LORNAY
ENVIRONMENTAL CONSULTING

Environmental Management Programme

Proposed Residential Development on the Remainder of the Farm 281, Struisbaai, Bredasdorp RD

November 2025

Consultant:

Michelle Naylor | Senior Env. Consultant **|** M.Sc., Pr. Sci. Nat., EAPASA
cell: 083 245 6556 **|** michelle@lornay.co.za **|** www.lornay.co.za

DOCUMENT CONTROL SHEET

ISSUED BY: **Lornay Environmental Consulting (Pty) Ltd**
Unit 5(1)F, Hemel & Aarde Wine Village
Hermanus
7201
Tel: 083 245 6556
www.lornay.co.za

CLIENT: Helemika Number 1 (Pty) Ltd

TITLE: Proposed Spookdraai Estate on the Remainder of the Farm Paapekuilfontein No. 281, Struisbaai, Bredasdorp RD

REFERENCE: EMP/RE-281/Rev1

REPORT DATE: 11 NOVEMBER 2025

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.

DETAILS OF THE AUTHOR(S)

EAP ORGANISATION:	Lornay Environmental Consulting (Pty) Ltd
AUTHOR(S):	Michelle Naylor
EAP REG. NO.:	EAPASA (2019/698)
SACNASP REG. NO.:	Pr. Sci. Nat (400327/13)
EAP QUALIFICATIONS:	Bachelor of Science (Hons); Master of Science (Rhodes University), EAPASA., SACNASP., IAIASA., cand. APHP
AUTHOR(S):	Njabulo Magoswana
EAP REG. NO.:	CAND. EAPASA 2021/3178
EAP QUALIFICATIONS:	BSc Hons., Environmental Geography

CONTENTS

LIST OF APPENDICES

LIST OF TABLES

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 – Helemika Number 1 (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 was applicable in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) regulations (2014) (as amended). Appendix 4 of the NEMA EIA Regulations (GN. R982) sets out the minimum requirements for the drafting of an Environmental Management Plan (EMP). This EMP has been created in fulfilment of these prescribed requirements for the construction phase of the activity. The implementation of this EMP will be a condition of approval of the Environmental Authorisation (EA). Failure by the applicant, to comply with this EMP, will therefore constitute an offence, and the applicant and / or the appointed contractors can be held liable for penalties and / or legal action. It is therefore important that a copy of this EMP be issued to each contractor, preferably at the appointment stage, in order to allow for the costs of implementing the EMP, to be included in cost proposals. This will also ensure that the contractor is aware of his responsibilities prior to appointment and commencement. Each appointed contractor involved in the project, as well as the project manager (as applicable), will be required to sign for and thereby acknowledge contents of, the approved EMP and therefore abide by the specifications of the document and any amendments thereto.

Other applicable legislation

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

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

National Environmental Management Act (Act 107 of 1998)

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

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

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

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

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

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

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

Environment Conservation Act (Act No. 73 of 1989)

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

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

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

Hazardous Substances Act (Act No. 5 of 1973)

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

1. INTRODUCTION

Lornay Environmental Consulting (Pty) Ltd has been appointed by Helemika Number 1 (Pty) Ltd, the "applicant" to ensure compliance with the regulations set forth in the National Environmental Management Act (NEMA, Act 107 of 1998), as amended, along with the Environmental Impact Assessment Regulations of 2014, as amended. This appointment pertains to the proposed subdivision and rezoning of the Remainder of the Farm 281 for the establishment of a residential development on Erf 281, Struisbaai.

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

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

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

Ensuring compliance with the Environmental Management Programme (EMPr) is essential during the construction and operational phase. A completion and closure audit will be required at the completion of the construction phase and as stipulated by the Environmental Authorisation (EA).

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

2. DEVELOPMENT PROPOSAL

The proposed residential development is located on the Remainder of Farm 281, Struisbaai. The site is situated within a narrow coastal strip with a rocky sandstone shoreline, on the seaside of Marine Drive. The Marine Drive Road reserve is located between Marine Drive and the subject property.

Figure 1: View of the subject property.

The proposed development entails the subdivision of the property to establish residential erven, open space, and service infrastructure components. Six residential erven (Erf 1 – 6) and associated infrastructure is applicable. In addition, a private internal road (Erf 9) with a footprint of approximately 900 m² will be developed, accommodating associated bulk service infrastructure such as sewer, water pipelines, and stormwater management systems. The total development footprint amounts to approximately 7 113 m². Furthermore, the formalisation of the existing beach access path on the western end of the site is proposed. This access will remain public in compliance with the requirements of the Integrated Coastal Management Act (Act 24 of 2008) (ICMA).

The proposal is detailed as follows:

Residential Erven

The subdivision of the property to create six residential erven is proposed. The construction of the houses will utilize conventional foundations and adhere to modern building practice in line with the recommendations from the Visual Assessment, Architectural Guidelines Document and Landscape Plan (See Appendix G4 and Appendix G6). The residential units will be constructed within a controlled building envelope and set back as far on the individual erf as possible through the relaxation of the rear building line to 0 m. The intention is to limit excessive coverage on sites and to ensure a maximum area of natural fynbos between houses as well as maximum space between southern building line and the high-water mark. The restriction of the footprint aims to reduce the

overall visual impact of the development. With the property sizes being relatively small and the form and slope of the site being difficult to work with, it is intended to limit the footprint and coverage to 50 % of each erf.

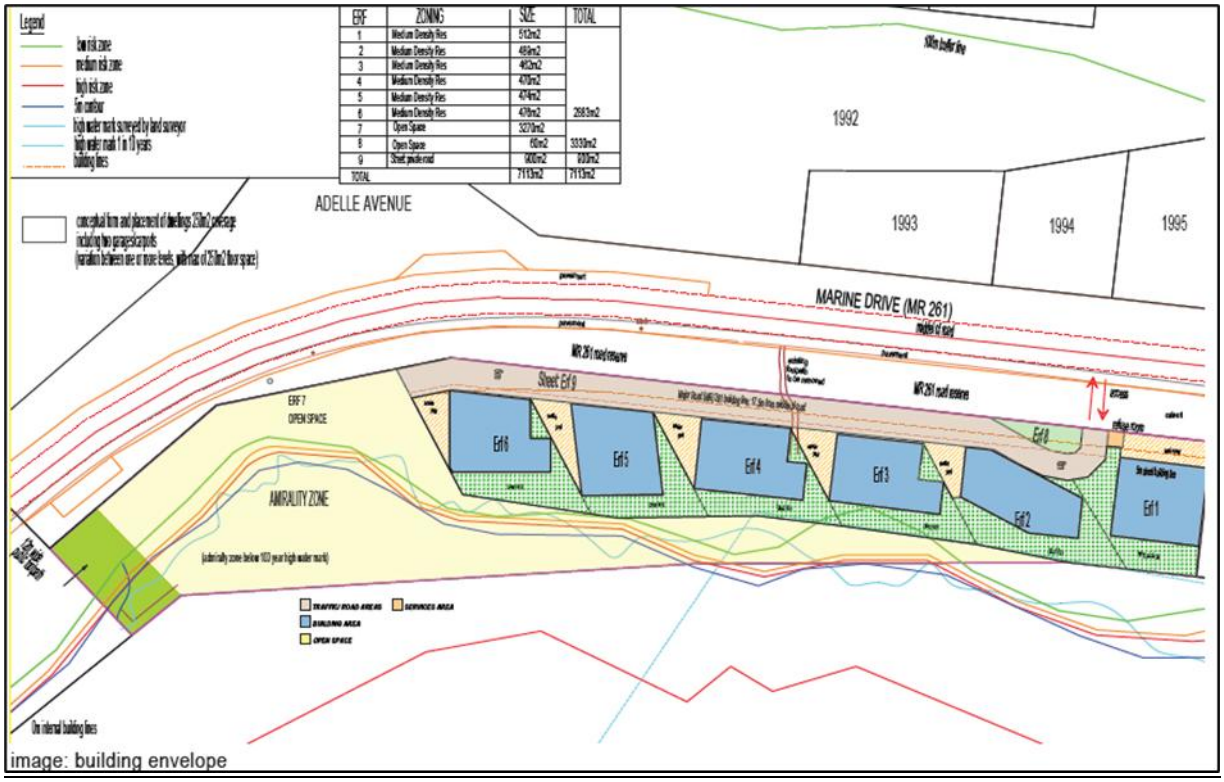

Figure 2. Extract from Architectural Guidelines document, showing the building envelope of the proposed development. Note the road reserve which separates the subject property and Marine Drive

Open Space Erven

Two open space erven are included in the development proposal.

- → Erf 7: Open Space Zone: 3270m^2 – comprises the beach area, access boardwalk and forms a communal open space.
- → Erf 8: Open Space: 60m^2

Road and Refuse Erven

- → A private road (Erf 9) covering a footprint of approximately 900 m^2 with a maximum width of 6 m and a length of 160 m will be constructed to provide access to the proposed residential development and accommodate associated bulk service infrastructure such as sewer, water pipelines, and stormwater management systems.
- → A refuse room will be located near the entrance of the development to facilitate waste collection and provide adequate access for municipal refuse vehicles.

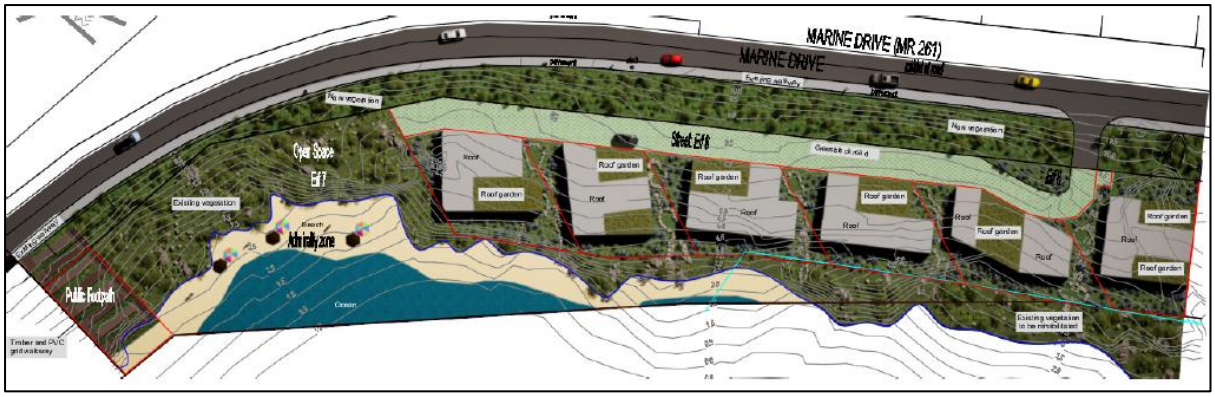

Figure 3: The proposed site development plan.

Bulk Services

See Civil Engineering Report Attached as **Appendix G**

Water

→ There is an existing 100 mm municipal watermain located on the northern side of Marine Drive (MR261). The proposed development would be required to link to this existing watermain and to provide a bulk water for the Cape Agulhas Municipalities metering process.
→ The ground level heights of the proposed development will not provide any low water pressure problems, as it is situated directly below the Struisbaai municipal water reservoirs, and the existing level difference is approximately 54 m.
→ The maximum water pipe size for the proposed development will be 110 mm diameter.
→ The internal water pipes will be sized to cater for the proposed development's peak water demand and fire requirements and will be constructed to the Cape Agulhas Municipalities minimum acceptable standards. The developer will provide the entire water network including all pipes, valves, hydrants and bends.
→ The water pipelines will be installed behind the road edge and will follow the existing roads as far as possible. The water pipelines will be installed in trenches up to 1 m deep and 700 mm wide.
→ The Cape Agulhas Municpality has provided confirmation of services, however alternative water resources have been factored into the design i.e. rainwater harvesting and water saving devices.
→ The water connection to the proposed development will be taken from the existing municipal watermain at Marine Drive (Provincial Main Road MR261).

Sewer

→ The existing municipal sewer infrastructure along Marine Drive (MR261) currently comprises of septic tanks and conservancy tanks. No municipal gravity pipeline system currently exists.

→ The proposed development will be required to operate off a gravity sewer system that is linked to a conservancy tank for the municipality to extract the sewerage with a tanker system. If the municipality installs a bulk gravity sewer system, the conservancy tank could be converted to a sewer pump station, and the sewerage could be pumped to the municipal gravity sewer system.

→ The maximum sewer pipe size will be 160 mm (0.16 m) diameter.

→ The sewer pipes for the proposed development will be sized to cater for the proposed development's peak flow conditions. The sewer system will comprise of a waterborne gravity sewer system and a conservancy tank system, and all areas of the proposed development will be served with sewer connections.

→ The sewer pipelines will be installed under the surfaced road area and will follow the existing roads as far as possible. The main pipelines will be installed in trenches up to 2.5 m deep and 0.8m (800 mm) wide. The erf sewer connections will be 1.2 m deep.

→ The sewer reticulation will consist of 110 mm and 160 mm class 34 heavy duty uPVC solid wall pipes.

→ The sewer from the proposed development will connect to a conservancy tank system that will be serviced by the Cape Agulhas Municipality as per the municipal service confirmation letters

Roads

→ The proposed development is adequately serviced by Marine Drive (Provincial Main Road MR261). The access to the proposed development will be taken off Marine Drive (Provincial Main Road MR261). The new internal road access will be designed to allow sufficient entry and exit lanes to the various areas of the proposed development. All roads and turning circles will be of a suitable width and radius to allow the comfortable movement of passenger, municipal, refuse and emergency vehicles and all roads will be designed to provide access to the proposed erven.
→ The internal road will cover a footprint of approximately 900m^2 with a maximum width of 6 m and a length of 160 m.

Stormwater

→ No municipal stormwater management system exists on Marine Drive (MR261), but an existing municipal stormwater outlet exists on the eastern boundary of the proposed development. This municipal stormwater system is an outlet for the residential developments to the north of Marine Drive and exits between erven 1995 and 1003. It must be noted that this stormwater system drains onto the proposed development and would need to be redirected around the proposed development as it is currently causing erosion across the proposed SR Erf 1.
→ The stormwater flow from the proposed development will be accommodated in the proposed development. The major system will be accommodated within the road reserve area and will be based on the 100-year storm event and the piped underground stormwater system will be designed to accommodate the 2-year storm event. The attenuation volume will be based on the post-development flow less the pre-development flow. In this manner, erosion and stormwater damage can be minimised and the existing ground water system can be recharged. All erf and road levels within the proposed development will be shaped to create the necessary falls towards the proposed stormwater system.
→ The stormwater system from the proposed development will exit to the sea, but will be managed through a stormwater dissipation, silt and debris trap to prevent any contamination at the coast, with reno-mattresses at the overflow, to prevent any erosion. The same structure will be used at the realignment of the existing municipal stormwater system. These stormwater structures will be set back far enough to not be affected or affect the tidal conditions along the coast. The maximum pipe size to be provided at the proposed development will be 450mm diameter.
→ A Stormwater escape route has been designed for between each erf as illustrated in **Figure 4** below.

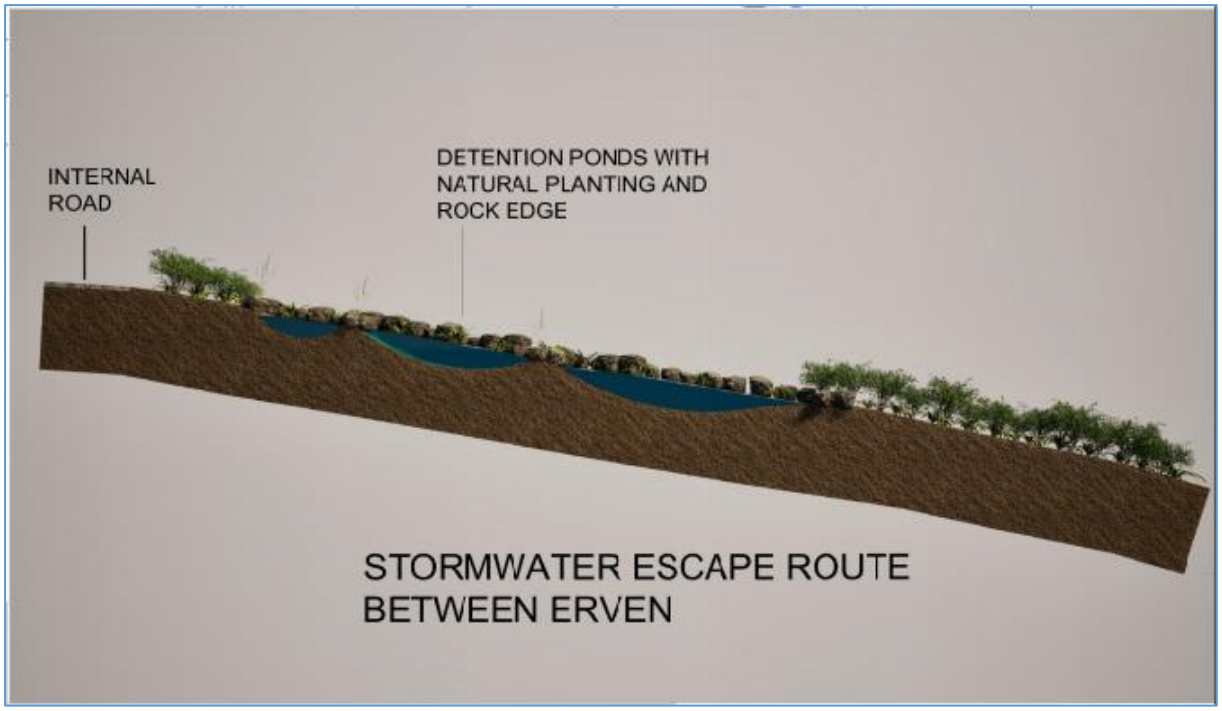

Figure 4: Stormwater escape route between each erven.

Solid Waste

→ The refuse from the development will be collected by the Cape Agulhas Municipality. There will be refuse bins provided at each proposed residential unit, which will be taken weekly to the proposed refuse room, which is situated close to the entrance of the proposed development. An adequate turning facility will be provided at the refuse room for the municipal refuse trucks.

Electricity

→ The evaluation of the developments electrical requirements has been undertaken by Converge Consulting.
→ Converge Consulting has engaged with Cape Agulhas Municipality and have received feedback that the proposed anticipated maximum demand of approximately 67kVA is available from an existing nearby 250kVA miniature substation
→ The minisub was manufactured in 1960 and will therefore need to be replaced as part of the development.
→ All upgrades to infrastructure including minisub, LV main and distribution breakers in the substation will be for the developer's account, and all cabling from the substation to the site and all other work on site must be done by the developer's contractors.
→ Marine Drive is a provincial road and permission to do road crossings must be obtained from province. The metering to the development can either be a maximum demand meter (78KVA) with private metering, or each erf can have a municipal prepaid meter.

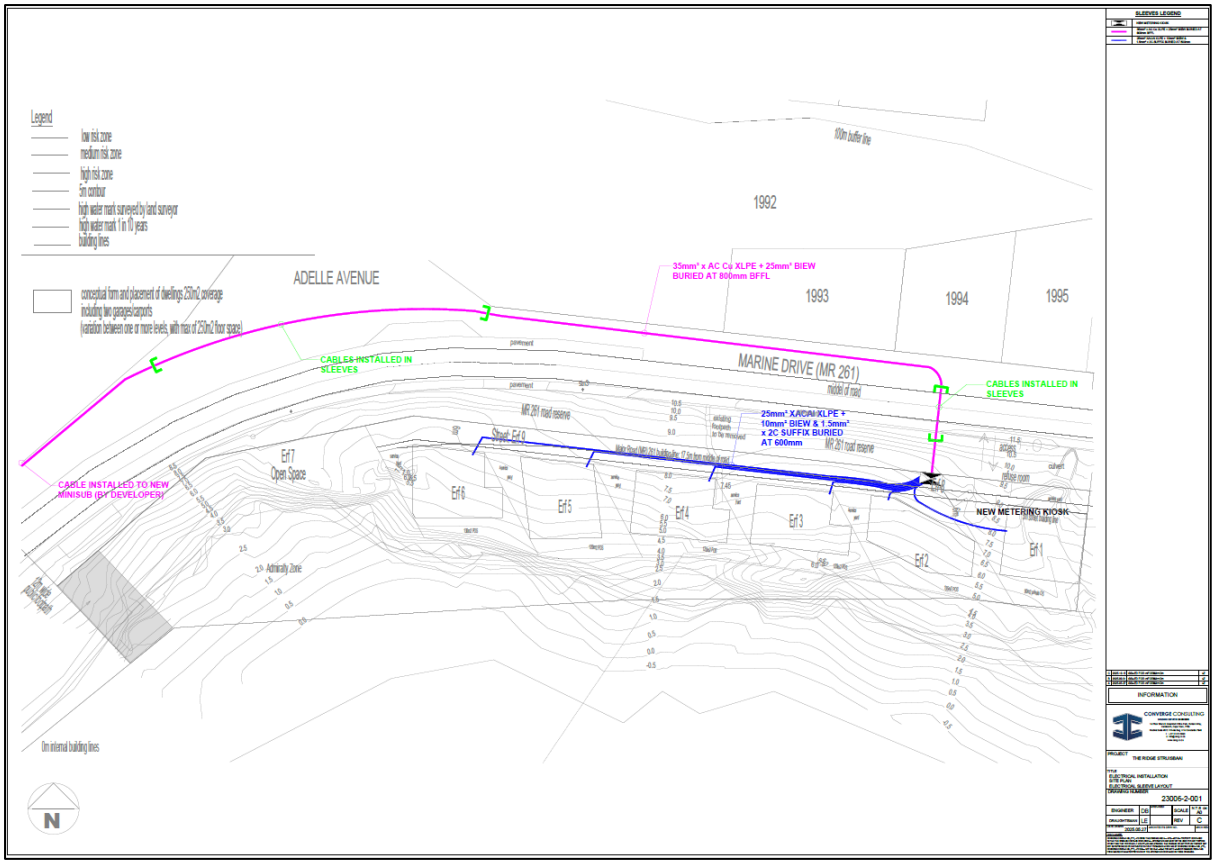

Figure 5. Electrical Sleeve Layout Plan – See Appendix G10

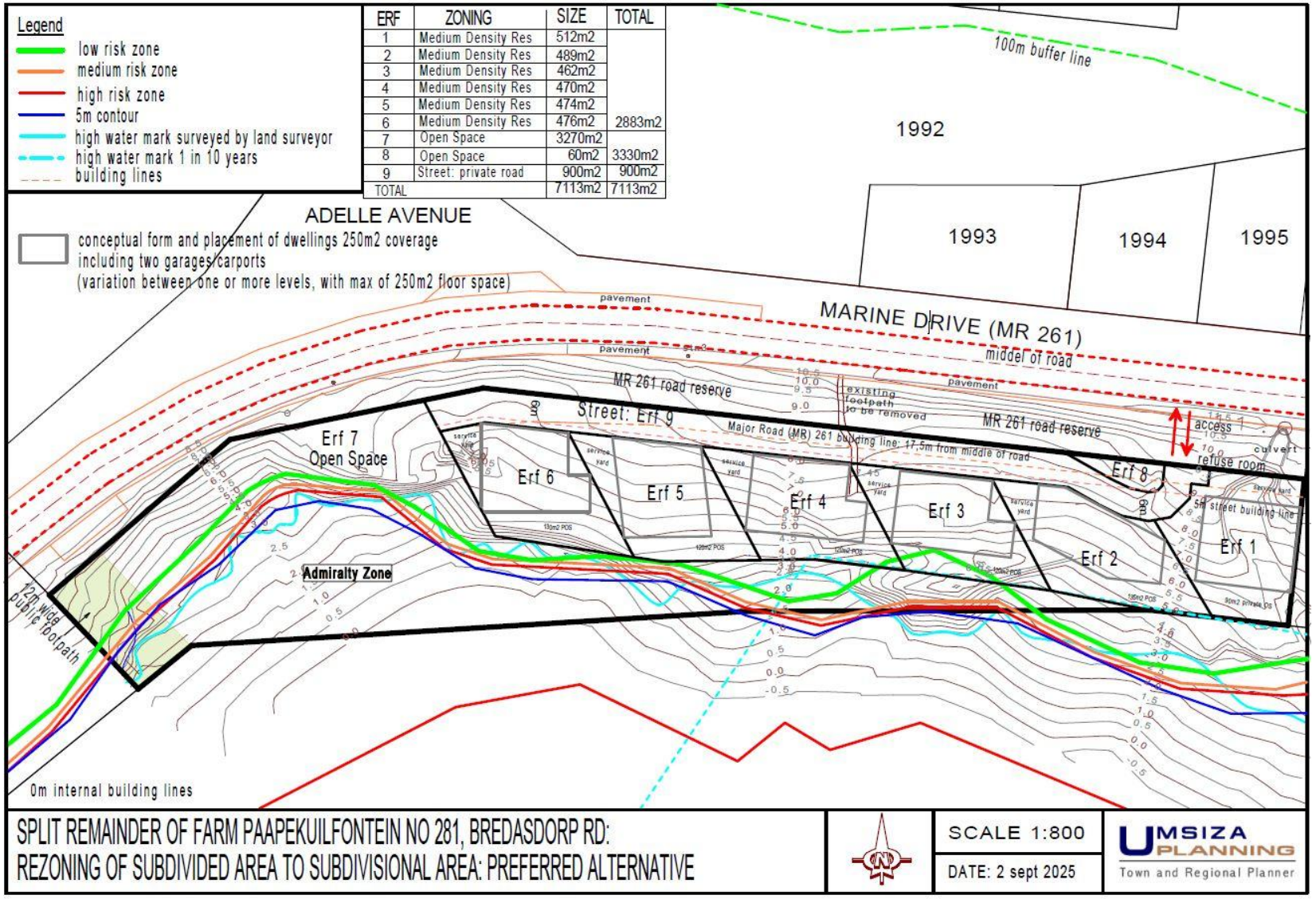

Figure 6: Proposed site development plan.

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 of the proposed development on Remainder of the Farm No. 281, Struisbaai. The EMPr serves as a guiding document to ensure that construction and post-construction activities 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 activities associated with the proposed development, including site preparation, development of housing, road and public pathway as well as the private open spaces.
- 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.

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

Environmental Site Instruction

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

Site Diary

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

Monitoring Section

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

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

5. 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 Terrestrial Biodiversity Impacts

Potential impacts:

There would be almost total loss of the strandveld vegetation on the site except for that at the western end of the site with the beach, and a limited area of Cape Seashore Vegetation would remain intact.

Management of impacts and Mitigation measures:

→ Since the western end of the site supporting Agulhas Limestone Fynbos would remain intact, Alternative 5 mitigates the effect of all the previous layout since the western end of the site would not be developed and incorporates more public open space.

7.2. Palaeontological Impact Assessment

Potential impacts

The primary construction phase impacts may include the loss of fossil bones and archaeological material from excavations in the coversands and beach deposits.

Mitigation measures recommended by specialist:

→ The possible presence of fossils in the subsurface does not have an *a priori* influence on the decision to proceed with the proposed development. However, mitigation measures are essential. The potential impact has a moderate influence upon the proposed project, consisting of implemented mitigation measures recommended below, to be followed during the Construction Phase.

→ Although the inspection of construction excavations may be specified in the Archaeological Impact Assessment, it is not feasible for a specialist monitor to be continuously present during the Construction Phases, when fossils may be unearthed at any time. The rescue of fossil bones during earth works critically depends on spotting this material as it is uncovered during digging.

→ For successful mitigation, it is therefore crucial that earth works personnel must be involved in mitigation by watching for fossil bones as excavations are being made.

→ It is recommended that a protocol for finds of buried fossil bones, the Fossil Finds Procedure (FFP), is included in the Environmental Management Plan (EMP) for the proposed development.

→ The Fossil Finds Procedure included as Appendix 2 provides guidelines to be followed in the event of fossil bone finds in the excavations. The works supervisor/foreman and workers involved in excavating the building foundations, infrastructure trenches and stormwater drainage must be informed of the need to watch for fossils and archaeological material. Workers seeing potential objects are to cease work at that spot and to report to the works supervisor who, in turn, will report to the Environmental Control Officer (ECO) and/or the Developer. The ECO/Developer will contact and liaise with Heritage Western Cape and the standby palaeontologist on the nature of the find and suitable consequent actions such as immediate site inspection, application for a palaeontological collection permit and drafting of a work plan for the collection of the find.

→ If a significant occurrence of fossil bones in a palaeontological context is discovered a professional palaeontologist must be appointed to collect them and to record their contexts. Said palaeontologist must also undertake the recording of the stratigraphic context and sedimentary geometry of the exposure, the sampling of ambient small fossil content and the compilation of the report for distribution to Heritage Western Cape, SAHRA, the approved curatorial institution and local heritage interest groups.

→ A permit from HWC is required to excavate fossil bone finds. The applicant should be the qualified specialist responsible for assessment, collection and reporting (palaeontologist). Should fossils be found that require

rapid collecting, application for a palaeontological permit with supporting work plan will immediately be made to HWC. The application requires the details and permission of the registered owner of the site. The fossils and their contextual information must be deposited at a SAHRA/HWC-approved institution. The rescue of discovered palaeontological remains by a contracted specialist shall be at the Developer's expense.

7.3. Visual Impact Assessment

Potential impacts:

- → Transformation of the site from a coastal zone to a built up urban landscape will take place
- → Potential visual intrusion on the foreground of the scenic experience along the route can be expected.
- → Change of the nature of the scenic route
- → Change in views of the coastal areas.

Mitigation measures recommended by specialist:

- → Strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), should be enforced.
- → In addition it is recommended that the landscape and visual indicators are implemented and these parameters are incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines dated 12-09-2025 must be strictly adhered to to ensure long-term mitigation of the visual intrusion and impact.
- → This includes any new additions and alterations, an architectural and landscape design review commitee must assess each application and amendment individually and no building works or landscape works take place without prior approval.
- → Use of greening and permeable fencing along the significant edges. Provide clear sightline and view corridors by providing green buffers. Keeping the significant portion along Spookdraai as an open space.
- → Limiting construction to within hoarding areas.
- → Maintain the access to the beach and footpath which are currently along the coastline and an amenity to the public
- → Create green continuous corridors between units to ensure ample visual connection with the ocean from Marine Drive and the existing development adjacent to the site. These must be generous and allow for unobstructed views.
- → Maintain a generous green edge of indigenous vegetation with no trees or exotic and manicured gardens. The buffer to be a minimum of 2m to allow the natural occurring shrubs to grow.
- → The roof-scape must be interrupted to avoid continuous heights perceived from Marine Drive and surrounding areas. Avoid continuous structures that may have a cumulative effect of a "solid" wall architecture. All boundary walls must be permeable to allow vegetation and greenery to continue through the fencing. There should be no fencing along the sea edge of the property.
- → The alternative (which is expressed in the renders supplied) is a modern rendition of a dwelling. Should this be the route then the roof-scape and heights must be restricted as is illustrated in the sketch over the render supplied. Where possible the roofs must be vegetated "green roofs".

7.4. Archaeological Impact Assessment

Potential impacts:

Archaeological specialist indicates that a proposed housing development on re Farm 218 – Re (seafront) does not pose a significant threat to local Stone Age archaeological resources. However, excavations for building foundations and services may uncover buried archaeological deposits.

Mitigation measures recommended by the specialist:

→ No archaeological mitigation is needed prior to construction excavations commencing.

→ Archaeological monitoring of building foundations and services (e. g. water, electricity, sewerage, stormwater) must be conducted by a professional archaeologist.

→ If any unmarked human remains are uncovered or exposed during excavations, work must stop, and the finds reported to the Environmental Control Officer and the contracted archaeologist (Jonathan Kaplan 082 321 0172). Human remains must not be removed or disturbed until inspected by the archaeologist.

7.5. Heritage Impact Assessment

Potential impacts

Archaeology

The proposed development is not expected to have a significant impact on archaeological resources

Palaeontology

The primary construction phase impacts may include the loss of fossil bones and archaeological material from excavations in the coversands and beach deposits.

Landscape/ Visual

Transformation of the site from coastal zone to built-up urban landscape. Potential visual intrusion on the foreground of the scenic experience along the route.

Change of the nature of the scenic route. Change in views of the coastal areas.

Mitigation measures recommended by specialist

Palaeontology

→ Should the development proceed, proposed mitigation recommendations must be incorporated into the Environmental Management Plan (EMP) for the proposed development.
→ Palaeontological, archaeological and botanical mitigations are proposed. In addition, strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), must be enforced.
→ In brief, the heritage, landscape and visual indicators are to be implemented and these parameters are to be incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines must be strictly adhered to, to ensure long-term mitigation of the visual intrusion and impact.
→ Public access to the beach must be provided via the public walkway on subdivision 7.
→ Although the inspection of construction excavations may be specified in the Archaeological Impact Assessment, it is not feasible for a specialist monitor to be continuously present during the Construction Phases, when fossil bones may be unearthed at any time. The rescue of fossil bones during earth works

critically depends on spotting this material as it is uncovered during digging. For successful mitigation, it is therefore crucial that earth works personnel must be involved in mitigation by watching for fossil bones as excavations are being made. It is recommended that a protocol for finds of buried fossil bones, the Fossil Finds Procedure (FFP) is included in the Environmental Management Plan (EMP) for the proposed development.

→ The field supervisor/foreman and workers involved in excavations must be informed of the need to watch for fossil bones and archaeological material. Workers seeing potential objects are to cease work at that spot and to report to the works supervisor who, in turn, will report to the Environmental Control Officer (ECO) and/or the Developer. The ECO/Developer will contact and liaise with Heritage Western Cape and the standby archaeologist or palaeontologist on the nature of the find and suitable consequent actions such as immediate site inspection, application for a palaeontological collection permit and drafting of a work plan for the collection of the find.

→ A permit from HWC is required to excavate fossil bone finds. The applicant should be the qualified specialist responsible for assessment, collection and reporting (palaeontologist). Should fossils be found that require rapid collecting, application for a palaeontological permit with supporting work plan will immediately be made to HWC. The application requires the details and permission of the registered owner of the site. The fossils and their contextual information must be deposited at a SAHRA/HWC-approved institution. The rescue of discovered palaeontological remains by a contracted specialist shall be at the Developer's expense.

Archaeology

→ No archaeological mitigation is needed prior to construction excavations commencing.

→ Archaeological monitoring of building foundations and services (e. g. water, electricity, sewerage, stormwater) must be conducted by a professional archaeologist.

→ If any unmarked human remains are uncovered or exposed during excavations, work must stop, and the finds reported to the Environmental Control Officer and the contracted archaeologist (Jonathan Kaplan 082 321 0172). Human remains must not be removed or disturbed until inspected by the archaeologist.

Visual

→ Strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), should be enforced.

→ In addition it is recommended that the landscape and visual indicators are implemented and these parameters are incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines dated 12-09-2025 must be strictly adhered to ensure long-term mitigation of the visual intrusion and impact.

→ This includes any new additions and alterations, an architectural and landscape design review committee must assess each application and amendment individually and no building works or landscape works take place without prior approval.

→ Use of greening and permeable fencing along the significant edges. Provide clear sightline and view corridors by providing green buffers. Keeping the significant portion along Spookdraai as an open space.

→ Limiting construction to within hoarding areas.

→ Maintain the access to the beach and footpath which are currently along the coastline and an amenity to the public

→ Create green continuous corridors between units to ensure ample visual connection with the ocean from Marine Drive and the existing development adjacent to the site. These must be generous and allow for unobstructed views.

→ Maintain a generous green edge of indigenous vegetation with no trees or exotic and manicured gardens. The buffer to be a minimum of 2m to allow the natural occurring shrubs to grow.

→ The roof-scape must be interrupted to avoid continuous heights perceived from Marine Drive and surrounding areas. Avoid continuous structures that may have a cumulative effect of a "solid" wall architecture. All boundary walls must be permeable to allow vegetation and greenery to continue through the fencing. There should be no fencing along the sea edge of the property.
→ The alternative (which is expressed in the renders supplied) is a modern rendition of a dwelling. Should this be the route then the roof-scape and heights must be restricted as is illustrated in the sketch over the render supplied. Where possible the roofs must be vegetated "green roofs".

7.6. Fauna Impact

Potential impacts

Struisbaai supports extensive sandy and mixed rocky–sandy beaches that provide suitable breeding and foraging habitat for *Haematopus moquini* (African Black Oystercatcher). Regional monitoring and citizen science data confirm the regular occurrence of this species along the southern Cape coast, with known breeding territories in the broader region. However, the section of beach adjacent to RE/281 is narrow (~30 m at its widest, with <3 m outside of the tidal zone) and the rocky tidal areas are largely depauperate of suitable prey species. Furthermore, high levels of recreational beach use in the vicinity are likely to deter breeding.

The immediate area adjacent to RE/281 is therefore not considered suitable as breeding habitat for *H. moquini.* The potential impact on this species is consequently assessed as low, with no expected loss of breeding habitat.

Impact management and Mitigation measures

→ Restrict all construction activities to daylight hours to minimise disturbance to nocturnal fauna. Limit vehicle and machinery movement to designated access routes and work areas to avoid unnecessary habitat disturbance. Store building materials on raised platforms or pallets to prevent their use as refuges by snakes and small mammals. No off-road driving should occur on beaches, dunes, or other sensitive habitats.
→ Enforce a no-harm policy for all wildlife encountered on-site, particularly reptiles. Any necessary relocation must be carried out by a suitably qualified and permitted handler. Prohibit domestic animals (e.g., dogs and cats) from entering the site during construction to reduce predation risk to native fauna. All site personnel should receive a brief induction on local fauna and the importance of species protection.
→ During the African Black Oystercatcher (*Haematopus moquini)* breeding season (October–March), survey the immediate project footprint and adjacent beaches for active nests. If nests are present, mark and maintain a minimum 50 m no-go buffer until chicks have fledged, in consultation with CapeNature.
→ Ensure all waste is stored in secure containers and regularly removed from the site to prevent attracting scavengers or predators. Avoid leaving food scraps or other organic waste exposed.

7.7. Traffic/ Transport Impact

Potential impacts

Traffic delay and congestion at intersections and road networks during the operational phase.

Impact Management and Mitigation Measures:

→ Routine road maintenance by the Roads Authority.

8. POST-CONSTRUCTION PHASE

This phase of the development refers to the operational phase, after construction has been concluded.

8.1 Botanical Impacts

Potential Impacts:

The post-construction impacts will take place after vegetation has been lost on the development areas, therefore, no further impact on vegetation.

Impact Management and Mitigation Measures:

→ Since the western end of the site supporting Agulhas Limestone Fynbos would remain intact, Alternative 5 mitigates the effect of all the previous layout since the western end of the site would not be developed and incorporates more public open space.

8.2. Visual impacts

Potential impacts:

→ The impacts associated with the post-construction phase includes the transformation of the site from a coastal landscape to residential (change in "sense of place").
→ New residential buildings and associated landscape
→ Residential activities / passive recreational use of internal open space
→ Increased traffic flows
→ Signage, Lighting at night.

Mitigation measures recommended by specialist:

→ Strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), should be enforced.
→ In addition it is recommended that the landscape and visual indicators are implemented and these parameters are incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines dated 12-09-2025 must be strictly adhered to to ensure long-term mitigation of the visual intrusion and impact.
→ This includes any new additions and alterations, an architectural and landscape design review commitee must assess each application and amendment individually and no building works or landscape works take place without prior approval.
→ Use of greening and permeable fencing along the significant edges. Provide clear sightline and view corridors by providing green buffers. Keeping the significant portion along Spookdraai as an open space.
→ Limiting construction to within hoarding areas.
→ Maintain the access to the beach and footpath which are currently along the coastline and an amenity to the public
→ Create green continuous corridors between units to ensure ample visual connection with the ocean from Marine Drive and the existing development adjacent to the site. These must be generous and allow for unobstructed views.
→ Maintain a generous green edge of indigenous vegetation with no trees or exotic and manicured gardens. The buffer to be a minimum of 2m to allow the natural occurring shrubs to grow.
→ The roof-scape must be interrupted to avoid continuous heights perceived from Marine Drive and surrounding areas. Avoid continuous structures that may have a cumulative effect of a "solid" wall

architecture. All boundary walls must be permeable to allow vegetation and greenery to continue through the fencing. There should be no fencing along the sea edge of the property.

→ The alternative (which is expressed in the renders supplied) is a modern rendition of a dwelling. Should this be the route then the roof-scape and heights must be restricted as is illustrated in the sketch over the render supplied. Where possible the roofs must be vegetated “green roofs”.

Table 2. Activity specific impacts and mitigations

PRE-CONSTRUCTION/ CONSTRUCTION PHASE AND POST-CONSTRUCTION PHASE			
IMPACT	**DESCRIPTION**	**MITIGATION MEASURES**	**RESPONSIBLE PERSONS**
Botanical Impacts	***Construction phase***: There would be almost total loss of the strandveld vegetation on the site except for that at the western end of the site with the beach, and a limited area of Cape Seashore Vegetation would remain intact. ***Post-construction phase:*** The post-construction impacts will take place after vegetation has been lost on the development areas, therefore, no further impact on vegetation.	- Since the western end of the site supporting Agulhas Limestone Fynbos would remain intact, Alternative 5 mitigates the effect of all the previous layout since the western end of the site would not be developed and incorporates more public open space.	Applicant Contractor ECO
Noise impacts	***Construction phase:*** Noise generated from the machinery moving during the 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 to reduce noise generation. - Restrict construction to normal working hours in line with municipal bylaws	ECO, Contractor Applicant
Dust Impacts	***Construction phase:*** Dust generated from the site clearing and site preparation phase is expected	- Maintain ground cover for as long as possible to reduce the total surface area exposed to wind. Do not clear the entire property, rather clear the building site only, as far as possible. - Ensure vehicle speeds limits on site are kept to a minimum. - Delivery vehicles to keep loads covered.	ECO Contractor Developer

		- Cover fine materials stockpiles - Wet dry and dusty surfaces using non-portable 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.	
Visual impacts	***Construction phase:*** Transformation of the site form coastal zone to built up urban landscape. Potential visual intrusion on the foreground of the scenic experience along the route. Change of the nature of the scenic route. Change in views of the coastal areas. ***Post-construction phase:*** The impacts associated with the post-construction phase includes the transformation of the site from a coastal landscape to residential (change in "sense of place"). New residential buildings and associated landscape Residential activities / passive recreational use of internal open space Increased traffic flows Signage, Lighting at night.	→ Strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), should be enforced. → In addition it is recommended that the landscape and visual indicators are implemented and these parameters are incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines dated 12-09-2025 must be strictly adhered to to ensure long-term mitigation of the visual intrusion and impact. → This includes any new additions and alterations, an architectural and landscape design review commitee must assess each application and amendment individually and no building works or landscape works take place without prior approval. → Use of greening and permeable fencing along the significant edges. Provide clear sightline and view corridors by providing green buffers. Keeping the significant portion along Spookdraai as an open space. → Limiting construction to within hoarding areas. → Maintain the access to the beach and footpath which are currently along the coastline and an amenity to the public	ECO Contractor Developer

		→ Create green continuous corridors between units to ensure ample visual connection with the ocean from Marine Drive and the existing development adjacent to the site. These must be generous and allow for unobstructed views. → Maintain a generous green edge of indigenous vegetation with no trees or exotic and manicured gardens. The buffer to be a minimum of 2m to allow the natural occurring shrubs to grow. → The roof-scape must be interrupted to avoid continuous heights perceived from Marine Drive and surrounding areas. Avoid continuous structures that may have a cumulative effect of a "solid" wall architecture. All boundary walls must be permeable to allow vegetation and greenery to continue through the fencing. There should be no fencing along the sea edge of the property. → The alternative (which is expressed in the renders supplied) is a modern rendition of a dwelling. Should this be the route then the roof-scape and heights must be restricted as is illustrated in the sketch over the render supplied. Where possible the roofs must be vegetated "green roofs".	
Socioeconomic impacts	***Construction phase:*** Job creation during the planning, design and construction phase. ***Post-Construction:*** Access to employment opportunities for the community during the operational phase, job creation, provision of housing for new residents moving into the area and investment opportunities, additional housing provided in response to need and demand.	***Construction phase:*** → Prioritize local hiring to maximize job creation for the community. → Ensure construction vehicles are adequately maintained, with proper scheduling and designated routes to minimize disruptions. → Ensure loads are securely fastened to prevent accidents or loss during transportation, which could impact public roads and road users ***Post-construction phase:***	ECO Developer Contractor

		- Investment in the area, attraction to the area. - Access to employment opportunities for the community during the operational phase, job creation, provision of housing in response to the provincial demand and investment in the area. - Engagement with local stakeholders to understand their needs and ensure the development benefits the local community. - Provision of affordable housing and support for local businesses to prevent displacement and encourage inclusive economic growth	
Transport/ Traffic impact	***Construction*** Traffic delay and congestion at intersections and road networks during the construction phase. ***Post construction*** Traffic delay and congestion at intersections and road networks during the operational phase**.**	***Construction phase:*** → Heavy construction traffic should not be allowed on the public road network during the typical a.m. and p.m. peak hours. ***Post-construction phase*** → Routine road maintenance by the Roads Authority.	ECO Developer Contractor
Fauna impact	***Construction*** Struisbaai supports extensive sandy and mixed rocky–sandy beaches that provide suitable breeding and foraging habitat for *Haematopus moquini* (African Black Oystercatcher). Regional monitoring and citizen science data confirm the regular occurrence of this species along the southern Cape coast, with known breeding territories in the broader region. However, the section of beach adjacent to	→ Restrict all construction activities to daylight hours to minimise disturbance to nocturnal fauna. Limit vehicle and machinery movement to designated access routes and work areas to avoid unnecessary habitat disturbance. Store building materials on raised platforms or pallets to prevent their use as refuges by snakes and small mammals. No off-road driving should occur on beaches, dunes, or other sensitive habitats. → Enforce a no-harm policy for all wildlife encountered on-site, particularly reptiles. Any necessary relocation must be carried	ECO Developer Contractor

	RE/281 is narrow (~30 m at its widest, with <3 m outside of the tidal zone) and the rocky tidal areas are largely depauperate of suitable prey species. Furthermore, high levels of recreational beach use in the vicinity are likely to deter breeding. The immediate area adjacent to RE/281 is therefore not considered suitable as breeding habitat for *H. moquini*. The potential impact on this species is consequently assessed as low, with no expected loss of breeding habitat.	out by a suitably qualified and permitted handler. Prohibit domestic animals (e.g., dogs and cats) from entering the site during construction to reduce predation risk to native fauna. All site personnel should receive a brief induction on local fauna and the importance of species protection. → During the African Black Oystercatcher (*Haematopus moquini)* breeding season (October–March), survey the immediate project footprint and adjacent beaches for active nests. If nests are present, mark and maintain a minimum 50 m no-go buffer until chicks have fledged, in consultation with CapeNature. → Ensure all waste is stored in secure containers and regularly removed from the site to prevent attracting scavengers or predators. Avoid leaving food scraps or other organic waste exposed.	
Archaeological Impact Assessment	***Construction phase:*** The proposed low density housing development on re Farm 218 – Re (seafront) does not pose a significant threat to local Stone Age archaeological resources. However, mitigation measures are added in case archaeological resources have been discovered.	- No archaeological mitigation is needed prior to construction excavations commencing. - Archaeological monitoring of building foundations and services (e. g. water, electricity, sewerage, stormwater) must be conducted by a professional archaeologist. - If any unmarked human remains are uncovered or exposed during excavations, work must stop, and the finds reported to the Environmental Control Officer and the contracted archaeologist (Jonathan Kaplan 082 321 0172). Human remains must not be removed or disturbed until inspected by the archaeologist.	ECO Developer Contractor
Palaeontological Impact Assessment	***Construction phase:*** The primary construction phase impacts may include the loss of fossil bones and archaeological material from excavations in the coversands and beach deposits.	- The possible presence of fossils in the subsurface does not have an a priori influence on the decision to proceed with the proposed development. However, mitigation measures are essential. The potential impact has a moderate influence upon the proposed project, consisting of implemented	ECO Developer Contractor

		mitigation measures recommended below, to be followed during the Construction Phase. - Although the inspection of construction excavations may be specified in the Archaeological Impact Assessment, it is not feasible for a specialist monitor to be continuously present during the Construction Phases, when fossils may be unearthed at any time. The rescue of fossil bones during earth works critically depends on spotting this material as it is uncovered during digging. - For successful mitigation, it is therefore crucial that earth works personnel must be involved in mitigation by watching for fossil bones as excavations are being made. - It is recommended that a protocol for finds of buried fossil bones, the Fossil Finds Procedure (FFP), is included in the Environmental Management Plan (EMP) for the proposed development. - The Fossil Finds Procedure included as Appendix 2 provides guidelines to be followed in the event of fossil bone finds in the excavations. The works supervisor/foreman and workers involved in excavating the building foundations, infrastructure trenches and stormwater drainage must be informed of the need to watch for fossils and archaeological material. Workers seeing potential objects are to cease work at that spot and to report to the works supervisor who, in turn, will report to the Environmental Control Officer (ECO) and/or the Developer. The ECO/Developer will contact and liaise with Heritage Western Cape and the standby palaeontologist on the nature of the find and suitable consequent actions such as immediate site inspection, application for a palaeontological collection permit and drafting of a work plan for the collection of the find.	

		- If a significant occurrence of fossil bones in a palaeontological context is discovered a professional palaeontologist must be appointed to collect them and to record their contexts. Said palaeontologist must also undertake the recording of the stratigraphic context and sedimentary geometry of the exposure, the sampling of ambient small fossil content and the compilation of the report for distribution to Heritage Western Cape, SAHRA, the approved curatorial institution and local heritage interest groups. - A permit from HWC is required to excavate fossil bone finds. The applicant should be the qualified specialist responsible for assessment, collection and reporting (palaeontologist). Should fossils be found that require rapid collecting, application for a palaeontological permit with supporting work plan will immediately be made to HWC. The application requires the details and permission of the registered owner of the site. The fossils and their contextual information must be deposited at a SAHRA/HWC-approved institution. The rescue of discovered palaeontological remains by a contracted specialist shall be at the Developer's expense.	
Heritage Impact Assessment	***Construction phase:*** <u>*Archaeology*</u> The proposed development is not expected to have a significant impact on archaeological resources <u>*Palaeontology*</u> The primary construction phase impacts may include the loss of fossil bones and archaeological material from excavations in the coversands and beach deposits.	<u>*Archaeology*</u> → No archaeological mitigation is needed prior to construction excavations commencing. → Archaeological monitoring of building foundations and services (e. g. water, electricity, sewerage, stormwater) must be conducted by a professional archaeologist. → If any unmarked human remains are uncovered or exposed during excavations, work must stop, and the finds reported to the Environmental Control Officer and the contracted archaeologist (Jonathan Kaplan 082 321 0172). Human	ECO Developer Contractor

	Landscape/ Visual Transformation of the site from coastal zone to built-up urban landscape. Potential visual intrusion on the foreground of the scenic experience along the route. Change of the nature of the scenic route. Change in views of the coastal areas.	remains must not be removed or disturbed until inspected by the archaeologist. *Palaeontology* - Although the inspection of construction excavations may be specified in the Archaeological Impact Assessment, it is not feasible for a specialist monitor to be continuously present during the Construction Phases, when fossil bones may be unearthed at any time. The rescue of fossil bones during earth works critically depends on spotting this material as it is uncovered during digging. For successful mitigation, it is therefore crucial that earth works personnel must be involved in mitigation by watching for fossil bones as excavations are being made. It is recommended that a protocol for finds of buried fossil bones, the Fossil Finds Procedure (FFP) (Appendix 2), is included in the Environmental Management Plan (EMP) for the proposed development. → The field supervisor/foreman and workers involved in excavations must be informed of the need to watch for fossil bones and archaeological material. Workers seeing potential objects are to cease work at that spot and to report to the works supervisor who, in turn, will report to the Environmental Control Officer (ECO) and/or the Developer. The ECO/Developer will contact and liaise with Heritage Western Cape and the standby archaeologist or palaeontologist on the nature of the find and suitable consequent actions such as immediate site inspection, application for a palaeontological collection permit and drafting of a work plan for the collection of the find. → A permit from HWC is required to excavate fossil bone finds. The applicant should be the qualified specialist responsible	

		for assessment, collection and reporting (palaeontologist). Should fossils be found that require rapid collecting, application for a palaeontological permit with supporting work plan will immediately be made to HWC. The application requires the details and permission of the registered owner of the site. The fossils and their contextual information must be deposited at a SAHRA/HWC-approved institution. The rescue of discovered palaeontological remains by a contracted specialist shall be at the Developer's expense. *Landscape / Visual* → Strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), should be enforced. → In addition it is recommended that the landscape and visual indicators are implemented and these parameters are incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines dated 12-09-2025 must be strictly adhered to to ensure long-term mitigation of the visual intrusion and impact. → This includes any new additions and alterations, an architectural and landscape design review commitee must assess each application and amendment individually and no building works or landscape works take place without prior approval.	

		→ Use of greening and permeable fencing along the significant edges. Provide clear sightline and view corridors by providing green buffers. Keeping the significant portion along Spookdraai as an open space. → Limiting construction to within hoarding areas. → Maintain the access to the beach and footpath which are currently along the coastline and an amenity to the public → Create green continuous corridors between units to ensure ample visual connection with the ocean from Marine Drive and the existing development adjacent to the site. These must be generous and allow for unobstructed views. → Maintain a generous green edge of indigenous vegetation with no trees or exotic and manicured gardens. The buffer to be a minimum of 2m to allow the natural occurring shrubs to grow. → The roof-scape must be interrupted to avoid continuous heights perceived from Marine Drive and surrounding areas. Avoid continuous structures that may have a cumulative effect of a "solid" wall architecture. All boundary walls must be permeable to allow vegetation and greenery to continue through the fencing. There should be no fencing along the sea edge of the property. → The alternative (which is expressed in the renders supplied) is a modern rendition of a dwelling. Should this be the route then the roof-scape and heights must be restricted as is illustrated in the sketch over the render supplied. Where possible the roofs must be vegetated "green roofs".	
Coastal Environment	***Construction phase:*** Risk of sprawl of construction activities into coastal zone (trampling,	- Development and construction areas must be marked with weather and animal proof barriers for the duration of the construction phase and the rest of the site must be marked a No Go	ECO Developer Contractor

	contamination, litter, stockpiles, unregulated access and footpaths) Public coastal access must be maintained during construction and post construction ***Post-construction phase:*** Alteration of the coastal landscape and potential degradation of coastal habitats due to increased human activity, infrastructure maintenance, and waste generation.	- Avoid encroachment to the coastal risk areas, such as low, medium and high-risk zones, as delineated on the site plan. This is to prevent the development from sea level rise and storm surges. - Establish buffer zones to protect sensitive coastal areas. - Implement long-term monitoring of coastal processes and habitats. - Restrict access to ecologically sensitive areas using signage or fencing. - Restore disturbed vegetation with indigenous coastal plant species. - Regularly remove waste and debris from the site to prevent pollution to the coastal environment. - Development and construction areas must be marked with weather and animal proof barriers for the duration of the construction phase and the rest of the site must be marked a No Go - Batching, stockpiles, mixing must be confined to development areas within the demarcated zones. - No dumping of rubble or any other materials are permitted - No hard landscaping is permitted seaside of the building footprints other than what is approved on the SDP - No infilling is permitted to create gardens or platforms - Establish buffer zones to protect sensitive coastal areas. - Implement long-term monitoring of coastal processes and habitats. - Restrict access to ecologically sensitive areas using signage or fencing. - Restore disturbed vegetation with indigenous coastal plant species. - Regularly remove waste and debris from the site to prevent pollution. - The construction area must be fenced off with weatherproof barriers before any site preparation begins. - All construction activities, including material storage, batching preparation, mixing, stockpiling, construction team	

		and vehicle movement, must remain strictly within this designated area. - Areas outside the fenced construction area should be designated as No-Go Areas for the duration of the construction phase and should be confined to the development footprint as far as possible. - Coastal access points must be clearly demarcated - Access points must be safe and away from construction areas.	

9. GENERAL CONSTRUCTION PHASE IMPACTS AND REQUIREMENTS

9.1 Contractors camp

Responsibility – Contractor / ECO / owner

The contractor shall comply will 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 contractors camp should be located in area proposed for development, in order to reduce impacting undisturbed areas. No overnighting will be permitted at the contractors camp, unless specifically arranged or required. Decommissioning of the campsite will involve removal of all compacted platforms, equipment machinery, tools, waste, etc. The contractors camp must be clearly demarcated before construction can commence and must be located within the approved development area. The contractors camp must not hinder public access to the coast.

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. General public safety must also be taken into account and all hazardous areas must be closed to the public and secured during weekends and public holidays.

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

Fuels and flammable materials are to be suitably stored, inside the contractor's camp or as appropriate. Impervious materials are to be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks. Quantities of fuels and hazardous materials stored on site should be appropriate to the requirement for these substances on site.

Bulk fuel depots, if required, should be placed within bunded areas to prevent soil contamination in the event of leaks of spills. Bunded areas are to have a holding capacity equal to 110% of the largest fuel container. The relevant Health and Safety requirements for the hazardous materials and fuels should be kept on site in the event of an emergency.

9.5 Emergencies protocol

Responsibility - Project Manager / Contractor / owner

Fire: The fire officer / suitable other person should be notified of any fires. Employees should be aware of the procedure to be followed in the event of a fire.

Hydrocarbon (fuel & oil) leaks and spillages: Employees should be aware of the procedure to be followed for dealing with spills and leaks, which shall include notifying the project manager / contractor. All vehicles leaking fuel or other liquids should immediately be removed to the maintenance area and repaired. In the event of a hydrocarbon spillage, the soil must be excavated and treated and adequately disposed. The necessary materials and equipment for dealing with spills and leaks are present on site at all times. The clean-up of sewerage spills and any damage caused by the spill or leak shall be for the applicant's account. The applicant shall ensure that the Health and Safety officer is available for the duration of the construction period.

Raw Sewerage spills (from portable toilets): Employees are to be aware of the procedure to be followed for dealing with spills and leaks. All the necessary materials and equipment for dealing with spills and leaks are present on site at all times. The clean-up of sewerage spills and any damage caused by the spill or leak shall be for the Applicant's account or applicable contractor.

Sudden illness in member of team: emergency numbers should be readily available on site in case of a sudden illness or injury to a construction team member.

Snake bite: Emergency contact numbers must be kept on site in case of a snake siting or snakebite.

9.6 Site Demarcation

Responsibility - Project Manager / Contractor / ECO / owner

Prior to any construction commencing, the construction areas must be clearly indicated with a weatherproof barrier. All areas outside of this area must be marked as No-Go areas for the construction team. Natural areas that should be retained should also be indicated at this stage. Following this, all construction works, as well as the storage or preparation of any materials must be within the demarcated boundaries of the construction zone.

9.7 Stockpiles

Responsibility - Project Manager / Contractor / ECO / owner

The contractor and / or project manager should identify sites for the stockpiling of building materials and excavated material. Stockpile sites should preferably be in areas with a gentle gradient. Stockpiles should be stabilised as required and monitored for dust blow and runoff / erosion. All stockpiling must be located within the demarcated construction zone.

9.8 General Wastes

Responsibility - Project Manager / Contractor / ECO / owner

Refuse refers to all construction debris (cement bags, rubble, timber, cans, nails, wire, spilt bitumen, glass, packaging, plastic, organic matter, etc.). Refuse generated during the construction phase must be stored in an appropriate area on site, and must be watertight and wind proof, and removed on a regular basis for disposal at a permitted disposal site. Waste bins should be labelled for their designated use. No burning or burying of general refuse on site should be permitted. Recycling and sorting of waste, at the source, is encouraged. Disposal certificates should be kept. Refuse areas must be located within the demarcated construction zone.

9.9 Recreational / Eating areas

Responsibility - Project Manager / Contractor / ECO / owner

If construction workers are permitted to eat on the development site, other than within the contractor's camp, the Contractor shall provide adequate refuse bins at all such places and ensure that they are used. Bins are to be cleared on a daily basis. Rest and eating areas must be located within the construction zone only.

9.10 Construction water

Responsibility - Project Manager / Contractor / ECO / owner

All cement effluent from mixer washings and run-off from batching areas, as well as other work areas, should be contained in suitable manner, these areas should be lined and allowed to dry from time to time in order to remove the solid materials. Care should be taken to prevent the runoff of construction water, to other areas on site or onto adjacent sites.

9.11 Equipment maintenance

Responsibility - Project Manager / Contractor / ECO / owner

All mechanical equipment and work vehicles which are present on-site during construction, are to be stored, serviced and refuelled only at designated areas within the demarcated construction site. Within these areas drip trays and other impervious materials, for example plastic or metal sheeting, must be used to prevent contamination of the ground. The project manager may order the removal of equipment that is causing continual environmental damage, until such equipment has been repaired.

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 must 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. No stormwater may be diverted into the coastal environment.

9.13 Topsoil Removal and Stockpiling

Responsibility - Project Manager / Contractor / ECO / owner

Where possible, top soil should be removed from development areas and stored within the construction zone for later use post construction. 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.

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 must be identified, and appropriate remedial action must be immediately implemented.

9.15 Dust Control

Responsibility - Project Manager / Contractor / ECO / owner

Appropriate action must 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 must be cleaned immediately.

9.17 Architecture / Design

Responsibility - Project Manager / Contractor / ECO / owner

Architecture and design to be done in line with Landscape Guidelines and recommendations contained in the Visual Impact Assessment.

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, 5 kl at each dwelling is recommended. 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 must 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, must be suitably managed to prevent long term impacts

- → All structures, equipment, materials and facilities used or created on site for or during construction activities must be 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. GENERAL OPERATIONAL PHASE IMPACTS AND REQUIREMENTS

10.1. Architectural Guidelines

A site-specific Architectural Guidelines document has been developed for the development of Spookdraai. The following aspects are to be taken into account for the development and operation of the development.

Building Lines

- → Building lines are as per the Local Municipal town planning scheme:
- → Street building line – 4.0m
- → Rear building lines – 2.0m
- → Lateral building line - 2.0m
- → Garages are permitted to encroach on the side and rear building line with the necessary approvals in place.

Height restriction

- → A blanket height restriction of 7.5 meters measured from the natural ground level, based on a professional survey of the pre-earthworks site is applicable. This height is measured from all parts of the building to the point of the natural ground level immediately below it.
- → No house may be higher than what is permitted in the local municipal by-laws (8.m from the base level to the top of the roof)
- → No unarticulated exposed vertical face of solid wall or glazing (excluding gables) may be taller than 6.0m above the finished ground level.

Built Forms:

- → The intention is to build an environment which fits into both the natural and traditional cultural context of the region. Regional vernacular architecture has been referenced in
- → establishing the design guideline intent but does not imply direct stylistic mimicry.
- → It is essential to be site sensitive in the natural context of Danger Point peninsula, historically considered a remote and wild place. The architecture should acknowledge this.
- → House forms should be compositions of composite-rectangular forms as opposed to singular monolithic structures.
- → The architecture is conceived as additive, where major plan form elements are connected by minor form elements. Differentiating vertical and horizontal planes through the use of materials, colour and texture is encouraged to further achieve elevational articulation.
- → Additive elements such as verandas, balconies and pergolas further articulate the building form increasing shading and relief and are encouraged in order to avoid or minimise the visual impact of large unarticulated planes.
- → Major forms and secondary built forms must be orthogonally arranged in relation to the property layout.
- → Landscape elements are not restricted geometrically.
- → MAJOR PLAN FORMS: These can be double pitched roofs and are limited to a maximum width of 6.5m. (indicated in green in the Architectural guideline)

→ MINOR PLAN FORMS: These include verandas and lean-to's, concrete roof elements.

Walls (External):

→ External exposed walls not covered by pergolas or verandas should be articulated to reduce the visual impact of large expanses of wall.
→ Decorative plaster mouldings, quoining or rustication, excepting plinths, will not be permitted.
→ Simple mouldings around windows and doors and simple copings to screen and boundary walls will be permitted.

Roof forms:

→ Roof forms and roof colour play a significant role in establishing a cohesive architectural language and a sense of homogeneity within the development.
→ Diamondek Roof sheeting and Victorian profile are allowed. Matt finish only.
→ Major form roofs: to be double pitched. 17,5° to 40°
→ Minor form roofs: Veranda's + Balconies max depth 6,5m
→ Lean-to's max 6,5m [head-wall to eaves]
→ Flat roofs permitted only with parapets
→ No parapet gables will be allowed on major forms.
→ No hipped roofs are permitted except on verandas.
→ Bargeboards are recommended on gable ends and lean-to's
→ Roof-windows co-planar with the roof, are allowed. Finishes are to merge with roof colour unless natural timber.
→ Dormer windows:
    o Mono-pitched dormer roofs are accepted. Long dormers of this type are acceptable as long as a substantial portion [min. 1 full sheet width] of the main roof remains at gable ends.
→ "Victorian" style dormer windows (with pitched or hipped roofs over) will not be allowed.
→ Pergolas: the use of pergolas is encouraged, particularly to shade areas of glass.

Major roof forms:

→ Major plan form elements are to be pitched roofs with pitch of 17.5º to 40º with the ridge placed centrally.

Minor roof forms:

→ Lean to and Verandah roofs are to have a pitch of between 3 degrees and 10 degrees. Verandahs may be constructed using masonry, timber or steel or a combination of these and colours and materials are to be as per the colour palette.
→ Flatroofs [concrete or boarded] with parapets may be used as linking elements between major plan forms, as well as for minor forms. They are to be finished with brown stone chip and no reflective finishes such as aluminium paint are to be visible .
→ Parapets to flat concrete roofs are to be a minimum of 250mm high.
→ Flat concrete roofs are also permitted where they are contiguous with the natural ground and are planted with indigenous fynbos.
→ Should these be used as terraces, no more than 25% of the area can be finished with either timber decking or paving.
→ Any area of concrete roof classified as planted roof [ie not included in footprint] is permitted a maximum trafficable paved surface of 25% of area.

→ Pergolas will be encouraged to provide shading on elevations and as devices to enhance fine grain to elevations. They may be constructed of timber, steel or a combination. Colours are to be as per the specified colour palette.

Other roof elements:

→ Garages and outbuildings are to be roofed to match the roofs of the house.
→ Garages may be free standing or form part of the main building's roofs [ie major or minor forms]
→ Carports to match pergola language. Visible translucent sheeting is not permitted.
→ Metal sheeting to match lean-tos and verandahs.
→ *Roof Windows*
  - Velux or similar approved roof windows used in the plane of the roof will be permitted.
  - Maximum size 780 x 1400mm.
→ *Eaves*
  - Eaves are to be clipped.
→ *Gutters*
  - Rainwater goods to be pre-coated aluminium.
  - Colours are to be as per specified colour palette.
→ It is intended that there be large areas of glass to take advantage of the views available from all orientations. It is encouraged to have walls interposed with glass areas of transparency to erode the form of a monolithic building.
→ Large areas of glazing are ideally set behind shading devices such as balconies, veranda roofs and pergolas and the shape and proportions of glazed areas, doors and windows are to be rectangular (except for gable ends). No arches are permitted.
→ Large areas of glass should be contrasted with solid wall planes as opposed to repetitive window puncture walls.

The following window types will be allowed:

→ Side hung casements
→ Top or bottom hung
→ casements Vertical sliding
→ Horizontal sliding
→ No profiles to be less than 45m x 65m
→ No winblock type windows allowed.
→ No reflective glass allowed.

Clerestorey Windows

→ The use of Clerestorey windows will be permitted and indeed encouraged.

Glass Standards

→ Glass standards to conform to the national building regulations and particular attention should be given to SANS 10400 XA (latest editions applies). Which deals with the thermal and insulative qualities required of the glazing to structures.

Burglar Bars

→ No external burglar bars will be permitted.
→ No external type "Trellidor" will be permitted.

Garage Doors

→ Garage doors should be horizontal slat type doors in either natural or painted timber or powder coated aluminium in colours as per specified colour palette.

Shutters

→ Non-functioning shutters will not be permitted
→ Shutters can be natural timber, timber painted to approved colour, to match colours of house, or aluminium in approved colour.

External elements:

Retaining structures

→ It is imperative that the existing topography by carefully considered when siting of buildings, terraces, courtyards and gardens are planes. Houses should be stepped or terraced across the site and low retaining structures are to be used which are sympathetic to the natural contours of each site.
→ *Height of Retaining Structures*
  - No front (down-slope) terrace structure may exceed 1.5 meters in height.
  - Retaining terraces which exceed this height must be stepped with minimum of 1.5 meters between terraces.
  - Back (up-slope) retaining structures may be a maximum of 3,5m vertically within 6,5m from buildings. Thereafter 1,5m terraces to be used.

→ Timber decks which are cantilevered or supported on timber or steel columns may extend beyond the retaining wall. The supporting columns however must be no taller than 1.5 meters from the ground level below to the point of connection with the deck.
→ The area below the deck needs to be suitably landscaped to reduce the perceived height of the deck.
→ *Finishes of Retaining Structures*
  - Plastered and painted masonry to match the colours of the house.
  - Banked earth may be used at changes of level but may not exceed 1.5 meters in height. The gradient shall be between 1:1 and 1:2.
  - Gabion cages filled with natural stone as per materials specification.
  - "Terraforce or Loffelstein" type retaining structures will not be permitted.

→ *Balconies*
  - The privacy surrounding properties should be considered and as a general rule no balconies should overlook the living spaces of adjacent dwellings.
  - The floor finish of balconies should have muted natural tones.
  - Balcony roofs must be in character with that of the main house and may be either an extension of the major plan form roof or roofed as for Verandahs and Lean- to's or with pergolas in timber or steel.

Balustrades

→ Balustrades may be constructed from timber, glass, steel or a combination of these materials.
→ Designs are to be simple and without ornate details.
→ Where the balustrade is an extension of the wall of the building below it can also be constructed with materials used in the construction of the house i.e. painted, plastered, masonry or natural stone and a studied balance of this type of upstand together with lighter steel and timber rails would be permitted.
→ This would further contribute to the reduction of the perceived scale of elevations in the secondary or minor form elements.

Fencing

Intention: to blend with the Estate Landscape Architecture. As previously stated, walls and fences are only found with the Building Zone. This is to allow the fynbos to "flow" as freely as possible between the houses.

- → There is to be no fencing or walls around the residential erven. Within the Building Zone, limited fencing or walled space can be created contiguous with the house, to serve as courtyards, drying yards, car courts, pool enclosures etc.
- → Courtyard walls, walls in the garden, fences: to match wall of house (i.e. stone or painted plaster), "latte" in dark colour or natural weathered, slatted timber-stained dark brown, (vertical or horizontal slats).
- → Plain unvarnished, un-oiled hardwood timber fences or screens are allowed.
- → Stained and oiled hardwood and painted timber according to colour palette for walls only. Black or charcoal grey steel palisade fences to approved detail and black weldmesh fences to approved detail are allowed.
- → No electrified, razor wire or barbed wire fencing will be allowed.
- → Under no circumstances will fences or walls which are not in keeping with the aesthetics of the estate be allowed. Any fence, screen or wall must be approved.
- → Laundry or drying yards and any storage areas must be completely hidden from view and must be incorporated into the building zone area.
- → Clearvu fencing in charcoal colour may be used and it should be placed and planted in such a way as to be as visually unintrusive as possible.
- → Entrances to properties may be defined by masonry or stone gate posts no more than 1.8m high and not more than 1.8m wide.

Pools

- → No "feature" rocks, fake rocks or rock pools will be allowed.
- → Visible edges of rim-flow pools shall be in a colour or finish which is in accordance with walls of retaining walls.
- → Pools to be either fenced with Estate approved pool fence in approved colour (to Landscape Architect's design) or walled with walls of minimum 1200 high.
- → Pool pump to be in fully enclosed chamber to reduce noise. Pool pumps must be incorporated into building zone for example into courtyards.
- → Free-standing pumps will not be allowed outside of the building zone or in any fynbos areas.
- → Backwash water shall be dealt with in terms of the local municipal by-laws.
- → Pool colours shall be grey, natural cement or black. No bright colours, white, blue or green pools will be allowed.
- → No rock pools or artificial rock water features will be allowed.
- → All pools, pool fences and water features must be approved by the Estate prior to construction.

Driveways and Landscaping

- → All driveways and paving that are visible from the road shall be exposed aggregate paving or be constructed of "grass block" paving or similar.
- → Driveways may not extend more than 3.5m along any street edge.
- → Two guest parking bays must be supplied per erven over and above any garages and parking that is required for the owners.
- → All paving or hard surfacing must be indicated on the site plan and must be approved by the HOA prior to installation. Under no circumstances will tar or plain concrete kerbs or plain concrete edgings be allowed.
- → For Hard Landscaping other than driveways, exposed aggregate pavers, revelstone pavers in earthy colours, "grass block" pavers or similar will be allowed.

- → Although semi-hard surfacing such as crushed shell, gravel, rock or pebbles is encouraged as an alternative to hard paving, these will not be allowed in lieu of planting and are not allowed anywhere outside of the property boundary.
- → The use of timber decking in hardwood with natural finish (no varnish or oil) or Tanalith treated timber as outdoor surfacing is encouraged.
- → Under no circumstances will homeowners be allowed to construct pathways or boardwalks from their erven to provide private access to natural or fynbos areas.
- → Where access roads to houses are in slopes >1:4, then roads should be aligned at 90 degrees to the slope to avoid cutting in.
- → Such steep sections should be paved with 75mm inter-locking pavers to ensure necessary grip.

Materials and Colours

Walls

- → Walls to be constructed generally of clay brickwork (280mm cavity), plastered, concrete bricks (230mm cavity), plastered
- → Bagged brickwork can only be used as an accent texture on exteriors.
- → Use of natural stone, off shutter concrete with weathered finish, Everite clap board painted and/or metal sheeting similar to the roof will be encouraged when used sensitively to assist with the articulation and reduction of visual impact of large expanses of wall.
- → External paint colours are limited to neutral colours that blends in with the natural surrounding vegetation.
- → Paint colours must be approved by the HOA prior to painting of the built forms.

Roofs

- → Roofs can be in black slate, dark charcoal slate, “brown built” profile metal sheeting or “Diamondeck” profile metal sheeting and “Victorian” profile metal sheeting.
- → Colours to be charcoal, matt stone grey, dove grey, epoxy coated finish. Matt finish only.
- → Flat concrete roofs are to be planted or where used as linking elements or minor forms, finished with Malmesbury brown, or grey stone chip granite.
- → Fascia’s and gutters to match roof colours or in tones from colour list.

Doors, Windows & Shutters

- → Weathered teak or similar.
- → Dark brown oiled timber (stained with approved stain to later ref to achieve dark brown).
- → Painted timber: Plascon “Colour Expressions” range, satin finish Velvaglo in the following colours:

Powder coated aluminium

Akzo Nobel “Interpon” powder coatings in colours below, or as per Plascon range “Colour Expressions”

- → Matte Stone grey
- → Gloss Stone grey
- → Matt grey
- → Gloss Seal grey
- → Gloss Light grey
- → Gloss Dark Admiralty grey
- → Gloss Anthracite grey
- → Matte Anthracite grey
- → Gloss Charcoal

- → Matte Charcoal
- → Matte Jet Black

Annodised alluminium

- → Ref manufacturer: Ferro
- → Ref code: VP 9119 Matt Bronze Aluminium

Frameless glass and matte stainless steel framed doors

- → Frameless glass system to be Cover system or equal approved.
- → Any metal on glass doors to be matte stainless steel.

Burglar bars, Screen balustrades & Lattices

Timber

- → Weathered teak (or similar approved), dark oiled or painted as elsewhere.

Metal

- → Painted or epoxy-coated in colours as per timber.

External paving, floor tiles & timber decks

Timber

- → Weathered teak-type or similar approved or dark oiled timber.
- → Exposed aggregate pavers with granite aggregate.
- → 'Revelstone' or similar pavers in earthy tones.

Services

Rainwater

- → It is recommended that a 5KL water tank be installed at each dwelling to receive water from the roof for the use in garden irrigation, these tanks are to be either sunk in the ground or contained within a courtyard or screening
- → with walls.
- → Storm water runoff is to be carefully controlled to avoid soil erosion and storm water reticulation is to be indicated on the building plans submitted.
- → Any channels required are to be constructed using materials in keeping with the landscape guidelines. Precast concrete channels will not be permitted.
- → Storm water will be dispersed in grassed or reeded channels/swales.

Plumbing

- → All drainage pipes except for low level stub stacks are to be concealed within the walls or structure.
- → All plumbing fittings, sanitary ware and brassware used in the house are to be water wise.
- → The use of grey water systems is encouraged.
- → All shower heads must be fitted with water saving devises, i.e. low flow shower heads, tap aerators and/or flow restrictors must be installed on all taps.

Air conditioners

- → All air-conditioning condenser units are to be installed at ground level and screened behind a wall at least 1.2m high.
- → No window mounted units are permitted.
- → Houses to be effectively insulated so as to reduce the need for air-conditioning as much as possible.

Satellite dishes and aerials

- → Satellite dishes and aerials to be positioned so as to be as inconspicuous as possible.

Lighting

Intention: The general principle for the Estate is that lighting should be minimal and cause the least visual impact. At night this will give a rural rather than an urban/suburban feeling to the site.

- → Outdoor lighting is to be kept to a minimum and at low levels (bollards or wall mounted shielded down-lighters). Under no circumstances will security/flood lighting be allowed.
- → Lighting at entrances to driveways: subtle lighting to illuminate number only will be allowed.

Laundry and refuse areas

- → All drying yards and refuse storage areas to be concealed within courtyards or behind screening walls.

Alternative power/ solar

- → All lighting of gardens, courtyards and building exterior is to be subtle. No floodlights.
- → No coloured lighting will be allowed.
- → All garden lights (e.g. bollards) are to be black or stainless steel.
- → No naked light sources are to be visible from outside. Only reflected light should spill out from the house.
- → Energy saving low voltage, LED's or compact fluorescent lights, instead of incandescent lights, must be used.
- → The installation of solar panels for water heating is encouraged.
- → Solar panels need to be inconspicuously installed and no combined tank and panels will be permitted unless it is so placed as to not be visible from the perimeter or exterior of the property.
- → All installed geysers must be covered with geyser blankets.
- → All electric geyser thermostats to be set at the most optimal temperature.
- → The use of photo voltaic solar panels for the production of some or all of the homes power requirements is encouraged.
- → PV panels must be fitted to the pitched roof at the same pitch as the roof. They may be tilted above flat roof connecting elements only if they are not visible from the perimeter of the property.
- → All inverters and batteries should be housed in sufficiently ventilated areas as required and it is the owner's responsibility to obtain all necessary certificates of compliance issued by a registered and recognised contractor.
- → Low energy lighting and appliances are to be used wherever possible.

General

- → All unsightly objects i.e. dust bins, refuse containers, washing lines & storage areas, pets' accommodation, kennels, water tanks, commercial type vehicles, boat or caravans or trailers must not be visible from roads, public open spaces, nature areas or other erven.

- → Drainage structures (e.g. gutters, drains, pumps, ditches) must be designed so that they do not act as pitfall traps for small creatures. They should either have gently sloping edges or be adequately covered to prevent creatures from falling into them.
- → Refuse bins are to be housed in areas that ensure they are not visible from anywhere outside the individual erf. These areas/structures must comply with the design guidelines.
- → Boats can only be kept on erven if they are stored in closed and roofed garages and thus not visible from anywhere on the erf or surrounds. No 'afdak' (canopies) or similar structures are allowed for boats. The boat garage will have to form part of the building footprint.
- → Pergolas or gazebos may only be installed within the building zone and must be designed as part of the house.
- → 'Wendy houses' or garden sheds will not be permitted.
- → Under no circumstances will retro-fit lapas or gazebos be allowed.
- → Braai areas shall be designed as part of the house.
- → No free-standing braais or open braai areas are allowed.

Plan approval process

- → All designs to be by Registered Professional who shall be registered with the South African Council for the Architectural Profession (SACAP).
- → Step one: Preliminary sketch plans of buildings must be submitted to and approved by the Homeowners' Association before working drawings are commenced.
- → Drawings must be to scale and indicate materials and colour being considered and all walls and preliminary landscape proposals.
- → The Estate will consider the drawing and will notify the owner's Architect of the approval, or of any suggested amendments within two weeks after submission of the plans.
- → Should the Estate suggest any amendment of the design, the owner's architect must resubmit amended design drawings to the Estate who shall confirm within two weeks of submission whether the amendments are accepted.

These drawings should include the following information:

  - o the erf with dimensions & area in m²
  - o applicable footprint restriction. Footprint in m² for ground floor, footprint in m² for first floor
  - o access point (from road)
  - o coverage (in terms of the Local municipal Zoning Scheme) m² based on extent of the erf
  - o applicable height restriction in terms of Design Guidelines
  - o applicable height restriction in terms of local municipal Zoning Scheme
  - o plan of all floors
  - o all elevations including full street elevations up to the side boundaries.
  - o site plan showing driveways and main landscaping elements, hard surfacing materials, planting, existing & proposed site levels, retaining walls, rainwater tanks, elevations of street boundary walls & gateways where applicable
  - o section showing proposed excavations and topography
  - o specifications of all external materials and finishes
- → Drawings are required to be submitted to and approved by the local Municipality (duly endorsed by Estate) prior to the commencement of building works.
- → The Homeowners' Association reserves the right to request any changes in design or site layout that, in their opinion, is required to conform to the building and landscape design manual / development plan.
- → All aesthetics are to be approved and submission fees are to be determined by HOA on an annual basis.

- → Any requested deviations from the Guidelines will be reviewed on a case by case basis by the Estate along with the Design Review Committee of the HOA and their recommendations will be final.
- → Where the Estate along with the Design Review Committee of the HOA permits variations, these are in respect of specific site conditions and should and will not be considered a permanent amendment to the Guidelines and will not be understood to set precedent.
- → The Design Review Committee of the HOA reserves the right to interpret these Design Guidelines and approve plans/drawings at its discretion. Any deviation must be compliant with the Local municipal Zoning Scheme or it will not be considered.
- → Members of the Homeowner's Association shall be required to comply fully with any Annexure of the Homeowners' Association constitution. The items cover procedures for submission of plans and subdivision and compliance with the environmental contract.
- → All construction companies shall be required to enter into a detailed written agreement – SPOOKDRAAI: Rules for Contractors" which shall establish all conditions pertinent to the Estate.
- → This shall include the following controls: defining the site area, protection of vegetation, provision of on-site ablution facilities and services, transport vehicle restrictions, materials storage and delivery, access times, location of wet works, site cleaning, codes of conduct of staff etc.

Planting

Intention: Locally indigenous gardens to retain habitat for birds, insects and small fauna. Continuity of fynbos, with houses forming islands within the landscape will allow the least disruption of the natural habitat.

- → All lawns shall be fully enclosed with a paved edging strip.
- → Sidewalk areas shall be planted using only plants from the sidewalk planting list, and shall be installed in an informal, natural manner and at a density of at least 4 plants per m^2.
- → Under no circumstances will any hard surfacing, other than the driveway, be allowed on sidewalks.
- → Automatic irrigation with rain sensors shall be installed to all garden areas, as well as to re-vegetated and sidewalk areas, by the homeowner. Where possible, use must be made of water from the rain tanks for all irrigation.
- → Use of any plants which are not on the approved list is strictly prohibited.
- → Landscape plans which include a list of plants, sizes and densities are to be submitted as part of the building plan submission and shall be implemented prior to occupation of the house.
- → Fertilisers, sprays and composts shall all be organically certified, such as Biogrow or Reliance or Seagro products.

It is trusted that the resultant-built environment which is achieved is respectful of the sense of place which Spookdraai represents.

These guidelines are to be strictly followed and embraced to achieve a development which has the least possible visual intrusion and "nests" in the overall landscape, maintaining the sense of place which Spookdraai is.

11. COMPLIANCE AND MONITORING

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
Restricting coastal access	Penalties to be applied to any cases of restricting public access to the coastline during construction or operational phases	R 5000 per incident
Sprawl of construction activities into no go areas beyond demarcated development area	Penalty to be issued for each infringement	R 6000 per action beyond demarcated construction area
Sprawl of garden, landscaping and indigenous lawns beyond the building footprint and into the coastal zone	Penalty to be issued for each homeowner infringement	R 6000 per action beyond demarcated development area
Not adhering to conditions of EA	Not attending to specific EA conditions	R 3000 + per condition

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	→ EA and EMP to be distributed to contractor at tender stage to include costing incurred due to compliance with EA and EMP METHOD: Distribute with tender documents	As required	Contractors are aware of requirements in terms of NEMA and can budget accordingly	Developer Project Manager			
Environmental File	→ To include EA, EMP, site diary, public complaints section → To be updated on a regular basis → Public complaints register → Kept on site at all times METHOD: Issue all applicable documents to site manager	As required	Construction team(s) and general public can access relevant information f and when required	ECO Project Manager			
Environmental Awareness training and induction	- All contractors to attend briefing prior to commencement of site works - Register to be signed as proof of attendance METHOD: Briefing to be undertaken by project manager and / ECO	As required	Construction team(s) informed of all requirements in terms of EMPr and EA	ECO Project Manager			

Method Statements	- Contractors to submit MS seven working days prior to commencement on site - MS to contain clear methods for pollution control measures during construction including hazardous waste, run off, general waste etc. METHOD: Request for method statements to be contained in tender documents	As required	ECO and project manager to be well informed in terms of methods for construction	Contractor			
Site definition and demarcation	- Site survey and pegging - Site demarcation and fencing (mark construction areas – all other areas are No Go) - Access roads for construction vehicles to be clearly indicated, consideration to be given to turning circles - Review of specialist input to familiarise with mitigation measures - Buffer areas to be indicated and demarcated as No Go 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	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			
Construction traffic	- All construction vehicles carrying materials must use cover sheeting to prevent loss of loads due to wind or rain - Maximum speed to be enforced	Duration of Construction	A safe working environment with minimal impact on No Go areas, minimal dust impact, minimal loss of load and minimal general public impact	Project Manager Contractor			

	- Movement of construction vehicles must be limited to approved haul and access routes and existing tracks METHOD: To be monitored by ECO and project manager as well as construction team leaders						
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	- Contractors camp to be located within the demarcated construction area and / or as determined in conjunction with the ECO - Contractor's Camp is located at the most suitable site as identified by the ECO and Site Manager, preferably in areas to be developed	Duration of Construction	A well placed and functional contractors camp to minimise impacts on other areas on site	Project Manager Contractor			

	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 - 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						

CONSTRUCTION							
TASK	**ACTION REQUIRED / MITIGATION & METHOD FOR IMPLEMENTATION**	**FREQUENCY**	**TARGET / OUTCOME**	**RESPONSIBILITY**	**COMPLETED YES/ NO**	**DATE**	**COMMENT**
Topsoil removal and stockpiling	- Replaced immediately after works where required - Topsoil which is required to be removed from direct work areas, should be stockpiled separately from subsoil and reused as far as possible - Stockpiles should be suitably shaped to prevent leaching of nutrients, and stabilized, or dispersal by wind or rain - Stockpiles to be monitored for dispersal by rain and wind 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	Duration of Construction	Minimal disturbance to sensitive zones, minimal disturbance to vegetation	Project manager Contractor ECO			

	- Use and excessive movement of heavy machinery to be avoided in areas of environmental sensitivity or high erosion potential - Trenching to be undertaken in a phased manner - Fill material to be replaced in same work area 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			

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 - Ensure all waste is stored in secure containers and regularly removed from the site to prevent attracting scavengers or predators. Avoid leaving food scraps or other organic waste exposed. - 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	- Suitable measures must be in place to prevent erosion resulting from diversion, restriction or increase in stormwater runoff - Measures must be taken to prevent stormwater from flowing from excavated areas or stockpiles - Stormwater containing harmful substances to be contained, and removed from site	Duration of Construction	A clean site post construction, avoiding additional impact on surrounds	Project Manager Contractor ECO			

	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 - 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	Duration of Construction	A clean site post construction, avoiding additional impact on surrounds, avoidance of impacts on general public	Project Manager Contractor ECO			

	- 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						
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.	Duration of Construction	A functional ecosystem post construction, suitably rehabilitated as required	Project Manager Contractor Applicant ECO			

	METHOD: Inspected upon site closure / suspension of works, rehabilitation methods contained in EMP and Dune EMP to be implemented.						
Visual intrusion	- Strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), should be enforced. - In addition it is recommended that the landscape and visual indicators are implemented and these parameters are incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines dated 12-09-2025 must be strictly adhered to to ensure long-term mitigation of the visual intrusion and impact. - This includes any new additions and alterations, an architectural and landscape design review commitee must	During construction phase and post-construction.	To minimize visual intrusion and maintain the aesthetic integrity of the site and surroundings.	Project Manager Applicant Contractor ECO			

	assess each application and amendment individually and no building works or landscape works take place without prior approval. - Use of greening and permeable fencing along the significant edges. Provide clear sightline and view corridors by providing green buffers. Keeping the significant portion along Spookdraai as an open space. - Limiting construction to within hoarding areas. - Maintain the access to the beach and footpath which are currently along the coastline and an amenity to the public - Create green continuous corridors between units to ensure ample visual connection with the ocean from Marine Drive and the existing development adjacent to the site. These must be generous and allow for unobstructed views. - Maintain a generous green edge of indigenous vegetation with no trees or exotic and manicured gardens. The buffer to be a minimum of 2m to allow the natural occurring shrubs to grow.						

	- The roof-scape must be interrupted to avoid continuous heights perceived from Marine Drive and surrounding areas. Avoid continuous structures that may have a cumulative effect of a "solid" wall architecture. All boundary walls must be permeable to allow vegetation and greenery to continue through the fencing. There should be no fencing along the sea edge of the property. - The alternative (which is expressed in the renders supplied) is a modern rendition of a dwelling. Should this be the route then the roof-scape and heights must be restricted as is illustrated in the sketch over the render supplied. Where possible the roofs must be vegetated "green roofs".						
Botanical loss	- Vegetation loss should be only applicable to outlined development footprints to prevent further loss of indigenous vegetation on site. - Restoration should take place on areas that are not developed.	During construction phase.	Prevent vegetation loss on the western portion of the site mapped as ESA1, as per WCBSP (2017).	Project manager Applicant Contractor ECO			

	- No construction or operational activities may spread towards the coastal zone beyond the approved building area - No infilling to create landscaped gardens - No restriction to public access.						
Coastal environment	- Avoid encroachment to the coastal risk areas, such as low, medium and high-risk zones, as delineated on the site plan. This is to prevent the development from sea level rise and storm surges. - Establish buffer zones to protect sensitive coastal areas. - Implement long-term monitoring of coastal processes and habitats. - Restrict access to ecologically sensitive areas using signage or fencing. - Restore disturbed vegetation with indigenous coastal plant species. - Regularly remove waste and debris from the site to prevent pollution to the coastal environment. - Development and construction areas must be marked with weather and	Construction phase	To prevent pollution to the coastal ecosystem.	Project manager Applicant Contractor ECO			

	animal proof barriers for the duration of the construction phase and the rest of the site must be marked a No Go - Batching, stockpiles, mixing must be confined to development areas within the demarcated zones. - No dumping of rubble or any other materials are permitted - No hard landscaping is permitted seaside of the building footprints other than what is approved on the SDP - No infilling is permitted to create gardens or platforms - Establish buffer zones to protect sensitive coastal areas. - Implement long-term monitoring of coastal processes and habitats. - Restrict access to ecologically sensitive areas using signage or fencing. - Restore disturbed vegetation with indigenous coastal plant species. - Regularly remove waste and debris from the site to prevent pollution. - Coastal access points must be clearly demarcated.						

	- Access points must be safe and away from construction areas - The construction area must be fenced off with weatherproof barriers before any site preparation begins. - All construction activities, including material storage, batching preparation, mixing, stockpiling, construction team and vehicle movement, must remain strictly within this designated area. - Areas outside the fenced construction area should be designated as No-Go Areas for the duration of the construction phase and should be confined to the development footprint as far as possible.						
Heritage Impacts	***Palaeontology*** → For successful mitigation, it is therefore crucial that earth works personnel must be involved in mitigation by watching for fossil bones as excavations are being made. It is recommended that a protocol for finds of buried fossil bones, the Fossil Finds Procedure (FFP) is included in the Environmental Management Plan (EMP) for the proposed development.	Construction phase					

	→ The field supervisor/foreman and workers involved in excavations must be informed of the need to watch for fossil bones and archaeological material. Workers seeing potential objects are to cease work at that spot and to report to the works supervisor who, in turn, will report to the Environmental Control Officer (ECO) and/or the Developer. The ECO/Developer will contact and liaise with Heritage Western Cape and the standby archaeologist or palaeontologist on the nature of the find and suitable consequent actions such as immediate site inspection, application for a palaeontological collection permit and drafting of a work plan for the collection of the find. → A permit from HWC is required to excavate fossil bone finds. The applicant should be the qualified specialist responsible for assessment, collection and reporting (palaeontologist). Should fossils be found that require rapid collecting, application for a palaeontological permit with supporting work plan will immediately be made to HWC. The application requires the details and permission of the registered owner of the site. The fossils and their						

	contextual information must be deposited at a SAHRA/HWC-approved institution. The rescue of discovered palaeontological remains by a contracted specialist shall be at the Developer's expense ***Archaeology*** → No archaeological mitigation is needed prior to construction excavations commencing. → Archaeological monitoring of building foundations and services (e. g. water, electricity, sewerage, stormwater) must be conducted by a professional archaeologist. → If any unmarked human remains are uncovered or exposed during excavations, work must stop, and the finds reported to the Environmental Control Officer and the contracted archaeologist (Jonathan Kaplan 082 321 0172). Human remains must not be removed or disturbed until inspected by the archaeologist. ***Visual*** → Strict adherence to heritage and environmental conservation and management controls, especially during the construction phases of the development (including						

	sufficient hoarding, lighting and signage, as well as noise and dust control for occupational health and safety), should be enforced. → In addition it is recommended that the landscape and visual indicators are implemented and these parameters are incorporated in the planning application to ensure any new development is sensitive and cognisant of the limitations of the site. The proposed Landscape and Architectural Guidelines dated 12-09-2025 must be strictly adhered to to ensure long-term mitigation of the visual intrusion and impact. → This includes any new additions and alterations, an architectural and landscape design review commitee must assess each application and amendment individually and no building works or landscape works take place without prior approval. → Use of greening and permeable fencing along the significant edges. Provide clear sightline and view corridors by providing green buffers. Keeping the significant portion along Spookdraai as an open space. → Limiting construction to within hoarding areas. → Maintain the access to the beach and footpath which are currently						

	along the coastline and an amenity to the public → Create green continuous corridors between units to ensure ample visual connection with the ocean from Marine Drive and the existing development adjacent to the site. These must be generous and allow for unobstructed views. → Maintain a generous green edge of indigenous vegetation with no trees or exotic and manicured gardens. The buffer to be a minimum of 2m to allow the natural occurring shrubs to grow. → The roof-scape must be interrupted to avoid continuous heights perceived from Marine Drive and surrounding areas. Avoid continuous structures that may have a cumulative effect of a "solid" wall architecture. All boundary walls must be permeable to allow vegetation and greenery to continue through the fencing. There should be no fencing along the sea edge of the property. The alternative (which is expressed in the renders supplied) is a modern rendition of a dwelling. Should this be the route then the roof-scape and heights must be restricted as is illustrated in the sketch over the render						

	supplied. Where possible the roofs must be vegetated “green roofs”.						

12. DECOMMISSIONING PHASE

Not Applicable to this development.

13. 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.

14. 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.

15.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: _____