → Design review shall be a digital process, subject to final approval by the RHHOA & DRC
- → A fee for design review shall be determined by the RHHOA – and paid prior to scrutiny by the DRC.
- → Following design approval by the RHHOA / DRC, plans shall be digitally endorsed by the controlling authority, and only then can plans be formally submitted to the Swartland Municipal Council
- → Following Municipal Approval, a digital copy of the Approved Building Plan shall be provided to the RHHOA / DRC for record
- → A mandatory site commencement meeting shall be convened by the owner & DRC prior to commencement of construction

11. DESIGN CONSIDERATIONS

11.1. Design Philosophy and Urban Integration

The development is conceived as a pedestrian-oriented extension of the Riebeek Kasteel townscape rather than an isolated precinct. The primary design informant is the NEMA mitigation hierarchy, specifically the avoidance of the Riebeek Hill ridgeline (no development above the 170m–175m contour) and the preservation of the iconic visual sightline from the R311 toward the Dutch Reformed Church steeple.

11.2. Precinct-Specific Design Parameters

11.2.1. Hilltop Residential (Residential Zone 1)

- → **Vision:** Low-slung, contextually sensitive houses with strict height restrictions to ensure they remain visually subordinate to the natural topography.
- → **Height:** Strictly limited to single-storey structures with an overall height of 3.2m above base level.
- → **Form:** Buildings must be expressed as a series of linear volumes set parallel to the grade line, with a maximum core building width of 6.0m.
- → **Coverage:** Limited to 40%.

11.2.2. Hillside Residential (Residential Zone 1)

- → **Vision:** A traditional continuation of existing village architecture, focusing on height sensitivity due to the sloping terrain.
- → **Height:** Limited to 1.5 storeys (habitable roof spaces permitted). The wallplate is capped at 4.5m and the roof apex at 8.0m above base level.
- → **Interface:** Mandatory verandas/stoeps (minimum 1.5m depth) must cover 50% of the street facade to animate the streetscape.
- → **Coverage:** 60%.

11.2.3. Mixed-Use Village (General Residential Zone 3)

- → **Vision:** A pedestrian-centered node featuring double-storey walk-ups with active ground-floor workshops/studios and residential units above.
- → **Height:** Wallplate limited to 5.5m and roof apex 10.0m.
- → **Interface:** Public-facing ground floors require full-height glazing/openings with a continuous streetscape maintained via accessible low-walled yards (max 1.2m).
- → **Coverage:** 70%.

11.2.4. Retirement Village (General Residential Zone 2)

- → **Vision:** A fine-grained, medium-density single-storey precinct designed to present as a rural farmstead.
- → **Height:** Wallplate limited to 3.5m and roof apex to 6.0m.
- → **Interface:** Dwellings facing the “Wetland Park” must include a covered stoep for 60% of the facade width.

11.3. General Architectural and Engineering Controls

- → **Topography Management:** All building platforms must respect natural contours. Cut and fill is strictly limited to a maximum of 1.2m from Natural Ground Level (NGL), and no cut/fill is permitted within 1.0m of any property boundary.
- → **Boundary Walls:**
  - **Street-facing:** Limited to 1.2m in height and must be visually permeable. No solid “back-facing” walls are permitted along public streets.
  - **Side/Rear:** Limited to 1.8m in height.
  - **Prohibited:** Vibracrete, PVC, and bagged brickwork are strictly prohibited.
- → **Materials and Colour Palette:**
  - **Roofs:** Limited to dark charcoal steel (Clip-lok or S-profile) or dark grey flat concrete tiles. Thatch and clay tiles are prohibited.
  - **Walls:** Plastered and painted masonry in neutral earth tones (sage, light grey, or sandy hues). Brilliant whites and intense blacks are prohibited.

- → **Lighting Control:**
  - **Public:** Limited to 3.0m high bollards with fully shielded fixtures and a maximum colour temperature of 3000 Kelvin.
  - **Private:** Street boundary wall lighting is prohibited. Security lights must be motion-sensored.
- → **Services:** All A/C units, geysers, heat pumps, and satellite dishes must be integrated into the structure and concealed from street view.
- → **Landscaping Phase-In:** The primary landscaping for each phase must be completed and vegetation established before subsequent building phases proceed.

12. COMPLIANCE AND MONITORING

12.1. Non-compliance

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

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

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

Table 3. Penalties Scheme – to be reviewed by ECO if required

INFRINGEMENT	DESCRIPTION	PENALTY
Hydrocarbon / fuel spill	Penalty to be issued when remediations not implemented timeously	R 5000
Disturbance beyond approved footprint	Disturbance to vegetation beyond approved development sites	R 5000
Disturbance to watercourse / wetlands	Any disturbance to watercourses or wetlands not included in the EA	R 5000
Waste management	Inappropriate waste management	R 3000 dependent of extent
Not adhering to conditions of EA	Not attending to specific EA conditions	R 3000 + per condition

The Client (on recommendation by the ECO) reserves the right at all times for the duration of this agreement to impose restrictions and associated penalties on the contractor with respect to the specific nature, timing and extent of construction activities on environmentally sensitive sites that are not in keeping with the contents of the EMP.

In instances of non-compliance with the EMP by the contractor (or any of their employees) or sub-contractor/s (or any of their employees) that move on or off the site, the Contractor's on-site Environmental Site Officer (ESO) must immediately inform the ECO who will issue a written warning indicating the non-compliance to the contractor.

The Client, in consultation with the ECO, has the prerogative to determine the amount of the penalty, if applicable. Such penalty amount, if applicable, must be produced in writing and presented to the contractor within seven (7) calendar days of the written warning. The Client may recover penalties by deducting the fine from the offending contractor.

The contractor will be responsible for all costs incurred where emergency procedures are implemented to deal with accidents impacting on the environment as well as the rehabilitation of such damage in conjunction with the Client, ECO and Site Engineer. In serious cases, at the discretion of the Client and the ECO, any multiple offences can be added together.

The ECO, after consultation with the Client, may also stop the works or part thereof until the situation is resolved. Please note that no extension of time is claimable by the contractor for such work stoppages due to non-compliance with the EMP. These penalties furthermore do not preclude any prosecution under any law or regulation. This set of procedures must be brought to the attention of and understood by all relevant on-site personnel during the Environmental Awareness Training Course.

12.2. Environmental Control Sheets

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

Table 4: *Environmental Control Sheet*

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
PRE-CONSTRUCTION				
Procurement	EA and EMP to be distributed to contractor at tender stage to include costing incurred due to compliance with EA and EMP. METHOD: Distribute with tender documents.	As required	Contractors are aware of requirements in terms of NEMA and can budget accordingly.	Developer | Project Manager
Environmental File	To include EA, EMP, site diary, public complaints section. To be updated on a regular basis. Public complaints register kept on site at all times. METHOD: Issue all applicable documents to site manager.	As required	Construction team(s) and general public can access relevant information if and when required.	ECO | Project Manager
Environmental Awareness Training and Induction	All contractors to attend briefing prior to commencement of site works. Register to be signed as proof of attendance. METHOD: Briefing to be undertaken by project manager and/or ECO.	As required	Construction team(s) informed of all requirements in terms of EMPr and EA.	ECO | Project Manager
Method Statements	Contractors to submit MS seven working days prior to commencement on site. MS to contain clear methods for pollution control measures during construction including hazardous waste, run-off, general waste, etc. METHOD: Request for method statements to be contained in tender documents.	As required	ECO and project manager to be well informed in terms of methods for construction.	Contractor
Site Demarcation and No-Go Areas	Site survey and pegging; site demarcation and fencing — mark construction areas; all other areas are No-Go. Access roads for construction vehicles to be clearly indicated. Buffer areas to be indicated and demarcated as No-Go. Review of specialist input to familiarise with mitigation measures. METHOD: Demarcation methods to be undertaken as outlined in EMPr; to be semi-permanent and checked regularly.	As required; repeated if demarcations shift or are disturbed.	A well-demarcated site with clearly defined No-Go areas and construction zones.	ECO | Project Manager | Contractor
CONSTRUCTION — GENERAL				

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
Construction Traffic	All construction vehicles to use cover sheeting. Maximum speed to be enforced. Movement limited to approved haul and access routes. Access off Church Road to be designed to local and provincial guidelines with adequate sight distances. A 4-way stop to be implemented at the R311/Access 1 intersection. Internal road surface width minimum 6.0 m. Surfaced sidewalk to be provided along at least one side of the 13 m Class 5 Local Street. Off-street parking per Swartland Municipality Land Use Planning By-law. METHOD: Monitored by ECO, project manager, and construction team leaders.	Duration of construction	Safe working environment with minimal impact on No-Go areas, minimal dust, minimal load loss, and minimal public impact.	Project Manager | Contractor
Emergency Protocol	Staff to be aware of actions in the event of a natural or medical emergency. Applicable Health and Safety required in terms of OH&S Act. METHOD: OH&S officer to be appointed; appropriate signage to be implemented.	Duration of construction	A safe working environment with minimal incidences.	Project Manager | Contractor
Fire	Fire management recommendations to be implemented. Required firefighting equipment available on site and in working order. No open fires lit on site without approval of ECO and Site Manager. METHOD: Checked by ECO and project manager; implemented by contractor.	Duration of construction	Safe working environment. Action plan in the event of a fire.	Project Manager | Contractor
Contractor's Camp	Camp located at the most suitable site as identified by ECO and Site Manager, preferably in areas to be developed or already transformed. Suitable toilet facilities provided for all staff. Ablutions restricted to facilities provided. Toilets to be kept hygienic and emptied regularly. Freshwater specialist recommendations to be implemented. METHOD: Site determined with project manager and ECO; serviced and cleaned regularly.	Duration of construction	A well-placed and functional contractor's camp to minimise impacts on other areas on site.	Project Manager | Contractor
Topsoil Removal and Stockpiling	Topsoil replaced immediately after works where required. Topsoil from direct work areas to be stockpiled separately from subsoil and reused as far as possible. Stockpiles to be suitably shaped to prevent	Duration of construction	Reusable soil stockpiles to facilitate rehabilitation of the site.	Project Manager | Contractor

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	leaching of nutrients and dispersal by wind or rain. Stockpiles to be monitored for dispersal. METHOD: Implement conditions outlined in EMPr for stockpiling and topsoil removal.			
Earthworks	Works to be restricted to construction area only. Heavy machinery operators to be under constant supervision particularly at onset of works. Excessive movement of heavy machinery to be avoided in areas of environmental sensitivity or high erosion potential. Trenching to be undertaken in a phased manner. Fill material to be replaced in same work area and compacted to its approximate original density. Seasonal construction in the northern soil profile should be restricted to dry periods to avoid soil pumping and subgrade failure. METHOD: Construction zone clearly demarcated; operators briefed prior to works.	Duration of construction	Minimal disturbance to sensitive zones and vegetation.	Project Manager | Contractor | ECO
Material Handling, Dispatching and Storage	Fuels and hazardous materials to be stored in suitably equipped storage areas in the contractor's camp and approved by ECO. Strict measures for use and storage of hazardous materials on site. Disposal to licensed facility only. Areas to comply with fire safety requirements. Impervious materials to be used to prevent contamination of the ground. Construction materials spilled on roads to be immediately cleaned. No storage other than contractor's camp. METHOD: Undertake regular inspections of areas and procedures.	Duration of construction	Minimal disturbance to sensitive zones including non-perennial drainage line. Minimal incidences.	Project Manager | Contractor
Waste Management	All waste to be stored in an appropriate contained area on site, protected against wind, rain, and animal dispersal. Waste to be removed on a weekly basis for disposal at a permitted disposal site. No burning or burying of refuse on site. Eating areas must be demarcated and provided with suitable refuse collection areas. Construction-related general and hazardous waste may only be disposed of at	Duration of construction	A clean waste collection point serviced on a regular basis.	Project Manager | Contractor | ECO

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	suitably approved waste disposal sites. METHOD: Waste areas to be wind and weatherproof and emptied regularly.			
Construction Wastewater	No contaminated water to be allowed to seep into the ground or run off the construction site. All runoff from batching plants, work areas, and mixer washings to be contained in sedimentation ponds, suitably lined. Ponds must be allowed to dry out regularly; solid waste removed and disposed of at a site approved by the local authority. METHOD: Wastewater areas to be suitably designed and inspected regularly.	Duration of construction	A clean site post-construction.	Project Manager | Contractor | ECO
Maintenance of Equipment	All mechanical equipment and work vehicles to be stored, serviced, and refuelled at designated areas in contractor's camp. Major services to take place off site. Drip trays or impervious materials to be used to prevent contamination of ground. METHOD: Regular inspections undertaken.	Duration of construction	A clean site post-construction.	Project Manager | Contractor | ECO
Stormwater	Suitable measures must be in place to prevent erosion resulting from diversion, restriction, or increase in stormwater runoff. Measures must prevent stormwater from flowing from excavated areas or stockpiles. Stormwater containing harmful substances to be contained and removed from site. No direct or untreated stormwater discharge into watercourses; runoff to be managed through vegetated swales, detention ponds, and flow dissipaters. Post-development peak discharge must not exceed pre-development flow rates. METHOD: Regular inspections undertaken.	Duration of construction	A clean site post-construction, avoiding additional impact on surrounds.	Project Manager | Contractor | ECO
Erosion	Stormwater channels to be kept clear from soil and debris. Erosion or stormwater damage to be suitably repaired. Suitable stabilisation measures to be implemented wherever works are taking place. Stormwater infrastructure to incorporate sediment traps and debris grates; all systems to be monitored for erosion and siltation after heavy	Duration of construction	A clean site post-construction, avoiding additional impact on surrounds.	Project Manager | Contractor | ECO

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	rainfall events. Where erosion is detected, suitable mitigation to be employed as soon as possible. METHOD: Regular visual inspections undertaken.			
Dust	Sand stockpiles to be covered with hessian, shade cloth, or DPC plastic and kept in sheltered areas. Water dampening measures or cessation of activities during high wind conditions. Vehicles must not exceed 40 km/h along gravel roads. If roads generate unacceptable dust levels, suppression measures to be introduced. METHOD: Areas and activities of possible dust generation to be inspected regularly.	Duration of construction	A clean site post-construction, avoiding additional impact on surrounds and on the general public.	Project Manager | Contractor | ECO
Site Clean-up and Rehabilitation	All structures, equipment, materials, and facilities to be removed from site on completion. Construction site to be cleared and cleaned to the ECO's satisfaction. Site rehabilitation to be conducted in line with recommendations herein. No waste or remaining materials to be buried on site. All AIPS listed under the amended AIPS Lists (DFFE: GN1003, 2020) must be removed or controlled on land under the management of the proponent. An AIPS control plan must be compiled which includes measures to control and prevent the proliferation of AIPS during the construction phase. METHOD: Inspected upon site closure or suspension of works.	Duration of construction	A functional ecosystem post-construction, suitably rehabilitated as required.	Project Manager | Contractor | Applicant | ECO
Alien Vegetation Clearing	An AIPS control plan must be compiled which includes measures to control and prevent the proliferation of AIPS during both the construction and operational phases. All AIPS listed under the amended AIPS Lists (DFFE: GN1003, 2020) must be removed or controlled. Special care must be taken with the removal of White Poplar (Populus alba) near the Krom River to ensure it does not enter the river system. Regular monitoring of alien plant regrowth during and after the construction phase. Adaptive management practices to be	Construction and post-construction	Long-term ecological integrity. Site remains free of Category 1 and 2 invasive species, with a focus on eradication of White Poplar from the Krom River system.	Project Manager | Applicant | Contractor | ECO

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	applied to address emerging issues. METHOD: Regular monitoring by ECO with adaptive management approach.			
CONSTRUCTION — BOTANICAL AND ECOLOGICAL (APP G1)				
Botanical Assessment	All construction must be done in accordance with the approved EMPr. A suitably qualified ECO must be appointed to monitor the construction phase. The layout of the development footprint must take the sensitivity of the Krom River into account and establish a suitable ecological corridor along this river system. The olive trees (Olea europaea) at the foot of the small hill should be considered for replanting into green belts or gardens. All listed alien invasive tree species (Acacia mearnsii, Melia azedarach, Populus alba) must be removed from the site. Special care must be taken with White Poplar removal to ensure it does not enter the river system. Lay-down areas and construction sites must be located at least 30 m away from the Krom River corridor. The hill crest is to be rehabilitated as a public Hill Park featuring Renosterveld species and indigenous vegetation.	Construction and post-construction	No net loss of critically endangered Swartland Shale Renosterveld outside the already transformed development footprint. Long-term ecological integrity of the Krom River corridor maintained.	Project Manager | Applicant | Contractor | ECO
CONSTRUCTION — GEOTECHNICAL (APP G2)				
Site Preparation and Subgrade Management	Trial Pit Remediation: All trial pits must be identified and loose backfill replaced with sand compacted to at least 95% mod AASHTO dry density to prevent soft spots. Vegetation Removal: Strip all grass and fynbos including roots to an average depth of 75–100 mm.	Duration of construction	Stable subgrade conditions throughout the development. Infrastructure integrity maintained.	Project Manager | Contractor

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	Compaction Requirements: Subgrade for all internal roads to be compacted to a minimum of 95% of mod AASHTO maximum dry density to ensure G9 quality. Seasonal Construction: In the Northern Soil Profile, construction to be restricted to dry periods to avoid soil pumping and subgrade failure due to high moisture levels.			
Subsurface Drainage	Southern Profile: Installation of toe drains where the contact between coarse surficial soils and impermeable bedrock is exposed in cuttings. Northern Profile: Conventional fin-type subsurface drainage must be installed adjacent to all roads with inverts placed at or below 0.9 m to intercept the perched water table. Spring Management: Formal surface and subsurface drainage measures must be implemented to control and direct existing spring flows.	Duration of construction	Road infrastructure integrity secured against seasonal waterlogging. Subsurface drainage stability maintained.	Project Manager | Contractor
Slope Stability and Engineering	Temporary cut batters for excavations between 1.0 m and 1.5 m: 1:0.5 batter in the Southern Profile; 1:1 batter in the Northern Profile. Permanent cut slopes: battered at 1:1. Embankments: battered at 1:2. All permanent slopes must be vegetated and protected against concentrated stormwater runoff. Quality control to be maintained through nuclear densimeter testing and supplementary mod compaction laboratory tests.	Duration of construction	Stable slopes and road infrastructure. Permanent vegetated slopes prevent erosion.	Project Manager | Contractor
CONSTRUCTION — HERITAGE AND VISUAL IMPACT (APP G3, G11)				
Heritage and Visual Controls	Development Cut-off: Strictly enforce the No-Go area for all development above the 170 m contour line to protect the topographical green frame of the town.	Construction and post-construction	Ridgeline of Riebeek Kasteel maintained. Dutch Reformed Church steeple remains the dominant visual	Developer | Project Manager | Contractor

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	Hill Park: Establish the hill crest as a public park featuring Renosterveld species and public pedestrian paths. Sightline Preservation: Protect the primary view cone from the R311 toward the Dutch Reformed Church steeple through the strategic placement of parklands and wetland areas. Transitional Edges: The western boundary along the R311 to be reimagined as a transitional zone using agricultural building typologies, werf walls, and olive groves to soften the urban-rural interface. Grid Alignment: Align the development layout with the historic town grid to complete fragmented town blocks and ensure the project reads as a continuation of the town. The Grade IIIA historic fountain (well) must be preserved in situ and integrated into a publicly accessible, vegetated setting.		anchor. Residual visual significance rated Moderate.	
CONSTRUCTION — URBAN DESIGN AND ARCHITECTURE (APP G4, G5)				
Spatial Integration and Grid Alignment	Align all new residential plots with the existing town grid to complete fragmented blocks and maintain the town original grain. Concentrate higher-intensity mixed-use and commercial components on the northern portion adjacent to the town centre; lower-intensity single residential units on the southern slopes. Establish five pedestrian access points from the north and east to create a continuous route from the town centre to The Barn and the hilltop. Limit vehicular access from Church Street to service the retail and resort components only; no through-vehicular access to Fontein Street is permitted.	Construction and post-construction	Development functions as a seamless extension of the town fabric. Pedestrian priority established.	Developer | Project Manager

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
Architectural Design Parameters	Height Restrictions: Hilltop dwellings capped at 3.2 m above base level. Hillside wall plates limited to 4.5 m with 8.0 m roof apex. Mixed-use wall plates limited to 5.5 m. Retirement village wall plate limited to 3.5 m with 6.0 m roof apex. Core Buildings: Primary dwellings expressed as rectangular barn forms not exceeding 150 m2 per volume, joined by secondary linking elements. Colour Palette: Wall colours to be natural earth tones (sage or sandy hues); brilliant whites, intense blacks, and vivid colours are prohibited. Roofing: Permitted materials include dark charcoal steel sheeting (Clip-lok or S-profile) or dark grey flat concrete tiles. Thatch and clay tiles are prohibited. Mandatory verandas or stoeps (minimum 50% of street facade) required for all residential zones. Street-facing boundary walls restricted to 1.2 m and must be visually permeable. Lateral or rear walls limited to 1.8 m. Vibracrete, PVC, and bagged brickwork are strictly prohibited. All A/C units, geysers, heat pumps, and satellite dishes must be integrated into the structure and concealed from street view. Lighting limited to 3.0 m bollard types with fully shielded fixtures and a maximum of 3000 Kelvin. Private security floodlighting to be motion-regulated. All building plans must be endorsed by the Design Review Committee (DRC) prior to municipal submission.	Construction and post-construction	Architectural homogeneity preserved. Structures act as recessive background to the historic town.	Developer | Project Manager | DRC
Landscape Implementation	Implement the March 2026 Planting List, utilising a mix of indigenous Renosterveld species and traditional cultural species (e.g., Oaks) to blend the development into the townscape.	Prior to each subsequent phase	Vegetation established prior to subsequent phases. Long-term	Developer | Project Manager | ECO

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	The primary landscaping for each phase must be completed and vegetation established before subsequent building phases proceed. Integrate the stormwater retention system into a Wetland Park following natural drainage patterns. Tree Plan: Trees both on-site and adjacent need to be mapped to ensure their conservation and incorporation into the development.		landscape maintenance integrated into scheme.	
CONSTRUCTION — TRAFFIC AND ACCESS (APP G6)				
Traffic and Intersection Management	Intersection 7 (R311/Access 1): Must be 4-way stop-controlled to mitigate the 75 m northbound sight distance limitation and serve as a speed deterrent. Intersection 2 (Main Street/Maree Street): Establish a fourth leg from the south to accommodate Access 2. Intersection 5 (Fontein Street/Access 3): Establish a third leg from the west to accommodate Access 3. Intersection 6 (Fontein Street/Kloof Street): Extend Kloof Street westwards to form a third leg for Access 4. Four primary access points to be established, each featuring one entry and one exit lane. All internal access roads to have a minimum road surface width of 6.0 m. New sidewalks to be constructed throughout the development and linked directly to the existing Riebeek Kasteel CBD sidewalk network. On-site refuse removal to be integrated into the development operational plan. Parking provision to strictly adhere to the requirements of the Town Planning Scheme.	Pre-construction and construction	Safe vehicular access at the R311/Access 1 intersection. Pedestrian priority established via sidewalks linking to the CBD.	Developer | Project Manager | Contractor
CONSTRUCTION — AGRICULTURAL COMPLIANCE (APP G7)				

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
Agricultural Impact	The most effective mitigation for agricultural impact is the avoidance of viable croplands; this project has fulfilled this requirement by selecting a site that lacks viable arable potential. No specific mitigation measures or monitoring requirements are necessary for the protection of agricultural production potential. The recommendation for approval from an agricultural perspective is not subject to any conditions.	Not applicable	Development assessed as low significance from an agricultural perspective. No net loss of viable agricultural land.	Developer
CONSTRUCTION — AQUATIC BIODIVERSITY (APP G8)				
Buffer Implementation	Mandatory buffer areas must be established and maintained: 15-20 m for seep wetlands; 10 m for above-ground sections of the Krom River. Buffer areas must be incorporated into Private Open Space Zone 2 for long-term management. Buffer areas to be landscaped with indigenous vegetation and monitored monthly for health and AIPS colonisation.	Pre-construction; maintained throughout	Aquatic resources protected from edge effects. Buffer functionality maintained for long-term management.	Developer | ECO | HOA
No-Go Area Demarcation	The functional portions of Seep Wetland 2 and the Krom River must be strictly demarcated as No-Go Areas during construction to prevent equipment storage, stockpiling, or non-essential activities within sensitive zones. Encroachment is strictly limited to approximately 100 m2 of the already degraded lower portion of Seep Wetland 1 to accommodate essential road infrastructure.	Pre-construction; maintained throughout	Complete avoidance of Seep Wetland 2 and the Krom River corridor. Permanent habitat loss limited to a maximum of 100 m2.	Project Manager | ECO | Contractor
Hydrological Connectivity	Post-development throughflow from Seep Wetland 1 must be facilitated via indigenous vegetated earthen swales connecting to the Krom River to maintain habitat and hydrological connectivity.	Post-construction; maintained throughout	Post-development throughflow from Seep Wetland 1 to the Krom River sustained.	Developer | Contractor | ECO
Aquatic Stormwater and Sediment Control	No direct or untreated stormwater discharge is permitted into watercourses. Runoff to be managed through vegetated swales,	Duration of construction	No untreated stormwater enters the Krom River. Water quality	Project Manager | Contractor | ECO

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	detention ponds, and flow dissipaters to ensure diffuse, treated release. Post-development peak stormwater discharge must not exceed pre-development flow rates; on-site attenuation system to have a minimum storage capacity of 991 m3. Stormwater infrastructure to incorporate sediment traps and debris grates. All systems to be monitored for erosion and siltation after heavy rainfall events.		maintained. Peak discharge does not exceed pre-development rates.	
Sanitation Safety and Emergency Containment	Development to connect to the municipal mainline or utilise fully contained conservancy tanks. No on-site sewage treatment, irrigation with effluent, or soak-aways are permitted. Manholes located upslope of watercourses must include emergency storage or bunded containment to provide a two-hour peak flow buffer in the event of a surcharge.	Pre-construction (connection); duration of construction	Sanitation safety maintained. No risk of untreated sewage discharge into sensitive watercourses.	Developer | Project Manager | Contractor
HOA Operational Oversight	The Homeowners Association (HOA) must implement a long-term management plan that includes monthly monitoring of buffer health, control of AIPS, and managed community access to the spring areas to prevent further degradation. A formal groundwater impact assessment must be conducted as part of the Water Use Authorisation (WUA) process.	Monthly (operational phase)	Long-term management plan implemented. Groundwater assessment completed as condition of EA.	HOA | Developer
CONSTRUCTION — ARCHAEOLOGICAL IMPACT (APP G10)				
Archaeological Protocol	No further archaeological mitigation or monitoring is required during construction phase excavations. Accidental Discovery Protocol: If any buried human remains or significant archaeological resources are uncovered during construction, works must stop immediately. The project archaeologist	Duration of earthworks	No significant archaeological resources destroyed. Heritage resource protection maintained.	Project Manager | Contractor

SUBJECT	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY
	(J. Kaplan, 082 321 0172) and Heritage Western Cape must be notified before any further disturbance. No remains or graves are to be disturbed until inspected and cleared by the archaeologist.			

13. ENVIRONMENTAL DECLARATION OF UNDERSTANDING FOR THE EMP

The purpose of the Environmental Declaration of Understanding agreement between the Applicant / Client, the Engineer, Contractor and the ECO is;

→ To enforce agreement on compliance by all relevant Parties with the DEA&DP Environmental Authorisation & this Environmental Management Plan.
→ To maintain proof of such an agreement pertaining to the onsite requirements of the EMP
→ To spell out the Applicant's responsibility to inform all relevant parties of the DEA&DP Environmental Authorisation & EMP (as per condition of DEA&DP Environmental Authorisation).
→ To protect the environment of the site against environmental damage.
→ To make good any damage to the environment.
→ Ensure that all contractors and sub-contractors are familiar with the EMP & DEA&DP Environmental Authorisation and sign the mandatory Declaration of Understanding indicating their undertaking to work within the management framework to achieve the environmental requirements pertaining to the site as contained in the EMP.

This agreement outlines the obligations on the various parties and forms the basis for the ECO to ensure compliance by all parties with the EMP.

14. RESPONSIBILITY OF THE CLIENT (as the Applicant)

The Client must be responsible for ensuring compliance with the conditions contained in the DEA&DP Environmental Authorisation by any person acting on his behalf, including but not limited to an agent, servant, employee or any person rendering a service to the Client in respect of the activity, including but not limited to contractors and consultants.

The Client is responsible for appointing the ECO, Site Engineer and Contractor for the duration of the construction contract and for ensuring that the Site Engineer and Contractor fulfil their obligations in terms of this EMP. The Client and or its representative must notify DEA&DP and any other relevant authority, in writing, within 24 hours thereof if any condition of this DEA&DP Environmental Authorisation is not adhered to.

15. THE SITE ENGINEER / SITE MAIN CONTRACTOR

The Site Engineer/Site main contractor (whichever is applicable) is responsible for ensuring that the construction contract and daily construction activities as per the original site specifications are implemented in terms of the Construction Phase Environmental Management Plan which includes additional OSSM agreements.

The Site Engineer/Site main contractor (whichever is applicable) and the ECO are expected to develop a close working relationship and to stay in contact with each other. The Site Engineer issues site instructions to the Contractor and all requests and communications between the ECO and Contractor are via the Site Engineer. The only exception to this is where the ECO needs to issue a "stop works" order on the Contractor or the Site Engineer if serious environmental harm is about to happen or is happening as a result of construction activity. This "stop-works-order" must be confirmed by the ECO as soon as practically possible to all affected construction personnel.

When the ECO is not on site the Site Engineer (assisted by the ESO) will be responsible for implementation of the EMP. Any construction related activities that might lead to damage to the environment should be immediately brought to the attention of the ECO and must be recorded on the Environmental Weekly Checklist (see **Appendix 4**) by the Site Engineer or the appointed engineer's representative (ESO).

16. THE CONTRACTOR

The Contractor must ensure that all of its sub-contractors, employees, suppliers, agents, etc., are fully aware of the environmental issues detailed in the site EMP. The Contractor must liaise closely with the Site Engineer and the ECO and must ensure that the works on site are conducted in an environmentally sensitive manner and fully in accordance with the requirements of the EMP at all times.

Main bulk service providers such as Telkom and Eskom must be advised of the construction activities as well as the requirements of this EMP and the Contractor must be responsible for their activities conducted within their work areas. All contractors working on site must attend the Environmental Awareness Training Course and have proper and competent contractor supervision during their time of contract. If more than one contractor works on the site simultaneously, then the responsibility lies on each contractor to adhere to the conditions of the EMP and related documents for the duration of the contract.

The supervisors must work closely with the appointed environmental officer and discuss the daily programme with the appointed environmental officer, taking special consideration of any specific method statement requirements. Any problems that might lead to damage to the environment must be discussed prior to commencement of the activity.

The ECO must ensure that the Contractor has signed a "Declaration of Understanding" of this environmental management plan before construction commences.

17. AUTHORITY OF THE ECO

The ECO has the authority to stop works if in his/her opinion there is a serious threat to, or impact on the environment, caused directly by the construction operations. This authority is to be limited to non-compliance to the EMP and emergency situations where consultation with the Client is not immediately available. The ECO is to inform the Client of the reasons for the stoppage and agree on a solution to the problem as soon as possible.

Upon failure by the contractor or his employee to show adequate consideration to the environmental aspects of this contract i.e. wilful destruction of the environment, the ECO may recommend to the Client/site representative to have the contractor's representative, or any employee(s) removed from the site or work suspended until the matter is remedied. No extension of time will be considered in the case of such suspensions, and all costs will be borne by the contractor.

18. ENVIRONMENTAL COMPLETION STATEMENT

An Environmental Completion Statement is a report by the ECO/Environmental Consultant to the relevant authorities stating completion of the project and compliance with the EMP and conditions. The following environmental statements may be required to be completed on completion of all site construction activities and submitted in line of sequence to the relevant office for perusal and reference. The required completion statements must be discussed and agreed upon at the OSSM.

18.1. ECO: Environmental Completion Statement:

The ECO must submit an environmental closing statement relating to all environmental and technical issues that occurred on site as well as any conclusions regarding incidents such as written warnings, stoppages of works and penalty fines.

19. ENVIRONMENTAL AUDITS

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

The objective of the environmental audit report is to:

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

An environmental audit report should contain the following:

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

20. CONCLUSION

An EMP has been developed as part of the Basic Assessment process to ensure that mitigation and management measures are enforced during the construction phase of the development, and that the conditions of the EA are upheld. The EMP should guide all phases of the project to minimize possible negative impacts and assign responsibility for environmental controls. The EMP provides a tool to recognise the needs of the environment and is intended to be utilised in conjunction with the Environmental Authorisation.

APPENDIX 1
MANAGEMENT DECLARATIONS

ERF 878 RIEBEEK KASTEEL — DECLARATIONS

Method Statement Sign-Off | EMPr Reference Document

1. ENVIRONMENTAL CONSULTANT AND/OR ENVIRONMENTAL CONTROL OFFICER

The work described in this Method Statement, if carried out according to the methodology described, is satisfactorily mitigated to prevent avoidable environmental harm:

_____	_____
(Signed)	*(Print name)*

_____	_____
(Signed)	*(Print name)*

Dated: _____

2. PERSON UNDERTAKING THE WORKS

I understand the contents of this Method Statement and the scope of the works required of me. I further understand that this Method Statement may be amended on application to other signatories and that the ECO will audit my compliance with the contents of this Method Statement.

_____	_____
(Signed)	*(Print name)*

Dated: _____

3. THE CLIENT

The works described in this Method Statement are approved.

_____	_____	_____
(Signed)	*(Print name)*	*(Designation)*

Dated: _____

APPENDIX 2
ENVIRONMENTAL CHECKLIST FOR CONTRACTOR

ERF 878 RIEBEEK KASTEEL — ENVIRONMENTAL CHECKLIST FOR CONTRACTOR

To be completed weekly by the contractor and submitted to the Environmental Site Officer (ESO)

Site: _____

Phase of work and % of completion: _____

Date of inspection: _____

ENVIRONMENTAL ASPECT	YES / NO	COMMENTS / OBSERVATIONS
SITE AND CAMP CONDITIONS		
How many workers are on site?		
All new personnel on site are aware of the contents of the EMPr and have been through the environmental awareness course.		
Contractor's camp is neat and tidy and the labourers' facilities are of an acceptable standard.		
Sufficient and appropriate firefighting equipment is visible and readily available.		
Waste control and removal system is being maintained.		
Refuse bins are in place and maintained.		
Toilets are in place and clean.		
Demarcation and other fences are being maintained.		
EQUIPMENT AND SPILL PREVENTION		
What machinery is on site?		
Drip trays are being utilised where there is a risk of incidental spillage.		
Bunds/drip trays are being emptied on a regular basis (especially after rain).		
No leakages (oil and fuel) are visible from construction vehicles.		

ENVIRONMENTAL ASPECT	YES / NO	COMMENTS / OBSERVATIONS
No-Go areas, remaining natural features, and trees have not been damaged.		
ENVIRONMENTAL CONTROLS — GENERAL		
Dust control measures (if necessary) are in place and are effectively controlling dust.		
Noise control measures (if necessary) are in place and are working effectively.		
Erosion control measures (if necessary) are in place and are effective. (Access road, site areas, etc.)		
Stockpiles are located within the boundary of the site, do not exceed 2 m in height, and are protected from erosion.		
AQUATIC AND ECOLOGICAL NO-GO COMPLIANCE		
No-Go buffer areas around the Krom River (10 m) and seep wetlands (15–20 m) are clearly demarcated and undisturbed.		
No construction activities, equipment storage, or stockpiling has occurred within the demarcated No-Go areas.		
No direct or untreated stormwater discharge is occurring into the Krom River or seep wetland areas.		
Sediment traps and stormwater controls are in place and functioning.		
No evidence of sewage or grey water discharge outside of designated sanitation facilities.		
Alien invasive plant species (especially White Poplar near the Krom River) have not been disturbed or spread during works.		
HERITAGE, VISUAL AND ARCHITECTURAL COMPLIANCE		
No construction activity is occurring above the 170 m–175 m contour line (No-Go area).		
The view corridor from the R311 toward the Dutch Reformed Church steeple is unobstructed by temporary structures, signage, or stockpiles.		
All building plans and structures being erected have been endorsed by the Design Review Committee (DRC) prior to construction.		
The historic fountain (well) on site has not been disturbed or damaged.		
GEOTECHNICAL AND ARCHAEOLOGICAL COMPLIANCE		
Slope batters comply with geotechnical requirements (1:0.5 southern profile; 1:1 northern profile for temporary cuts).		

ENVIRONMENTAL ASPECT	YES / NO	COMMENTS / OBSERVATIONS
Subsurface drainage installation is proceeding in accordance with the geotechnical report requirements.		
Any accidental discovery of human remains or archaeological artefacts has been reported immediately to the project archaeologist and work stopped in that area.		

Completed by:	_____	**Sign:**	_____
Date:	_____		

To be submitted at the end of each week to the Environmental Site Officer (ESO).

Received by (ECO):	_____	**Sign:**	_____
Date:	_____		

APPENDIX 3
ENVIRONMENTAL CHECKLIST FOR ECO

ERF 878 RIEBEEK KASTEEL — ECO SITE VISIT CHECKLIST

For use by the appointed Environmental Control Officer (ECO) during construction phase site visits

Site: _____

Date of visit: _____

Phase of work and % of completion: _____

Previous visit date: _____

ECO name: _____

ENVIRONMENTAL ASPECT	COMPLIANT (Y/N)	OBSERVATIONS / NON-CONFORMANCE	ACTION REQUIRED / FOLLOW-UP
PRE-CONSTRUCTION AND ADMINISTRATIVE COMPLIANCE			
The Environmental File is present on site and contains the EA, EMPr, site diary, and public complaints register.			
The Environmental File has been updated since the last ECO visit.			
Proof of environmental awareness training and induction is on file; register has been signed by all current site personnel.			
All required Method Statements have been submitted at least seven working days prior to commencement of the relevant works.			
Method Statements have been reviewed and approved by the ECO prior to implementation.			
The appointed OH&S officer is on site and the required Health and Safety documentation is in place.			
No new personnel have commenced work on site without completing the environmental awareness induction.			
The contractor has been briefed on all No-Go areas, buffer zones, and specialist mitigation requirements applicable to the current phase of work.			
SITE DEMARCATION AND NO-GO AREAS			

ENVIRONMENTAL ASPECT	COMPLIANT (Y/N)	OBSERVATIONS / NON-CONFORMANCE	ACTION REQUIRED / FOLLOW-UP
All construction zone boundaries are clearly pegged, fenced, and demarcated.			
No-Go area demarcations are intact, visible, and have not been disturbed since the last ECO visit.			
No construction activity, equipment storage, or stockpiling has occurred outside the approved construction footprint.			
Access routes for construction vehicles are clearly indicated and are being used correctly.			
Buffer areas around sensitive features (Krom River: 10 m; seep wetlands: 15–20 m) are demarcated and undisturbed.			
No construction activity is occurring above the 170 m–175 m contour line (No-Go area).			
CONTRACTOR'S CAMP AND SITE CONDITIONS			
Contractor's camp is located within the approved area as identified by the ECO and Site Manager.			
Camp is neat, tidy, and labourers' facilities meet an acceptable standard.			
Toilet facilities are present, sufficient in number, clean, and being emptied regularly.			
Eating and ablution areas are demarcated and provided with sufficient refuse collection points.			
No evidence of open burning or burying of refuse on site.			
Appropriate firefighting equipment is present, visible, and in working order.			
EQUIPMENT, MACHINERY, AND SPILL PREVENTION			
All mechanical equipment and vehicles are being stored, serviced, and refuelled within the designated contractor's camp area.			
Drip trays are in place under all plant and equipment where there is a risk of incidental spillage.			
Drip trays and bunded areas have been emptied and are in acceptable condition.			
No visible oil or fuel leaks from construction vehicles or machinery.			

ENVIRONMENTAL ASPECT	COMPLIANT (Y/N)	OBSERVATIONS / NON-CONFORMANCE	ACTION REQUIRED / FOLLOW-UP
Hazardous materials (fuels, lubricants, chemicals) are stored in clearly marked, impervious-floored storage areas.			
No hazardous materials are stored outside the approved contractor's camp storage area.			
No contaminated water or construction wastewater is being discharged to ground or watercourses.			
Sedimentation ponds or wastewater containment are in place and functioning.			
WASTE MANAGEMENT			
Waste is being stored in contained, weather-protected areas and is not dispersing across the site.			
Waste has been removed from site within the required weekly timeframe for disposal at a permitted facility.			
Construction waste is being sorted and disposed of at appropriately licensed facilities only.			
No waste, rubble, or excess materials have been buried on site.			
EARTHWORKS, TOPSOIL, AND STOCKPILES			
Earthworks are confined strictly to the approved construction zone.			
Heavy machinery movements in areas of environmental sensitivity or high erosion potential are being supervised.			
Topsoil has been stripped and stockpiled separately from subsoil for later reuse.			
Stockpiles do not exceed 2 m in height, are located within the site boundary, and are protected from wind and rain dispersal.			
In the northern soil profile, construction is being restricted to dry periods to avoid subgrade failure.			
Trial pit backfill has been replaced with compacted sand to prevent soft spots.			
Compaction testing (nuclear densimeter) is being conducted and records are available.			
STORMWATER, EROSION, AND DUST			

ENVIRONMENTAL ASPECT	COMPLIANT (Y/N)	OBSERVATIONS / NON-CONFORMANCE	ACTION REQUIRED / FOLLOW-UP
Stormwater channels and drainage infrastructure are clear of debris and functioning correctly.			
Stormwater diversions and cut-off drains are in place to prevent runoff from entering sensitive areas.			
Erosion or stormwater damage has been repaired promptly since the last ECO visit.			
Sediment traps and debris grates are installed upstream of all discharge points and are being maintained.			
No untreated or sediment-laden stormwater is entering the Krom River or seep wetland areas.			
Dust suppression measures are in place and operational; vehicles are not exceeding 40 km/h on gravel roads.			
Sheet runoff from hardened surfaces is being intercepted and treated prior to discharge.			
Subsurface drainage (fin drains) is being installed in the northern soil profile adjacent to roads as required.			
AQUATIC AND ECOLOGICAL COMPLIANCE			
The Krom River corridor is undisturbed and the 10 m buffer is intact.			
Seep Wetland 1 remnant and its 15–20 m buffer are intact and undisturbed, except for the approved 100 m² road encroachment area.			
Seep Wetland 2 is completely avoided and its No-Go demarcation is intact.			
Indigenous vegetated earthen swales connecting Seep Wetland 1 to the Krom River are being established as required.			
Lay-down areas and construction sites are located at least 30 m away from the Krom River corridor.			
The development is connected to the municipal mainline for sewage; no on-site sewage treatment or soak-aways are present.			
Manholes located upslope of watercourses are equipped with emergency containment.			

ENVIRONMENTAL ASPECT	COMPLIANT (Y/N)	OBSERVATIONS / NON-CONFORMANCE	ACTION REQUIRED / FOLLOW-UP
No evidence of accidental pollution (fuel, cement, concrete washings) near watercourses.			
ALIEN INVASIVE PLANT SPECIES (AIPS)			
An AIPS control plan has been compiled and is being implemented.			
All Category 1 and 2 alien invasive species are being removed and controlled on land under the proponent's management.			
White Poplar (Populus alba) removal near the Krom River has been conducted carefully to prevent spread into the river system.			
No new alien invasive plant species have been identified on site since the last ECO visit. Any new occurrences have been recorded and actioned.			
Olive trees (Olea europaea) identified for conservation have been retained or replanted in green belts or gardens as agreed.			
BOTANICAL AND VEGETATION MANAGEMENT			
Vegetation clearing has been restricted to the approved development footprint only.			
The hill crest above the 170 m–175 m contour is being retained and rehabilitated as the public Hill Park.			
Renosterveld species and indigenous vegetation are being planted on the hill crest as per the landscaping plan.			
Landscaping for each completed phase has been established before the subsequent phase has commenced.			
The March 2026 Planting List is being implemented, including the mix of indigenous Renosterveld and traditional cultural species.			
HERITAGE, VISUAL, AND ARCHITECTURAL COMPLIANCE			
No development activity is occurring above the 170 m–175 m contour line (No-Go area). ECO to physically verify boundary marking.			
The view corridor from the R311 toward the Dutch Reformed Church steeple is unobstructed by any temporary or permanent structures.			

ENVIRONMENTAL ASPECT	COMPLIANT (Y/N)	OBSERVATIONS / NON-CONFORMANCE	ACTION REQUIRED / FOLLOW-UP
The Grade IIIA historic fountain (well) is intact and has not been disturbed or damaged.			
All building plans and structures under construction have been endorsed by the Design Review Committee (DRC) prior to commencement.			
Building heights and materials comply with the approved Architectural Design Parameters (Calibri earth tones; no brilliant whites/blacks; dark charcoal roofing).			
Boundary walls comply with requirements: street-facing limited to 1.2 m (visually permeable); side/rear limited to 1.8 m. No Vibracrete, PVC, or bagged brickwork.			
All A/C units, geysers, heat pumps, and satellite dishes are concealed from street view.			
Lighting installations comply with the 3.0 m bollard limit and 3000 Kelvin maximum colour temperature.			
TRAFFIC AND ACCESS			
The 4-way stop at the R311/Access 1 intersection has been implemented prior to any development-related traffic using this access.			
Construction vehicles are using approved haul and access routes only.			
Vehicle speeds on gravel roads do not exceed 40 km/h.			
The proposed sidewalk along the 13 m Class 5 Local Street is being constructed as required.			
Internal road surface widths of minimum 6.0 m are being maintained for safe bidirectional access.			
GEOTECHNICAL COMPLIANCE			
Slope batters comply with the geotechnical report requirements: 1:0.5 (southern profile) and 1:1 (northern profile) for temporary cuts.			
Permanent cut slopes are battered at 1:1; embankments at 1:2. All permanent slopes are being vegetated.			
Subsurface fin drainage is being installed adjacent to roads in the northern profile with inverts at or below 0.9 m depth.			

ENVIRONMENTAL ASPECT	COMPLIANT (Y/N)	OBSERVATIONS / NON-CONFORMANCE	ACTION REQUIRED / FOLLOW-UP
Toe drains are installed in the southern profile where coarse surficial soils contact impermeable bedrock.			
Formal drainage measures are in place to control and direct existing spring flows.			
Compaction testing results confirm subgrade quality meets G9 standard for all road layerworks.			
ARCHAEOLOGICAL PROTOCOL			
No significant archaeological resources or human remains have been uncovered since the last ECO visit.			
If human remains or artefacts were encountered: works were stopped immediately, the project archaeologist (J. Kaplan, 082 321 0172) and Heritage Western Cape were notified, and no further disturbance occurred prior to inspection.			
All site personnel are aware of the accidental discovery protocol and know who to contact.			
INCIDENTS AND NON-CONFORMANCES			
No environmental incidents (spills, pollution events, No-Go transgressions, fire) have occurred since the last ECO visit. If yes, confirm that incident reports have been completed.			
All non-conformances identified during the previous ECO visit have been resolved and closed out.			
The public complaints register has been reviewed; no new complaints have been received, or received complaints have been logged and addressed.			
No instructions or stop-work notices have been issued since the last ECO visit that remain unresolved.			

OVERALL COMPLIANCE STATUS FOR THIS VISIT: ☐ Satisfactory ☐ Minor Non-Conformances ☐ Major Non-Conformances ☐ Stop Work Required

ECO signature:	_____	**Sign:**	_____
Date:	_____		

Site Manager / Contractor:	_____	**Sign:**	_____
Date:	_____		

Copy to: Developer | Project Manager | Environmental File