



Environmental Management Programme

PROPOSED REZONING, CONSOLIDATION AND
SUBDIVISION FOR THE ESTABLISHMENT OF A
RESIDENTIAL DEVELOPMENT ON ERF 597, AND 598,
599, STANDFORD, CALEDON RD.

October 2026

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599, Standford, Caledon RD.

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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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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

Developer / Applicant – Bonnybrae Property Holdings Pty Ltd

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 is 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 and post-construction phase of the activity applied for. The implementation of this EMP will be a condition of approval of the Environmental Authorisation (EA). Failure by the applicant, to comply with this EMP, will therefore constitute an offence, and the applicant and / or the appointed contractors can be held liable for penalties and / or legal action. It is therefore important that a copy of this EMP be issued to each contractor, preferably at the appointment stage, in order to allow for the costs of implementing the EMP, to be included in cost proposals. This will also ensure that the contractor is aware of his responsibilities prior to appointment and commencement. Each appointed contractor involved in the project, as well as the project manager (as applicable), will be required to sign for and thereby acknowledge contents of, the approved EMP and therefore abide by the specifications of the document and any amendments thereto.

Other applicable legislation

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

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

National Environmental Management Act (Act 107 of 1998)

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

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

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

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

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

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

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

Environment Conservation Act (Act No. 73 of 1989)

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

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

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

Hazardous Substances Act (Act No. 5 of 1973)

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

National Heritage Resources Act (Act No. 25 of 1999)

This act is South Africa's primary legislation designed to establish an integrated system for the management, identification, and conservation of the nation's cultural and natural heritage.

1. INTRODUCTION

Bonnybrae Property Holdings Pty Ltd, herein referred to as the “Applicant”, has appointed Lornay Environmental Consulting (Pty) Ltd as the independent Environmental Assessment Practitioner (EAP) to apply for Environmental Authorisation in terms of the National Environmental Management Act (Act 107 of 1998) and the Environmental Impact Assessment Regulations (2014), as amended. This appointment relates to the application for environmental authorisation of listed activities associated with the Proposed Rezoning, Consolidation and Subdivision for the establishment of a residential development on Erf 597, 598, and 599, Stanford.

The Environmental Management Programme (EMPr) presented in this document is a legally binding instrument applicable to the applicant, all successors in title, and any future developers or property owners, whether they assume ownership of the whole or any portion of the development. This EMPr governs the proposed residential development on the subject properties, Erf 597, 598 and 599, as outlined in this application, including any future amendments to the approved layout or site development plan. It further extends to all property owners within the development, ensuring a consistent and enforceable framework for environmental management.

This EMPr has been prepared and submitted as part of the Basic Assessment process, in accordance with the requirements of NEMA and its associated regulations. It serves as a comprehensive guideline for managing environmental impacts during both the construction and post-construction phases of the project. The scope of the development includes the establishment of internal roads, residential erven and residential dwellings, open spaces as well as the associated infrastructure on Erf 597, 598 and 599. The document is prescriptive in nature, detailing mitigation measures and assigning specific responsibilities to individuals or organizations tasked with implementing actions during the construction and post-construction phases.

The primary objective of this EMPr is to minimise or, where possible, entirely avoid potential environmental impacts arising from the proposed development. It addresses key activities such as vegetation clearing, civil works, residential construction, rehabilitation plans and the installation of services, while promoting sustainable development practices. As a dynamic document, the EMPr is designed to be adaptable, allowing for periodic updates to reflect changing site conditions or project requirements. While it is compiled as an integral component of the Basic Assessment process, this EMPr becomes legally enforceable upon approval by the Competent Authority, Department of Environmental Affairs and Development Planning (DEADP).

Compliance with the EMPr is critical throughout the construction and post-construction phases, particularly during activities such as vegetation clearing and the installation of civil services, road construction, and residential units. Upon completion of the construction phase, a completion audit is anticipated to be required, as may be stipulated in the Environmental Authorisation (EA). This audit will verify adherence to the EMPr and ensure that all environmental management commitments have been met.

This EMPr has been drafted in strict accordance with Section 24N of the National Environmental Management Act (NEMA, Act 107 of 1998), ensuring alignment with statutory requirements and best practices in environmental management. It reflects a commitment to balancing the developmental needs of the proposed residential project with the imperative to protect and preserve the natural environment of the subject properties and its surroundings.

2. DEVELOPMENT PROPOSAL

The preferred development alternative involves the establishment of a residential estate “Walker Bay Estate” on Erf 597, 598 and 599, all of which are located within the demarcated urban edge of Stanford in the Overstrand Local Municipality. All these erven are currently zoned Residential Zone 1: Single Residential and fall within the Overstrand Urban Edge, as delineated in the approved spatial planning framework. Historically, these properties formed part of the disestablished Stanford municipal area and have for nearly 30 years formed part of a broader agricultural enterprise, with portions of the site under viticulture (vineyards) associated with the adjacent Walker Bay Winery and small-scale agricultural activities.

At present, the site comprises a combination of cultivated vineyard blocks and disturbed/degraded areas. The disturbed portions of the property, previously farmed or mechanically cleared, are now characterised by secondary vegetation dominated by kikuyu grass and alien invasive species (mainly *Acacia* spp.), with no remaining natural vegetation, rendering them suitable for urban development within the urban edge.

Rather than replacing this agricultural land use outright, the applicant's intent is to establish a low-density, agri-residential estate that consciously retains and integrates the existing vineyard blocks as a core landscape and identity feature, so that the rural, viticultural character of the Stanford “agricultural forecourt” is carried through into the developed environment rather than erased by it. This vision is informed both by the owners' brief for the site and by the findings of the Heritage Impact Assessment (HIA) Statement of Significance, which together establish a framework balancing residential development objectives against the retention and reinforcement of the site's rural and cultural landscape context. To this end, the site's retained vineyards are proposed to remain under professional cultivation, leased to and managed by Walker Bay Winery, ensuring the agricultural component remains functionally productive rather than merely decorative.

Applications Required

The following applications need to be considered for approval:

- ❖ **Rezoning** of the Consolidated Erf from Residential Zone 1: Single Residential to Subdivisional Area Zone (SA) in terms of Section 16(2)(a) of the Overstrand Municipality Amendment By-Law on Municipal Land Use Planning, 2020.
- ❖ **Subdivision** of the Consolidated Erf into seventy-three (76) Residential Zone 1: Single Residential (SR1) erven, nine (9) Open Space Zone 3: Private Open Space (OS3) erven and one (1) Transport Zone 2: Road and Parking (TR2-A) erf in terms of Section 16(2)(d) of the Overstrand Municipality Amendment By-Law on Municipal Land Use Planning, 2020.
- ❖ **Consent Use** to allow urban agriculture in terms of Section 16(2)(o) of the Overstrand Municipality Amendment By-Law on Municipal Land Use Planning, 2020.

Development Components

The proposed development layout comprises the following key land-use components:

Residential Zone 1: Single Residential (SR1)

- ❖ 76 Single Residential erven. These erven will accommodate single dwelling units designed to blend with the local architectural and environmental context.
- ❖ Approximate development footprint is **61 031 m²**.

Open Space Zone 3: Private Open Space (OS3)

- 9 Private Open Spaces will be established to form part of the ecological and landscape framework. These areas will include retained vineyard sections, and landscaped areas.
- Approximate development footprint is **55 578 m²**.

Transport Zone 2: Road and Parking (TR2-A)

- Internal private access roads, pedestrian walkways, and associated parking areas providing efficient circulation within the development.
- Approximate development footprint is **25 161 m²**.

Access and circulation

The existing right of way servitudes currently provide essential access to the Walker Bay Winery, Birkenhead Brewery (Erf 596 Stanford) and Klein Rivier Estate properties. The proposal includes the cancellation of these existing servitudes and the registration of new right of way servitudes over the newly designed internal streets within the proposed development. This change will ensure that uninterrupted access is maintained for both the Winery, Brewery and the Estate, while simultaneously integrating these properties into the security estate. Inclusion within the secure estate will offer enhanced safety measures and greater peace of mind for the owners and visitors of these properties. Furthermore, positioning the servitudes along the internal streets facilitates better traffic flow and improved management of access, aligning with the overall objectives of the development.

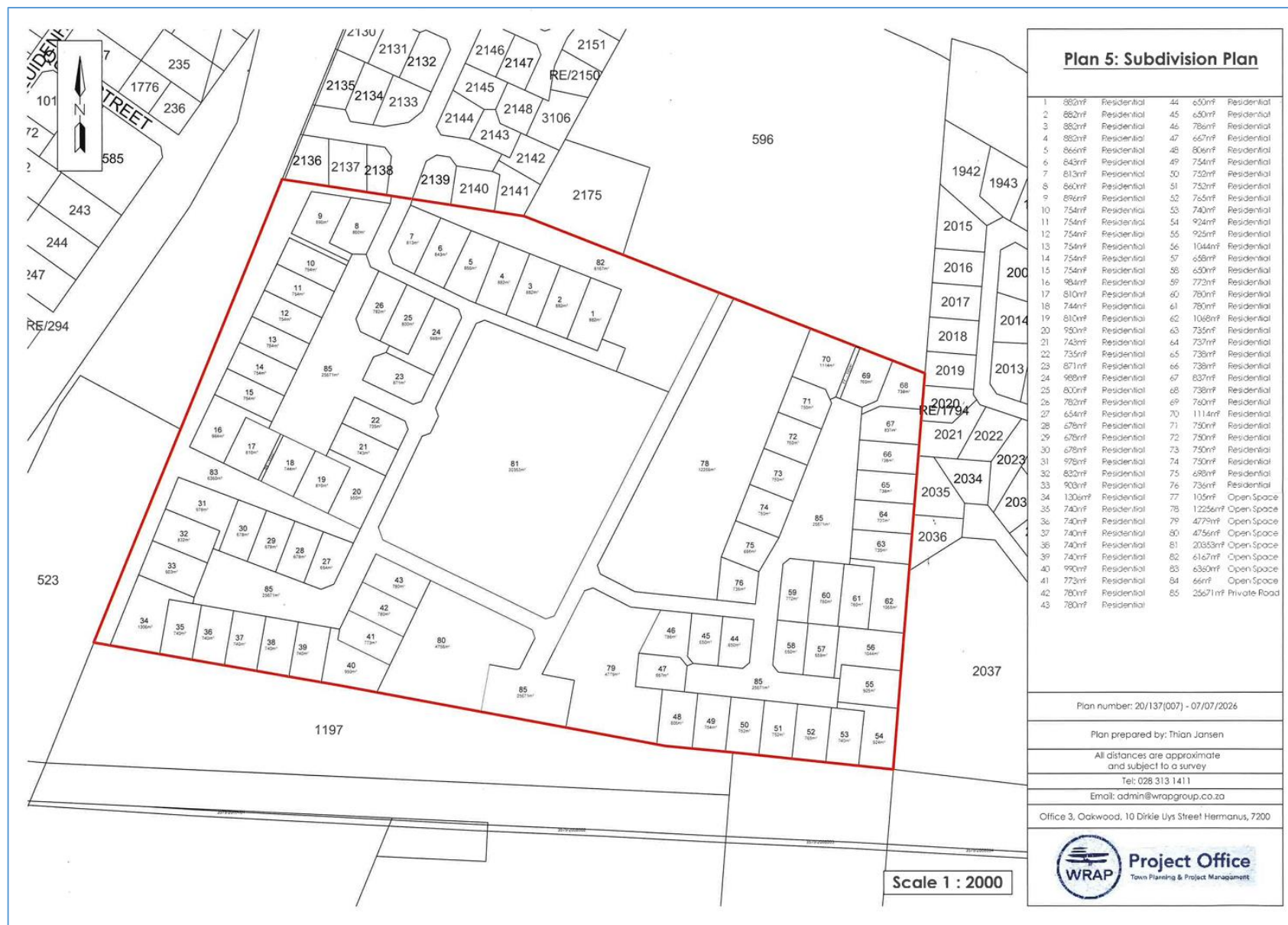


Figure 1: Proposed site development plan.

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 post-construction phases of the proposed residential development and associated infrastructure. 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 Application:

- This EMPr applies to all construction and post-construction / operational activities associated with the proposed development, including site preparation, building construction, access roads, service infrastructure 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. Long term management will be required in the post construction / operational phase, and this will be done in conjunction with the Home Owners Association / similar structure.

4.3. 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.

It will be the ECO's responsibility to ensure that the mitigation / rehabilitation measures and recommendations referred to in the EA (still to be issued) are implemented and complied with by the owner.

The applicant (owner/holder) will be responsible for the remuneration of the ECO and any other expenses encountered in the process of environmental monitoring of the construction.

Roles and Responsibilities of an ECO

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

- Ensure compliance with the EMPr at all times during the pre-construction and construction phase;
- Ensure compliance with relevant management conditions of the EA during the preconstruction and construction phase;
- Meet with the contractors to set out the environmental parameters within which they must work (pre-construction and construction phase);
- 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.
- Approve the previously disturbed areas set out;
- Indicate where all no-go areas are to be demarcated and to ensure adherence to these delimitations at the induction session BEFORE any construction or site clearance commences on-site (pre-construction phase).
- Must inspect the construction footprint on a weekly basis during construction of these elements of the development; and must take immediate measures to address unforeseen disturbances to the estuary and its associated buffer area.
- Must check the non-perennial stream as well as the recommended buffer area for erosion damage and sedimentation weekly and after every heavy rainfall event.
- To review method statements and to determine the most environmentally sensitive options
- To oversee the implementation of environmental procedures set out in this document
- Indicate where plant rescue may be necessary, and what species should be rescued on this site (pre-construction phase)
- Advise on rehabilitation/landscaping measures to be implemented
- Ensure that the correct earthworks practices are adhered to; e.g. no encroachment into the surrounding vegetation, separation of topsoil and subsoil, correct stockpiling and stripping of topsoil);
- 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.
- The ECO is to submit a completion report to the competent authority (DEADP) and applicant upon completion of the construction phase and before the EA lapses.

4.4. 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

4.5. 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

4.6. 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.

4.7. Homeowners association

A Homeowners Association or similar structure is required to implement and manage the long-term management actions required on site.

5. 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.

6. 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.

6.1. Aim of the Environmental Awareness Plan

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

6.2. 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.

7. CONSTRUCTION PHASE IMPACTS AND MITIGATIONS

7.1 Loss, damage and Destruction of palaeontological resources

Excavations for foundations, roads, drainage and services that penetrate below the disturbed agricultural soil, typically at depths exceeding 1.5 to 2 m, may destroy, displace or seal in fossil-bearing sediments of the Ceres Subgroup, which has very high palaeontological sensitivity. The loss would be irreversible. The Palaeontological Desktop Assessment rates the impact as very high negative before mitigation, reducing to medium after mitigation.

7.1.1. Mitigation measures

- The Contractor must implement the Palaeontological Chance Find Protocol for the full construction period, and it must be written into the construction contracts.
- All personnel must receive induction training on fossil recognition, the protection of fossils under Section 35 of the National Heritage Resources Act, 1999 (NHRA), and the reporting procedure, with signed attendance registers kept by the ECO, monthly refresher talks, and visual aids displayed at the site entrance, offices, canteens and ablution facilities.
- The ECO must monitor all excavations deeper than 1.5 m or reaching fresh bedrock, and must inspect them for fossils before they are backfilled. If a fossil is found, all work within a 10 m radius must stop immediately, the find must not be removed or further exposed, and the area must be cordoned off and covered with plastic sheeting held down by sandbags.
- The find must be photographed with a scale, its GPS position, depth and context recorded, and it must be reported by the finder to the supervisor, the Project Manager and the ECO. The ECO must notify Heritage Western Cape (HWC) within 24 hours, quoting the HWC case number, with a preliminary report. Work within the exclusion zone may not resume until HWC has given written clearance.
- Any rescue excavation must be done by a qualified palaeontologist holding a SAHRA fossil collection permit, with recovered material deposited in an accredited repository and a mitigation report submitted to HWC, all at the applicant's cost. The ECO must keep a Chance Find Register.

7.2. Disturbance of archaeological material or graves

No archaeological resources or graves have been recorded. However, the site's proximity to the Millstream Eye and the long occupation history of the Klein River valley mean that Early Stone Age artefacts, historical remains or human remains could be uncovered during earthworks. Disturbance would be permanent and irreversible.

7.2.1. Mitigation measures

- The Contractor must stop work in the vicinity immediately if any such material is exposed and must secure the area and report to the ECO, who must inform HWC without delay.
- No material or grave may be disturbed, moved or removed without a permit under Sections 35 and 36 of the NHRA, and work may not resume until HWC has authorised it in writing. The induction training and site protection procedures of the Chance Find Protocol apply equally to these finds.

7.3. Damage to Significant Landscape Features (Ficus nitida avenue, retained vineyards, milkwood trees)

The Ficus avenue is a compositional feature of the site that is to be incorporated into the layout, and the vineyard blocks are to remain as the open space structuring system. The milkwood line associated with the Millstream Eye lies to the south of the site.

7.3.1. Mitigation measures

- Construction traffic, stockpiling, compaction, trenching and spillages could damage these features and erode the character of the site.
- The Ficus trees must be fenced off with a protection zone around the drip line of each tree, in which no excavation, compaction, materials storage or trenching may take place.
- Any trenching close to the trees must be done by hand under the supervision of the ECO.
- The retained vineyard blocks must be demarcated as no-go areas for vehicles, stockpiling, storage and the handling of hazardous substances.
- The milkwood trees must not be disturbed, and no construction activity may take place within their canopy zone. No tree may be removed or pruned without the approval of the ECO. Any damage must be reported to the ECO and remedied in consultation with a horticulturist or landscape architect.

8. POST-CONSTRUCTION PHASE IMPACTS AND MITIGATIONS

8.1. Visual Impacts

Visual impact of the built development (roads, walls and housing clusters) on the R43 and R326 scenic routes, the farmstead immediately south of the site, and the tourist facilities and farmsteads to the north and east. The HIA rates the intensity of visual impact as moderate for these receptors and low beyond 3 km. It rates visual intrusion as high for sections of the scenic routes south and west of the site and for the farmstead immediately south of the site. The rating was premised on Erf 1197 remaining undeveloped as an open buffer.

8.1.1. Mitigation measures

- Implement the approved landscape plan in full, including the planting of indigenous trees and shrubs to soften the edges of the development, and maintain it thereafter.
- Retain the vineyard blocks and the open space around the entrance so that the development remains broken into clusters, with views towards the Klein River Mountains maintained from the scenic routes.

- Limit buildings to single storey and to the maximum height of 8 m on which the viewshed was based, and apply the approved Architectural Design Guidelines (white plastered walls, parapet gables, low werf-style boundary walls, a limited palette of materials and colours).
- Do not erect visually impermeable walls or fencing, precast concrete or "vibracrete" walls, unpainted cement block walls, razor wire or billboards along the interface with the scenic routes.
- Locate substations, electrical infrastructure and kiosks so that they do not block views of the mountains or sites of heritage significance, and screen them with low indigenous planting.
- Design the entrance gateway to be recessive and modest, stepped back from the boundary and not more than 10 m wide, and submit the detailed design to the municipality for approval before construction.

8.2. Change to Rural Character and Sense of Place

Alteration of the flat, open agricultural character of the site, which forms the forecourt or gateway to historic Stanford and lies next to the Stanford Heritage Protection Overlay Zone, through the introduction of a residential estate into the rural approach. The HIA rates the mitigation ability as low and finds partial compliance.

8.2.1. Mitigation measures

- Retain the working vineyards (approximately 39.4% of the property) as private open space in accordance with the consent use, leased to and managed by the Walker Bay Winery, and do not convert them to other uses without the approval of the competent authorities.
- Retain the Ficus nitida avenue and incorporate the existing road and vineyard alignments as they appear on the approved layout.
- Include the retention of the agricultural character, the vineyard management arrangements and the landscape principles in the HOA constitution and the development guidelines.
- Restrict landscaping to indigenous, water-wise species, and do not permit alien invasive vegetation or trees and hedges that block significant views.

Table 2. Activity specific impacts and mitigations

PRE-CONSTRUCTION/ CONSTRUCTION PHASE AND POST-CONSTRUCTION PHASE			
IMPACT	DESCRIPTION	MITIGATION MEASURES	RESPONSIBLE PERSONS
Socio-economic impacts	Construction Job creation during the development / construction phase	- Ensure labour force is sourced locally as far as possible. - Consider gender balance during when sourcing labour.	Applicant Contractor ECO
Visual impacts	Construction Visual impacts of the construction site and construction activities (earthworks, infrastructure establishment, construction camp, stockpiles, machinery, fencing and lighting) on the R43 and R326 scenic routes, the adjacent farmsteads and the tourist facilities along the Klein River. The Heritage Impact Assessment rates the intensity of visual impact as moderate for these receptors during the construction and operational phases.	- Ensure good design, approved by the local authority. - Maintain good housekeeping of the construction site and working areas. - Locate the site camp, laydown areas, stockpiles and parking within the development footprint in a transformed area, not on the proposed Open Space or the retained vineyards, and sited so as to be as inconspicuous as possible from the scenic routes. - Screen the visual elements of the site camp with netting. - Keep the extent of cleared ground at any time to the minimum required by the construction programme, and clear building sites and services corridors only. - Keep stockpiles low and away from the site boundaries. - Site fencing and hoarding along the external edges must be visually recessive in colour and material. Precast concrete or "vibracrete" walls, unpainted cement block walls, razor wire and billboards are prohibited along scenic routes. Only statutory and safety signage may be displayed. - Limit night-time construction lighting to that necessary for safety and security. Fixtures must be shielded and directed downwards so that light remains within the site, and must be switched off when not required. - The site officer must walk the site daily to check general site aesthetics and visual impacts, particularly prior to weekends and holidays. - The site officer must ensure that waste and batching areas are correctly screened and secured to prevent spread by wind, rain or animals.	Applicant Contractor ECO

		- Rehabilitate disturbed areas outside the building footprints as soon as practicable, in accordance with the approved landscape plan, using locally indigenous species.	
Dust impacts	Construction Dust generated from site clearing and site preparation.	- Maintain ground cover for as long as possible to reduce the total surface area exposed to wind. Do not clear entire plots and rather clear building sites only . - Ensure vehicle speed limits on site are kept to a minimum. - Delivery vehicles to keep loads covered. - Cover fine material stockpiles. - Wet dry and dusty surfaces using non-potable water. - Staff to wear correct PPE if dust is generated for long periods. Road surfaces to be swept and kept clean of sand and fine materials.	Applicant Contractor ECO
Noise impacts	<i>Construction Phase</i> Noise generated by vehicles and machinery during construction phase.	- Limit noise levels (e.g. install and maintain silencers on machinery) - Provide protective wear for workers i.e. ear plugs. - Ensure that construction vehicles and machinery are maintained regularly to reduce noise generation. - Restrict construction to normal work hours.	Applicant Contractor ECO
Ecological	<i>Construction Phase</i> Clearance of vegetation onsite may result or affect existing fauna onsite including slow moving fauna during the clearance of vegetation for the construction phase of the development.	- Since the site is confirmed to be in a highly transformed state with no intact original vegetation remaining, clear only the minimal footprints strictly required for civil services, internal roads, and top structures to protect the remaining soil profile. - Stockpile cleared topsoil in low berms (not exceeding 1.5m in height) and seed or cover them if left for extended periods to prevent erosion. - Implement an active Alien Invasive Plant Management Plan during and immediately post-construction to continuously eradicate emerging weeds on disturbed soils. - Restrict all residential estate and open space landscaping exclusively to endemic, water-efficient species representative of the local Elim Ferricrete Fynbos and Agulhas Limestone Fynbos biomes (such as <i>Olea europaea</i>, <i>Protea</i>, <i>Leucadendron</i>, and <i>Elegia tectorum</i>) to actively support local fynbos restoration.	Applicant Contractor ECO
Heritage Impact Assessment	<i>Construction Phase</i> Potential degradation of the Landscapes Heritage Protection Overlay Zone (HPOZ), visual intrusion along the R326 scenic route, and impact on historical cultural pathways	- A Chance Find is made during any construction, excavation, or earthworks activity, the person responsible for the discovery must immediately stop working, and all work that could impact the finding must cease in the immediate vicinity of the find (minimum 10-meter radius). The person who made the find must immediately report the discovery to his or her direct supervisor, who in turn must report the find to the project manager and the Environmental Control Officer (ECO) or Environmental Site Officer (ESO). The ECO must report the	Applicant Contractor ECO

		find to Heritage Western Cape (HWC) within 24 hours so that appropriate mitigation (recording and collection by a qualified palaeontologist) can be arranged. Heritage Western Cape can be contacted at 3 Dorp Street, Cape Town, 8001 (Tel: 021 483 9685; Email: info@hwc.org.za; HWC Case No. HWC25042505EJV0505; Case Officer: Emily-Jane Vowles, emily.vowles@westerncape.gov.za). Alternatively, the South African Heritage Resources Agency (SAHRA) may be contacted at 111 Harrington Street, Cape Town, 8000 (Tel: 021 462 4502; Email: info@sahra.org.za; Website: www.sahra.org.za). - The information submitted to the Heritage Agency must include high-quality, in-focus photographs of the find from multiple angles accompanied by a scale (coin, ruler, or measuring tape), GPS coordinates, and photographs of the vertical section (stratigraphic context) where the fossil was found. A preliminary report must be submitted to Heritage Western Cape within 24 hours of the find and must include the following information: date and time of the discovery; detailed description of the discovery and its context; description of the fossil including its depth and position within the excavation; GPS coordinates; name of the person who made the discovery; and the activity being undertaken when the fossil was encountered. The more photographs provided, the better, as they assist the heritage authority in determining the significance of the find and appropriate mitigation response. - Upon receipt of the preliminary report, Heritage Western Cape will review the information and inform the ECO whether a rescue excavation or rescue collection by a qualified palaeontologist is necessary, or whether the find is of insufficient significance to warrant further action. The ECO will communicate Heritage Western Cape's decision and any requirements for rescue excavation or collection to the ESO or site manager. If mitigation is required, Heritage Western Cape will appoint a qualified palaeontologist to conduct the necessary fieldwork, typically within 2 to 5 working days of notification. The developer is responsible for all costs associated with specialist assessment, fossil collection, curation, and reporting. - While awaiting Heritage Western Cape's response and any required specialist assessment, the site must be secured to protect it from further damage, unauthorized access, theft, or weathering. No attempt should be made to remove fossil material from its original position unless absolutely necessary for site protection purposes.	
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		Exposed fossil finds must be stabilized and covered with plastic sheeting or protected by sandbags to prevent deterioration. Heritage Western Cape will provide guidance on the most suitable method of protection for the specific find. In the event that a fossil cannot be adequately stabilized in situ and is at immediate risk of damage or loss, the ECO may, with extreme care, collect the fossil material for temporary safekeeping. Fossil finds collected under emergency circumstances must be wrapped carefully in tissue paper and stored in an appropriate container, ensuring that all associated fossil material is removed from the site and kept together with clear labeling indicating the exact location, depth, and context of the find. - If Heritage Western Cape determines that mitigation is required, the appointed palaeontologist will obtain the necessary fossil collection permit from SAHRA before commencing fieldwork. The specialist will conduct systematic excavation, documentation, and collection of fossil material in accordance with professional standards and SAHRA minimum requirements for palaeontological assessments. All collected fossil material will be professionally prepared (if necessary), catalogued, and deposited in an approved repository such as an accredited museum or university collection, where it will be curated in perpetuity for scientific research and public education. The palaeontologist will prepare a mitigation report documenting the discovery, collection methodology, specimens recovered, and repository details, which will be submitted to Heritage Western Cape for record purposes. - Once Heritage Western Cape has reviewed the mitigation report (if applicable) and issued written authorization or clearance, the developer may resume construction activities in the affected area. No work may recommence in the area of the fossil discovery until such written clearance has been received from Heritage Western Cape. Work may continue in other areas of the site that are not affected by the discovery, subject to ECO approval and provided that appropriate buffer zones are maintained around the fossil discovery site. - It is the responsibility of the ECO or site manager, with appropriate training and guidance, to ensure that all construction personnel, foremen, contractors, and subcontractors are trained in the procedures to follow when a fossil is accidentally uncovered. This training must form part of the mandatory site induction program for all personnel working on the site. In the absence of the ECO, a	
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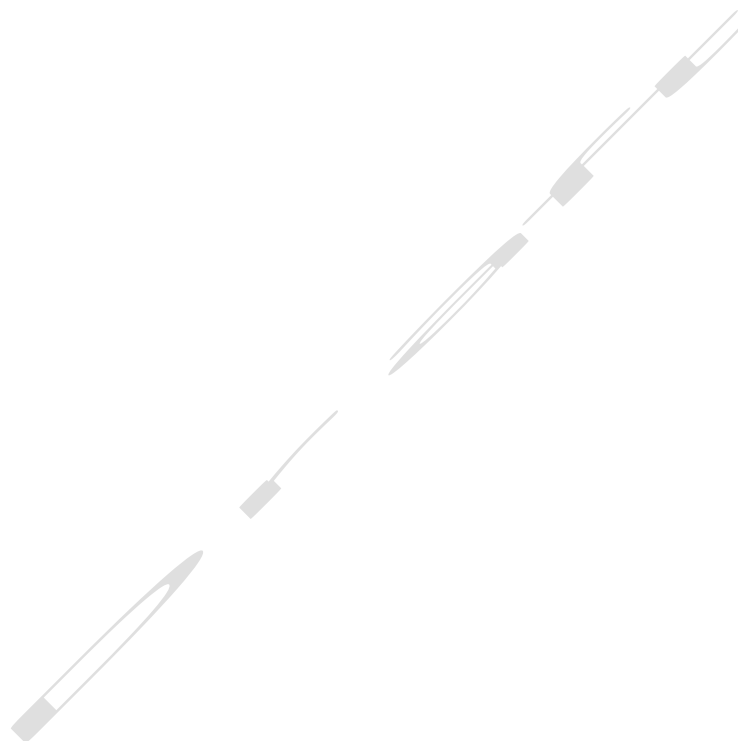
		designated member of the site management team must be appointed to be responsible for the proper implementation of this Chance Find Protocol to ensure the conservation of fossil material and compliance with the National Heritage Resources Act. All personnel must be made aware that fossil heritage is protected by law under Section 35 of the NHRA, and that unauthorized disturbance, damage, or removal of fossils is a criminal offense punishable by fines, imprisonment, or both. - In the event that fossil materials are found during construction related to the residential development Walker Bay Estate, this Chance Find Protocol specifies the steps that must be taken. The protocol is required because of the extremely high palaeontological sensitivity of the underlying Ceres Subgroup sediments, as designated by both SAHRIS and the DFFE Screening Tool. This protocol includes all development phases, including site preparation, excavation, foundation building for 93 residential units, installation of road and drainage infrastructure, utilities trenching, landscaping, and post-construction operations. The procedure is obligatory for the developer, Environmental Assessment Practitioner, Environmental Control Officer (ECO), Project Manager, all contractors and subcontractors, construction people, and operations staff. - This protocol is fulfilled in accordance with Section 35 of the National Heritage Resources Act (NHRA, Act 25 of 1999), which protects all fossil material and prohibits disturbance, destruction, or removal without a valid permit from SAHRA or the relevant Provincial Heritage Resources Authority. This protocol responds to Heritage Western Cape requirements under HWC Case No. HWC25042505EJV0505. Unauthorized damage or removal of fossil material constitutes a criminal offense punishable by fines, imprisonment, suspension of environmental authorization, and project delays. Compliance is a legal requirement, not optional. - Personnel should watch for marine shells including brachiopods (clam-like, symmetrical, ribbed, white grey-brown coloured, few millimetres to 10+ centimetres), bivalves (oyster-like, often fragmented), and gastropods (snail-like, spiral). Trilobites appear as segmented oval "bugs" with three lobes, typically 2-15 centimeters long, often preserved as moulds. Trace fossils are extremely common including Zoophycos (spiral burrows), Chondrites (branching burrows), Skolithos (vertical tubes), and Cruziana (ribbed crawling	
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		traces). Crinoid columnals resemble stacked coins, 0.5-3 centimeters diameter with central holes. Any unusual rock structures, patterns, or embedded objects should be reported to the ECO immediately. - If fossil material is discovered, the following actions are mandatory: stop all work immediately in a minimum 10-meter radius; do not remove, collect, or further expose the fossil; secure the site from disturbance, damage, weathering, and unauthorized access; if safe, photograph the find from multiple angles with scale reference (coin, ruler); record GPS coordinates; note depth below ground surface, excavation activity, discoverer's name, and date/time. The person discovering the fossil must immediately notify their supervisor, who must notify the Site Agent/Project Manager and Environmental Control Officer. - The ECO must notify Heritage Western Cape within 24 hours of discovery. Contact Heritage Western Cape at: 3 Dorp Street, Cape Town, 8001; Tel: 021 483 9685; Email: info@hwc.org.za; HWC Case No. HWC25042505EJV0505; Case Officer: Emily-Jane Vowles (emily.vowles@westerncape.gov.za). Alternative contact: South African Heritage Resources Agency (SAHRA), 111 Harrington Street, Cape Town, 8000; Tel: 021 462 4502; Email: info@sahra.org.za. Notification must include: project name and location; HWC Case Number; date, time, and GPS location of discovery; detailed description; high-quality photographs from multiple angles with scale; stratigraphic context photos; depth; excavation activity; discoverer's name; and ECO/Site Agent contact details. - Heritage Western Cape must give written permission before any building work may take place within 10 meters of the find. This is true no matter what the schedules or expenses are. Outside the exclusion zone, work can continue in regions that are not impacted, but only with ECO approval. There should be obvious signs, barrier tape, fence, or cones in the exclusion zone. To keep exposed fossils from being damaged by the elements, they should be covered with plastic sheeting and held down with sandbags (without touching the fossils directly). The exclusion zone should also keep anyone from getting in and stealing them and from accidentally damaging them. Heritage Western Cape can provide you specialized advice on how to safeguard your property. - Heritage Western Cape will evaluate the discovery and reach one of three conclusions. Although the NHRA does not provide legislative timescales, professional experience with such palaeontological	
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		mitigation initiatives indicates that assessments often need 2-4 weeks, although this duration may be prolonged based on case complexity and the workload of the authorities involved. Should the discovery be deemed devoid of substantial cultural significance, Heritage Western Cape will provide written approval, allowing building to proceed without delay. A qualified palaeontologist must be appointed, if necessary, normally needing 1-2 weeks based on expert availability, and must first get a SAHRA fossil collection permission before to initiating rescue excavation. According to SAHRA instructions and practitioner experience, permit processing generally necessitates 2-4 weeks from the submission of a full application, however this duration may be extended if further information is requested. The designated expert will methodically excavate and document fossil specimens, record stratigraphic context and GPS coordinates, collect samples with appropriate field labelling, deposit all materials in an accredited repository (museum or university collection), and submit a mitigation report to Heritage Western Cape for approval prior to receiving written authorization to continue work. Drawing from professional experience with analogous projects in the Western Cape, the entire process from initial discovery to mitigation reporting and approval generally spans 6-12 weeks, contingent upon the volume of fossil material, and specialist availability; however, extraordinary discoveries may necessitate prolonged investigation durations of 8-16 weeks or more. Should fossils of considerable scientific importance be found, Heritage Western Cape may necessitate further investigation, alterations to project design, the creation of heritage buffer zones, or the relocation of infrastructure; however, this scenario is deemed uncommon due to the primarily marine invertebrate composition of Ceres Subgroup fossils. - All personnel must receive mandatory induction training covering: what fossils are and their importance; legal protection under NHRA and penalties; types of fossils likely encountered with visual examples; Chance Find Protocol procedures; reporting contact details; and consequences of non-compliance. Training delivered by ECO with signed attendance registers retained. Monthly talks must cover fossil identification refreshers, protocol procedures, discussion of discoveries, and Q&A. Visual aids must be displayed at site entrance, offices, canteens, ablution facilities, and equipment yards showing: fossil photographs with identification; protocol summary	
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		flowchart; ECO contact details; Heritage Western Cape contacts with HWC Case Number; and legal warnings. - The ECO must: ensure all personnel receive induction training and maintain attendance registers; conduct monthly talks and maintain visual aids; monitor excavations exceeding 1.5 meters depth or encountering fresh bedrock; inspect excavations for fossils before backfilling; maintain a Chance Find Register documenting discoveries, notifications, assessments, and mitigation; serve as primary contact for Heritage Western Cape and specialists; enforce work stoppage and site protection; facilitate specialist site access; and report non-compliance immediately. - The ECO is required to: guarantee that all personnel undergo induction training and keep attendance records; hold monthly discussions and utilize visual aids; oversee excavations surpassing 1.5 meters in depth or reaching fresh bedrock; examine excavations for fossils prior to backfilling; uphold a Chance Find Register that records discoveries, notifications, assessments, and mitigation measures; act as the principal liaison for Heritage Western Cape and specialists; implement work stoppages and site protection; enable specialist access to the site; and promptly report any instances of non-compliance.	
Heritage: archaeological resources and graves	Construction phase Disturbance of archaeological material, historical remains or graves uncovered during earthworks. None has been recorded on the site, but the site lies close to the Millstream Eye, the historic freshwater source of Stanford, in a long-inhabited valley, so Early Stone Age artefacts or human remains could be exposed.	- If any archaeological material, historical remains or human remains are exposed, all work in the vicinity must stop immediately and the area must be secured. - The find must be reported to the ECO, who must inform HWC without delay. - No such material or grave may be disturbed, moved or removed without a permit in terms of Sections 35 and 36 of the NHRA. - Work in the affected area may not resume until HWC has authorised it in writing. - The induction training and site protection procedures of the Chance Find Protocol apply equally to these finds.	Applicant Contractor ECO
Cultural Landscape features	Construction phase Damage to the existing Ficus nitida avenue, the retained vineyard blocks and the milkwood trees (associated with the Millstream Eye)	- Fence off the Ficus trees with a protection zone around the drip line of each tree. No excavation, compaction, materials storage, stockpiling or trenching may take place in this zone. Trenching near the trees must be done by hand under the supervision of the ECO. - Demarcate the retained vineyard blocks as no-go areas for vehicles, stockpiling, storage and the handling of hazardous substances.	Applicant Contractor ECO

	through vehicle movement, stockpiling, compaction, trenching and spillages, eroding the agricultural character of the site, which forms the forecourt to historic Stanford.	- Do not disturb the milkwood trees. No construction activity may take place within their canopy zones. - No tree may be removed or pruned without the approval of the ECO. - Report any damage to the ECO immediately. Damage must be remedied in consultation with a horticulturist or landscape architect.	
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9. GENERAL CONSTRUCTION PHASE IMPACTS AND REQUIREMENTS

9.1 Contractors camp

Responsibility – Contractor / ECO / owner

The contractor shall comply with all relevant laws and regulations concerning water provision, sanitation, wastewater discharge and liquid and solid waste handling and disposal during the construction phase. The contractor is referred to the requirements of the NEMA and the NEM:WA and related regulations. The contractor shall not locate the camp, or sanitation facilities, in any areas that can cause nuisance or safety hazards to surrounding land users, inhabitants or the general public. Suitable temporary toilet facilities should be provided to the construction team. These facilities should be emptied and cleaned on a regular basis by a registered contractor and the waste is to be removed by contractor to a registered facility. The contractor shall at all times carefully consider the machinery required for the desired task while minimizing the extent of environmental damage. The contractor shall keep construction campsites clean and tidy at all times. The contractor shall not leave domestic waste uncontained, and temporary storage shall be enclosed to keep out people and animals. No permanent domestic waste disposal shall be permitted. All domestic refuse is to be removed to an existing licensed landfill site. The contractor shall take specific measures to prevent the spread of veld fires, which may be caused by activities at the camp. These measures may include appropriate instruction of employees about the fire risks and the construction of firebreaks around the site perimeter, as required. The contractor shall prevent accelerated erosion from the construction campsite and shall not discharge polluted runoff into the environment. Adequate firefighting equipment shall be made available and maintained on site. The contractor's camp should be located in area proposed for development, in order to reduce impacting undisturbed areas. No overnighting will be permitted at the contractor's camp, unless specifically arranged or required. Decommissioning of the campsite will involve removal of all compacted platforms, equipment machinery, tools, waste, etc.

9.2 Health and Safety

Responsibility - Project Manager / Contractor / ECO / owner

Correct Personal Protective Equipment (PPE) must be worn at all times by the personnel on site. Personnel must be trained on the use of PPE. The applicant will appoint one safety officer for the activities. Suitable warning and information signage should be erected at the commencement of construction. The handling of hazardous materials should only be done by trained personnel. Safety Data Sheets (SDSs) must be readily available for all hazardous substances on site and employees should be aware of the risks associated with any hazardous materials used. All provisions of the Occupational Health and Safety Act (Act No. 85 of 1993) must be complied with. In the event of an emergency relating to a hazardous substance, procedures detailed in the SDSs should be immediately implemented.

9.3 Fire risk management

Responsibility - Project Manager / Contractor / ECO / owner

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

9.4 Fuels and hazardous materials

Responsibility - Project Manager / Contractor / owner

- All fuels and flammable or hazardous materials shall be stored in a suitable, designated storage area, located within the contractor's camp or another appropriate demarcated location on site.
- Storage areas shall be constructed using impervious materials to prevent the contamination of soil and groundwater in the event of spillage or leakage.
- The quantity of fuels and hazardous materials stored on site at any given time shall be limited to that reasonably required for construction activities, in order to minimise the risk and extent of potential contamination.
- Where bulk fuel storage is required, such fuel depots shall be located within a bunded area to prevent soil and groundwater contamination in the event of a leak or spill.
- Bunded areas shall have a holding capacity of no less than 110% of the volume of the largest fuel container stored within the bunded area.
- A spill kit and appropriate containment materials shall be kept readily available in proximity to fuel and hazardous material storage areas.
- All relevant Safety Data Sheets (SDS) and Health and Safety documentation pertaining to the fuels and hazardous materials stored on site shall be kept on site and readily accessible in the event of an emergency or spillage incident.
- Any spillage or leakage of fuels or hazardous materials shall be reported immediately to the Environmental Control Officer (ECO) and remediated in accordance with the site's Emergency Response Procedure.

9.5 Emergencies protocol

Responsibility - Project Manager / Contractor / owner

Fire:

- The Fire Officer, or another suitably designated person, shall be notified immediately in the event of a fire on site.
- All employees shall be familiar with the fire emergency procedure, including evacuation routes, assembly points, and the location and use of available firefighting equipment.

Hydrocarbon (Fuel and Oil) Leaks and Spillages

- All employees shall be familiar with the procedure for responding to hydrocarbon leaks and spillages, which shall include immediate notification of the Project Manager / Contractor.
- Any vehicle observed leaking fuel, oil, or other hazardous liquids shall be removed to the designated maintenance area without delay and repaired prior to further use.
- In the event of a hydrocarbon spillage, contaminated soil shall be excavated, appropriately treated, and disposed of at a licensed facility in accordance with applicable waste legislation.
- The necessary materials and equipment for containing and cleaning up spills and leaks (including a spill kit) shall be maintained on site at all times.
- The clean-up of any hydrocarbon spillage, and remediation of any resultant damage, shall be for the account of the Applicant or the relevant Contractor.
- The Applicant shall ensure that a Health and Safety Officer is available on site for the full duration of the construction period.

Raw Sewerage Spills (from Portable Toilets)

- All employees shall be familiar with the procedure for responding to sewerage spills and leaks.
- The necessary materials and equipment for containing and cleaning up sewerage spills and leaks shall be maintained on site at all times.
- The clean-up of any sewerage spillage, and remediation of any resultant damage, shall be for the account of the Applicant or the relevant Contractor.

Sudden Illness or Injury

- Emergency contact numbers (including the nearest hospital, ambulance service, and Health and Safety Officer) shall be readily available and clearly displayed on site in the event of sudden illness or injury to a member of the construction team.

Snakebite

- Emergency contact numbers, including the nearest medical facility equipped to administer antivenom, shall be kept readily available on site in the event of a snake sighting or snakebite.
- Employees shall be inducted on basic snakebite first-aid procedure prior to commencing work on site.

9.6 Site Demarcation

Responsibility - Project Manager / Contractor / ECO / owner

- Prior to the commencement of any construction activity, the boundaries of the overall construction site, and/or the individual footprints of each dwelling or structure, shall be clearly indicated and, where appropriate, fenced off by the Contractor.
- Natural areas identified for retention shall be clearly demarcated at this stage, prior to the commencement of construction.
- No-go areas shall similarly be demarcated prior to the commencement of construction, and shall be clearly indicated by means of appropriate signage and/or barrier fencing.
- Following demarcation, all construction activities, as well as the storage, handling, or preparation of any materials or equipment, shall be confined strictly within the demarcated boundaries of the construction zone.
- The permanent delineated wetland boundary shall be clearly demarcated and maintained as a strict no-go area for the duration of the construction period.
- Temporary wetland zones shall, as far as reasonably possible, likewise be demarcated and treated as no-go areas.
- Demarcation measures (fencing, flagging, or signage) shall be inspected and maintained by the ECO on a regular basis throughout construction and reinstated promptly if damaged or removed.
- No vehicles, machinery, personnel, or materials shall enter a demarcated no-go area at any time, except with the prior written approval of the ECO.

9.7 Stockpiles

Responsibility - Project Manager / Contractor / ECO / owner

- The Contractor and/or Project Manager shall identify and demarcate suitable sites for the stockpiling of building materials and excavated material prior to the commencement of construction.
- Stockpile sites shall preferably be located in areas of gentle gradient, away from watercourses, wetlands, and any demarcated no-go areas, to minimise the risk of runoff and sedimentation.
- Stockpiles shall be appropriately stabilised (e.g. through the use of berms, covers, or vegetative/other suitable stabilisation methods) as required to prevent dust generation and material loss.

- Stockpiles shall be regularly monitored for dust blow, as well as for runoff and erosion, particularly during periods of high wind or rainfall.
- Where necessary, dust suppression measures (such as damping down) shall be implemented to minimise dust generation from stockpiled material.
- Topsoil and subsoil shall be stockpiled separately to preserve topsoil quality for future rehabilitation purposes.
- Stockpiles shall not be located within any demarcated no-go area, buffer zone, or the temporary or permanent wetland zones.

9.8 General Wastes

Responsibility - Project Manager / Contractor / ECO / owner

- Refuse refers to all construction-related debris, including but not limited to cement bags, rubble, timber offcuts, cans, nails, wire, spilt bitumen, glass, packaging, plastic, and organic matter.
- All refuse generated during the construction phase shall be stored in a designated, appropriately located area on site, in receptacles that are watertight and windproof to prevent littering and pollution of the surrounding environment.
- Waste receptacles shall be clearly labelled according to their designated use (e.g. general waste, recyclables, hazardous waste).
- Refuse shall be removed from site on a regular basis and disposed of at a permitted waste disposal facility.
- The burning or burial of general refuse on site is strictly prohibited.
- The sorting and recycling of waste at source is encouraged, with separate receptacles provided for recyclable material where practicable.
- Disposal certificates (or equivalent proof of lawful disposal) shall be retained by the Contractor for the duration of the construction period and made available to the ECO upon request.
- The construction site shall be kept clean and free of litter at all times, with regular litter patrols conducted by the ECO.

9.9 Recreational / Eating areas

Responsibility - Project Manager / Contractor / ECO / owner

- Where construction workers are permitted to eat on the development site, at locations other than within the Contractor's camp, the Contractor shall designate specific eating/rest areas for this purpose.
- Adequate refuse bins shall be provided by the Contractor at all designated eating and rest areas, and their use by workers shall be enforced.
- Refuse bins at eating and rest areas shall be cleared on a daily basis to prevent the accumulation of litter and the attraction of scavenging animals.
- No rest, eating, or recreational areas shall be permitted within any demarcated No-Go area.
- Designated eating and rest areas shall be sited away from watercourses and sensitive ecological features and shall be approved by the ECO prior to use.

9.10 Construction water

Responsibility - Project Manager / Contractor / ECO / owner

- All cement effluent arising from mixer washings, and runoff from batching areas and other construction work areas, shall be contained in a suitable manner to prevent contamination of soil, groundwater, and surrounding watercourses.

- Containment areas (e.g. settlement ponds or designated wash-down areas) shall be appropriately lined to prevent infiltration and shall be allowed to dry periodically to facilitate the removal and appropriate disposal of accumulated solid materials.
- Solid materials removed from containment areas shall be disposed of at a permitted waste disposal facility and shall not be discarded on site.
- Care shall be taken at all times to prevent the runoff of construction water including cement-contaminated water onto other areas of the site, adjacent properties, or into any watercourse, wetland, or no-go area.
- Batching and wash-down areas shall be sited a suitable distance from watercourses, wetlands, and demarcated no-go areas, and shall be approved by the ECO prior to use.
- The ECO shall inspect containment and batching areas on a regular basis to verify their integrity and effectiveness.

9.11 Equipment maintenance

Responsibility - Project Manager / Contractor / ECO / owner

- All mechanical equipment and work vehicles present on site during the construction phase shall be stored, serviced, and refuelled only within designated maintenance areas or within the Contractor's camp.
- Drip trays or other impervious materials (e.g. plastic or metal sheeting) shall be used within these designated areas at all times during servicing and refuelling to prevent contamination of the underlying soil.
- Equipment and vehicles shall be regularly inspected for leaks, and any equipment found to be leaking oil, fuel, or other hazardous substances shall be repaired promptly or removed from site until repaired.
- The Project Manager may order the removal from site of any equipment causing, or with the potential to cause, continual or significant environmental damage, until such equipment has been adequately repaired.
- No servicing, refuelling, or maintenance of equipment or vehicles shall take place within any demarcated no-go area, or within the wetland zones referred to in Section 9.6.
- The ECO shall periodically inspect designated maintenance areas to verify compliance with the above measures.

9.12 Stormwater Management

Responsibility - Project Manager / Contractor / ECO / owner

Due to the small-scale nature of the construction, a Stormwater Management Plan is not required. However, Stormwater should be monitored regularly to ensure no environmental risk or unmanageable load to the existing infrastructure. The contractor must take suitable measures to prevent erosion resulting from a diversion, restriction or increase in flow of stormwater caused by construction. The open space erf will be used for stormwater retention.

9.13 Topsoil Removal and Stockpiling

Responsibility - Project Manager / Contractor / ECO / owner

Where services are to be extended or houses erected, topsoil is to be removed from the work areas, stockpiled separately from subsoil, and must be stabilised within a day of stockpiling. In general, stockpiles should be convex at the top to promote run-off, so that water is not able to accumulate and result in leaching of nutrients from the soil. Stockpiling areas should be determined in consultation with the ECO and only for short term.

9.14 Erosion Control

Responsibility - Project Manager / Contractor / ECO / owner

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

9.15 Dust Control

Responsibility - Project Manager / Contractor / ECO / owner

Appropriate action should be taken to minimise the generation of dust on the site. This can be done by applying appropriate stabilisation materials, such as straw or mulch or watering of exposed areas. Suppression methods not involving water, are preferred as far as possible.

9.16 Construction Traffic Management

Responsibility - Project Manager / Contractor / ECO / owner

All construction vehicles which carry construction materials, must use sheeting or a suitable cover, to prevent loss of load during travelling or due to wind or rain. Any spills should be cleaned immediately.

9.17 Architecture / Design

Responsibility - Project Manager / Contractor / ECO / owner

The architecture and design of the dwellings will be done in line with the general trend of the area. The houses should be designed to be in line with the surrounding architecture and cape vernacular style common to the area. Neutral colour palettes should be used which blend into the surrounds.

9.18 Sustainable Building Guidelines and materials

Responsibility - Project Manager / Contractor / ECO / owner

The houses should be designed in such a way as to create a sustainable living area. Ensure materials and orientation allow for an environmentally friendly design with lower operating costs, i.e natural ventilation, correct orientation, correct colours and roofing etc. Use recycled materials as far as possible.

Energy efficiency is also an important consideration and the following actions should be considered:

- North orientation to ensure that as many well-used spaces face north as possible. Sun control is more difficult on East and West facing windows
- Use of good insulation in the roof and walls to keep the inside temperature warm in winter or cool in summer
- Solar water heaters to be included in the design phase
- Suitable roof overhangs to let in the lower winter sun but provide shade from the summer sun
- Sensible fenestration – let in the light and catch the winter sun, but not too much window area so that warmth or cool cannot be retained inside when needed. They can be combined with shading and reflecting devices - such as overhangs, screens, shutters, awnings, trees, planting and different glass types which will aid to control the amount, quality and time of daylight entering the building
- Suitable ventilation for fresh air and cool breezes
- Natural lighting through windows and light wells

Water conservation should be a priority in design of the dwelling. Rainwater tanks are recommended as far as possible. Optimally designed systems for grey water reuse should also be explored during the design phase in order to prevent the expense of retrofitting a system. Water wise and indigenous landscaping is recommended and will reduce the water costs associated with maintaining gardens. Permeable paving is to be used in areas

where paving is required. Low flow shower and heads and dual flushing systems should be fitted. Aerators on taps should also be fitted to reduce overall water demand.

Construction activities such as watering, mixing and cleaning should avoid water wastage. Dry brushing and trigger spray nozzles should be used. Reuse of construction water should also be implemented.

9.19 Site Clean Up and Rehabilitation

Responsibility - Project Manager / Contractor / ECO/ owner

The following actions should be implemented once construction has concluded:

- The construction footprint should be restored to the natural contours of the ground and shall allow normal surface drainage, as far as possible
- No foreign matter such as rubble, waste or hazardous material will be mixed with the topsoil or used to backfill excavation.
- All temporary works within the construction footprint, including fences, access, roads etc. disturbed by construction, should be restored to their original condition, as far as practical.
- Compacted soils within the construction footprint should be loosened by means of a plough or scarified to aid revegetation
- Runoff and erosion, as a result of the construction phase, should be suitably managed to prevent long term impacts
- All structures, equipment, materials and facilities used or created on site for or during construction activities are removed once the project has been completed
- Vegetation cover (using species appropriate to the local area) in all areas disturbed by the works should be reintroduced, as required.

10. COMPLIANCE AND MONITORING

10.1. 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 areas	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

10.2. Environmental Control Sheets

Environmental Control Sheets should 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 proposed by the specialists for the site and reasons for these recommendations, as well as understand the site and constraints analysis and be able to identify the constraints / No Go areas.

Table 3. Environmental Control Sheets							
					RECORD OF PERFORMANCE		
TASK	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY	COMPLETED YES/ NO	DATE	COMMENT
PRE-CONSTRUCTION							
Procurement	- The Environmental Authorisation (EA), the EMPr and its annexures (including the Palaeontological Chance Find Protocol, the landscape plan and the Architectural Design Guidelines) and any conditions issued by Heritage Western Cape (HWC) to be distributed to contractors at tender stage. - Tenderers to price for compliance, including the ECO's monitoring, fossil and heritage induction training, protection of the no-go areas, and the costs of specialist assessment, collection and curation if a fossil find requires rescue excavation. METHOD: Distribute with tender documents	As required	Contractors are aware of the requirements in terms of NEMA, the NHRA and the EMPr, and can budget accordingly	Developer Project Manager			

Appointment of ECO and Heritage Compliance	- Appoint a suitably qualified, independent Environmental Control Officer (ECO) before site works start. - Record the HWC case number (HWC25042505EJV0505, to be updated when the final HIA case number is issued) and incorporate any conditions in HWC's comment or decision on the HIA into the EMP. - Confirm that no structures older than 60 years will be altered or demolished. If this changes, a Section 34 NHRA permit is required before work starts. - Appoint a person to implement the Chance Find Protocol in the ECO's absence. - Identify a qualified palaeontologist who can be called on if HWC requires rescue work. METHOD: Written appointments, files in the Environmental File.	Once, before site works	ECO in place and heritage obligations understood before any ground disturbance	Developer/ Project Manager			
Environmental File	- To include the EA, the EMP, HWC correspondence, the HIA and the Palaeontological Desktop Assessment, the Chance Find Protocol and Chance Find Register, the approved landscape plan and design guidelines, method statements, the site diary, training registers, permits	As required	Construction team(s) and the public can access the relevant information when required	ECO Project Manager			

	and the public complaints register. - To be updated on a regular basis. - Public complaints register to be kept on site at all times. METHOD: Issue all applicable documents to site manager.						
Environmental Awareness training and induction	- All contractors and workers to attend an induction before starting work on site, and a register to be signed as proof of attendance. - Induction to cover: the EMPr requirements; the no-go areas (Ficus avenue, retained vineyards, milkwood trees, scenic route setback); the prohibition on disturbing graves, archaeological material and fossils, and their legal protection under Sections 35 and 36 of the NHRA and the penalties; recognition of fossils (brachiopods, bivalves, gastropods, trilobites, trace fossils, crinoid columnals); the Chance Find Protocol and reporting contacts; and the complaints procedure. METHOD: Briefing to be undertaken by project manager and / 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 - Method statements to contain clear methods for pollution control (hazardous and general waste, runoff, wastewater, dust), excavation and trenching near the Ficus avenue, stockpile locations and heights, camp siting and screening, construction lighting, and the maintenance of access to neighbouring properties. 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 definition and demarcation	- Site survey and pegging. - Demarcate the construction areas and fence them. All other areas are no-go. - Demarcate as no-go areas: the Ficus nitida avenue (protection zone around the drip line of each tree), the retained vineyard blocks, the milkwood trees and their canopy zones, the open space areas and landscape corridors, and the scenic route setback. - Indicate access roads for construction vehicles clearly, giving consideration to turning	As required and to be repeated on a regular basis in the event that demarcations shift or disturbed by operators, weather etc.	A well demarcated site Well-defined No-Go areas Well defined construction zones	ECO Project Manager Contractor			

	circles, and keep the access to neighbouring properties free. - Review the specialist input to familiarise the team with the mitigation measures. - Set out roads and erven in accordance with the approved layout, which follows the vineyard rows, existing road alignments and the historic wagon route alignment. - Temporary fencing to be visually recessive in colour and material. No precast concrete or "vibracrete" walls, unpainted cement block walls, razor wire, billboards or advertising (other than statutory and safety signage) along the scenic route. METHOD: Demarcation methods to be undertaken as outlined in EMP, suitable to the environment and semi-permanent to last as long as possible during construction phase, to be checked on a regular basis						
Communication and complaints	- Notify neighbouring owners and the adjacent tourist facilities and farmsteads of the construction programme and any temporary access changes before works start. - Keep a public complaints register on site and record the complaint, the response and the date.	Before works starts and throughout	Neighbours informed and complaints resolved	Applicant Project Manager ECO			

	Display the ECO's and the Applicant's contact details at the site entrance. - Respond to complaints promptly and report them in the ECO reports. METHOD: Written notice; complaints register in the Environmental File.						
Construction traffic	- All construction vehicles carrying materials must use cover sheeting to prevent loss of loads by wind or rain. - Enforce the maximum speed. - Limit construction vehicles to the approved haul and access routes and existing tracks and keep them out of no-go areas. - Keep access to the Walker Bay Winery, Walker Bay Estate and Klein Rivier Estate open at all times, and agree any temporary diversion in advance with the affected owners and signpost it. METHOD: To be monitored by ECO and project manager as well as construction team leaders	Duration of Construction	A safe working environment with minimal impact on no-go areas, dust, loss of load and the public, and uninterrupted access to neighbouring properties	Project Manager Contractor			
Emergencies protocol	- Staff to be aware of actions to be taken 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 is available on site, and in working order - No open fires are lit on site without approval of the ECO and Site Manager METHOD: To be checked by the ECO and project manager and implemented by the contractor	Duration of Construction	A safe working environment with minimal incidences Action plan in the event of a fire	Project Manager Contractor			
Contractors camp	- Contractor's Camp is located at the most suitable site as identified by the ECO and Site Manager, preferably in areas to be developed or used (i.e roads or house footprints) or already transformed areas - Contractor team to be briefed regarding Do's and Don'ts of camp and site in general - Suitable toilet facilities are provided for all staff - The contractor will be responsible for providing all sanitary arrangements for the sub-contractor's team. It is proposed that one toilet for 15 people will be established on site. - Sanitary arrangements shall be to the satisfaction of the ECO and local authority. Sanitary bins must be provided at each	Duration of Construction	A well placed and functional contractors camp to minimise impacts on other areas on site	Project Manager Contractor			

	ablution for ladies working on site. - Ablutions are to be restricted to the facilities provided - Toilets are to be kept in a hygienic condition and emptied regularly - Recommendations by Freshwater specialist will be implemented METHOD: Site to be determined in conjunction with project manager and ECO, to be well demarcated with appropriate signage, serviced and cleaned on a regular basis, checked by ECO							
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CONSTRUCTION							
TASK	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY	COMPLETED YES/ NO	DATE	COMMENT
Topsoil removal and stockpiling	- Replace topsoil immediately after works where required. - Stockpile topsoil removed from direct work areas separately from subsoil and reuse it as far as possible, including for the landscape plan. - Shape stockpiles to prevent leaching of nutrients and stabilise them against dispersal by wind or rain. Keep topsoil berms low (not exceeding 1.5 m) and seed or cover them if left for extended periods. - Do not place stockpiles in the vineyards, the Ficus protection zones or any other no-go area METHOD: Implement conditions outlined in EMP for stockpiling and topsoil removal	Duration of Construction	Reusable sand and soil stockpiles to facilitate rehabilitation of the site	Project Manager Contractor			
Earthworks	- Works to be restricted construction area only - Bulldozer/ heavy machinery operators to be under constant supervision particularly at onset of works - Use and excessive movement of heavy machinery to be avoided	Duration of Construction	Minimal disturbance to sensitive zones, minimal disturbance to vegetation	Project manager Contractor ECO			

	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 from which it originated - Fill material to be compacted to its approximate original density METHOD: Construction zone to be clearly demarcated, instruction for stockpiling to be implemented, operators to be briefed prior to works						
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 the ECO - Strict measures to be put in place for the use and storage of hazardous materials on site - Disposal to licenced facility only - These areas shall comply with fire safety requirements - Impervious materials are to be used to prevent contamination of the ground in the event of spillages or leaks - Construction materials spilled on public or private roads to be immediately cleaned - No storage other than contractor camp METHODS: 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			

Palaeontological chance finds	- Implement the Palaeontological Chance Find Protocol for the whole construction period (refer to Page 28 to 31 of the HIA report). Excavations for foundations, roads, drainage and services below the disturbed soil (typically deeper than 1.5 to 2 m) may reach the fossil-bearing Ceres Subgroup (very high palaeontological sensitivity). - The ECO must monitor all excavations deeper than 1.5 m or that reach fresh bedrock, and inspect them for fossils before backfilling. - If a fossil is found: stop all work within a minimum 10 m radius; do not remove or further expose the fossil; demarcate and protect the area (barrier tape, signage, plastic sheeting held down with sandbags); photograph the find with a scale and record its GPS position, depth and context; the finder reports to the supervisor, who informs the Project Manager and ECO. - The ECO notifies HWC within 24 hours, with a preliminary report (project name and location, case number, date, time and GPS position, description, depth, finder, activity and photographs). Contracts: HWC, 3 Dorp Street,						
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	Cape Town, 8001, 021 483 9685, info@hwc.org.za, Case Officer Emily-Jane Vowles (emily.vowles@westerncape.gov.za); alternatively SAHRA, 111 Harrington Street, Cape Town, 021 462 4502, info@sahra.org.za. - If HWC requires rescue excavation, a qualified palaeontologist must obtain a SAHRA fossil collection permit before starting, and material must be deposited in an accredited repository with a mitigation report to HWC. The Developer bears the costs. - No work within the exclusion zone may resume until HWC has issued written clearance. Other areas may continue with the ECO's approval, provided a buffer is kept. - The ECO keeps a Chance Find Register and reports non-compliance immediately. METHOD: Monitoring and training as per the Chance Find Protocol.						
Archaeological material and graves	- If any archaeological material, historical remains or human remains are exposed, stop all work in the vicinity immediately and secure the area.	Duration of construction (excavations)	No unauthorised disturbance of archaeological material or graves	No unauthorised disturbance of archaeological material or graves	ECO Project Manager Contractor		

	- Report the find to the ECO, who informs HWC without delay. - Do not disturb, move or remove any such material or grave without a permit in terms of Sections 35 and 36 of the NHRA. - Do not resume work in the area until HWC has authorised it in writing. METHOD: Site induction and the site protection procedures of the Chance Find Protocol.						
Protection of landscape features	- Fence the Ficus nitida avenue with a protection zone around the drip line of each tree. No excavation, compaction, stockpiling, storage or trenching within it. - Demarcate the retained vineyard blocks as no-go areas for vehicles, stockpiling, storage and hazardous substances. - Do not disturb the milkwood trees or work within their canopy zones. - Do not remove or prune any tree without the ECO's approval. - Do not remove or realign existing farm roads and field boundaries that are to be retained without the ECO's approval and, where required, the approval of the heritage specialist. - Report any damage to the ECO immediately and remedy it in	Duration of construction	Ficus avenue, vineyards and milkwoods must be retained.	Project Manager Contractor ECO			

	consultation with a horticulturist or landscape architect. METHOD: Fencing checked weekly by the ECO and repaired as needed.						
Visual and Scenic route	- Keep the site, camp, stockpiles and waste and batching areas tidy, screened and inconspicuous from the R43 and R326. - Keep stockpiles low and away from the site boundaries. - Keep the extent of cleared ground to a minimum and phase clearance. - Site fencing and hoarding to be recessive. No billboards or advertising other than statutory and safety signage. - The site officer walks the site daily to check site aesthetics and visual impacts, particularly before weekends and holidays. - Ensure waste and batching areas are secured against dispersal by wind, rain or animals. METHOD: Daily walk-over, and ECO inspection compared with the baseline photographs.	Daily (site officer); at each ECO inspection	Minimal visual intrusion on the scenic routes and sensitive receptors	Project Manager Contractor ECO			

Access to neighbouring properties and the Wandelpad	- Keep access to the Walker Bay Winery, Walker Bay Estate, Klein Rivier Estate and the Wandelpad open at all times. - Agree any temporary diversion or closure in advance with the affected owners and signpost it. - Do not obstruct the pedestrian gate and route to the Wandelpad and Klein River. - Record and respond to complaints in the complaints register. METHOD: ECO check at each inspection; liaison with owners.	Duration of construction	No unagreed loss of access	Project Manager Contractor ECO			
Material handling, dispatching and storage	- Store fuels and hazardous materials in suitably equipped areas in the Contractor's camp, approved by the ECO. - Apply strict measures for the use and storage of hazardous materials, and comply with fire safety requirements. - Use impervious materials to prevent ground contamination from spills or leaks. - Dispose of waste at a licensed facility only. - Clean up construction materials spilled on public or private roads immediately. - No storage other than in the contractor's camp.	Duration of construction	Minimal disturbance to sensitive zones and minimal incidents	Project Manager Contractor ECO			

	METHOD: Regular inspections of areas and procedures.						
Stockpiles	- Sites for stockpiling as identified by the Contractor are to be marked on a plan, and approved by the ECO and Site Manager - Stockpiles must be suitably stabilized where necessary METHODS: Undertake regular checks of stockpiles to ensure methods outlined in the EMP and Dune EMP are implemented	Duration of Construction	Reusable sand and soil stockpiles to facilitate rehabilitation of the site.	Project Manager Contractor ECO			
Waste management	- All waste to be stored in an appropriate contained area on site, and 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 is allowed - Eating areas must be demarcated and provided with suitable refuse collection areas METHOD: Waste areas to be designed correctly and be wind and weatherproof and emptied on a regular basis	Duration of Construction	A clean waste collection point which is serviced on a regular basis	Project Manager Contractor ECO			
Construction wastewater	- Careful runoff management will be required particularly during construction. No contaminated water should be allowed to seep	Duration of Construction	A clean site post construction	Project Manager Contractor ECO			

	into the ground or runoff the construction site - All runoff from batching plants, work areas and mixer washings to be contained in sedimentation ponds, which are suitably lined - Ponds must be allowed to dry out regularly, and solid waste removed and disposed of at a site approved by the local authority. METHOD: Wastewater areas to be suitably designed and inspected on a regular basis						
Maintenance of equipment	- All mechanical equipment and work vehicles to be stored, serviced and refuelled at designated areas in the 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	- Put measures in place to prevent erosion from diversion, restriction or increase of stormwater runoff, and to prevent stormwater flowing from excavated areas or stockpiles. - Manage construction stormwater on site so that runoff is not concentrated, using berms, silt fences and temporary swales.	Duration of Construction	A clean site, and no additional impact on the surrounds or the river system	Project Manager Contractor ECO			

	- Construct the permanent swales and water-catching features shown on the landscape plan early in the programme and protect them from siltation. - Do not discharge sediment-laden water to the surrounding land or towards the Klein River or Millstream. - Contain stormwater carrying harmful substances and remove it from site. METHOD: Regular inspections undertaken						
Erosion	- Stormwater channels are to be kept clear from soil and debris - Erosion or stormwater damage resulting from Contractor's operations to be suitably repaired - Suitable stabilization measures are to be implemented wherever works are taking place as outlined in this document - Where erosion is detected, suitable mitigation methods are to be employed as soon as possible METHOD: Regular visual inspections undertaken	Duration of Construction	A clean site post construction, avoiding additional impact on surrounds	Project Manager Contractor ECO			
Dust	- Sand stockpiles are to be covered with Hessian, shade cloth or DPC plastic	Duration of Construction	A clean site post construction, avoiding additional impact on surrounds, avoidance of impacts on general public	Project Manager Contractor ECO			

	- Stockpiles are to be located in sheltered areas and the useable face to be orientated away from the prevailing wind - Excavation and transporting erodible material during high wind conditions - water dampening measures or cessation of activities should be required - If necessary, certain components of the work should be stopped until conditions are more favourable - Vehicles must not exceed 40 km/h along gravel roads - If roads generate unacceptable levels of dust, suppression measures should be introduced - If water is used only the critical areas should be watered by cart or hand to avoid unnecessary run-off, erosion or misuse. METHOD: Areas and activities of possible dust generation to be inspected on a regular basis, as well as strategies to address dust						
Noise and Working hours	- Limit noise levels (install and maintain silencers on machinery). - Provide ear protection to workers. - Maintain vehicles and machinery regularly.	Duration of construction	No noise nuisance to neighbours and tourist facilities	Project Manager Contractor ECO			

	- Restrict construction to normal work hours. METHOD: Complaints monitored through the complaints register.						
Site clean-up and rehabilitation	- All structures, equipment materials and facilities are to be removed from site on completion of the project - Construction site shall be cleared and cleaned to the ECO's satisfaction - Site / Area Rehabilitation to be conducted in line with recommendations herein - Specialist advice to be sort where required - No waste or remaining materials to be buried on site - 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. METHOD: Inspected upon site closure / suspension of works, rehabilitation methods contained in EMP and Dune EMP to be implemented	Duration of Construction	A functional ecosystem post construction, suitably rehabilitated as required	Project Manager Contractor Applicant ECO			

Alien Clearing	- An AIPS control plan must be compiled which includes measures to control and prevent the proliferation of AIPS during the operational phase. - The plants should be removed by digging out all rhizomes / stolons. - 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. METHOD: Regular monitoring of rehabilitation progress, alien plant regrowth, and any faunal presence should be conducted during and after the construction phase. Adaptive management practices should be applied to address emerging issues and ensure that the long-term ecological integrity of the site is maintained.	Construction and Post-construction phase	Long term ecological integrity and restoration of vegetation onsite.	Project Manager Applicant Contractor ECO			
Ecological	- Since the site is confirmed to be in a highly transformed state with no intact original vegetation remaining, clear only the minimal footprints strictly required for civil services, internal roads, and top structures	Construction and Post-construction Phase	Long-term ecological recovery	Project Manager Applicant Contractor ECO			

	to protect the remaining soil profile. - Before clearing, check for slow-moving fauna and move any found to safe adjoining habitat by a suitably qualified person. - Stockpile cleared topsoil in low berms (not exceeding 1.5m in height) and seed or cover them if left for extended periods to prevent erosion. - Implement an active Alien Invasive Plant Management Plan during and immediately post-construction to continuously eradicate emerging weeds on disturbed soils. - Restrict all residential estate and open space landscaping exclusively to endemic, water-efficient species representative of the local Elim Ferricrete Fynbos and Agulhas Limestone Fynbos biomes (such as <i>Olea europaea</i>, <i>Protea</i>, <i>Leucadendron</i>, and <i>Elegia tectorum</i>) to actively support local fynbos restoration.						
POST-CONSTRUCTION PHASE							

TASK	ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION	FREQUENCY	TARGET / OUTCOME	RESPONSIBILITY	COMPLETED YES/ NO	DATE	COMMENT
Landscape plan implementation and management	- Implement the approved landscape plan in full, including the biodiversity corridors, open-space nodes, swales and indigenous planting, and retain its principles through subsequent design stages. - Adopt a landscape and open space management plan in the HOA rules, covering maintenance of the vineyards, corridors, swales, Ficus Avenue and indigenous planting, and AIPS control. - Maintain the swales and water-catching features so that they continue to function. METHOD: Plan approved before transfer to the HOA; ECO confirms implementation at close-out.	Planting programme; maintenance ongoing	Landscape and ecological functions sustained	Applicant HOA ECO			
Design guidelines and built form	- Apply the Architectural Design Guidelines through an HOA design review process and approve plans before building. - Set garages back from the street, encourage houses that address the street with stoeps, and keep low, open boundary walls.	Before each building and ongoing	Built form consistent with the heritage indicators	Applicant HOA			

	- No visually impermeable walls or fencing, precast or "vibracrete" walls, unpainted cement block walls or razor wire along the scenic route interface. - Design the entrance gateway to be recessive, stepped back and not more than 10 m wide. - Use non-reflective finishes on windows and solar panels and orient panels to avoid glare towards receptors. METHOD: HOA design review and record.						
Lighting	- Use downward-facing, shielded fixtures for street, entrance and security lighting, and include lighting specifications in the design guidelines and the HOA rules. METHOD: Check at close-out and on complaints.	Ongoing	No light pollution to the surrounds	Applicant HOA			
Public access and connectivity	- Record the public access arrangements (opening hours for the winery, brewery, restaurant and amphitheatre, the main entrance, the pedestrian gate to the Wandelpad and the north-south corridor) in the HOA constitution and design guidelines. - Provide walking and cycling connections to the Agri-mark	Ongoing	A permeable estate that is connected to Stanford	Applicant HOA			

	edge, as provided for in the landscape plan, and secure the pedestrian connection under the existing bridge. - Concentrate security at cluster level as far as possible, not around the external perimeter. METHOD: ECO confirms provisions at close-out						
Scenic route setback and Erf 1197	- Retain the open space between the development and the scenic route in accordance with the approved layout.	Before construction is completed	Long-term visual and public function of the buffer secured	Applicant HOA			

11. DECOMMISSIONING PHASE

Not Applicable to this development.

12. 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

13. 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.

14. DECLARATION OF CONTRACTOR'S ACCEPTANCE

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

Signed: _____ Date: _____