

APPENDIX F: CONSTRUCTION ENVIRONMENTAL MANAGEMENT PROGRAMME

Construction Environmental Management Programme

DRAFT BASIC ASSESSMENT REPORT



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PROGRAMME

**FOR THE PROPOSED DEVELOPMENT OF A NEW
DWELLING ON ERF 3806 (PORTION OF ERF 2916) SEA
VISTA, ST FRANCIS BAY, WITHIN THE KOUGA LOCAL
MUNICIPALITY, EASTERN CAPE.**

DEDEAT REF: EC08/C/LN1/M/41-2026

Construction Environmental Management Programme

Prepared for: Mr. Pearton

Submitted in support of an application for Environmental Authorisation in terms of Section 24(5) of the National Environmental Management Act, Act 107 of 1998, as amended 07 April 2017

ENVIRONMENTAL MANAGEMENT PROGRAMME



REPORT PREPARED BY: HORT-COUTURE LANDSCAPE ARCHITECTS & PLANNING CC
1 Halstead Lane Port Alfred 6170 | Tel: 064-783-1668 | Email: admin@hortcouture.co.za

Document Title	THE PROPOSED DEVELOPMENT OF A NEW DWELLING ON ERF 3806 (PORTION OF ERF 2916) SEA VISTA, ST FRANCIS BAY, WITHIN THE KOUGA LOCAL MUNICIPALITY, EASTERN CAPE.		
Client Name	Mr. Pearton		
Document Reference	EC08/C/LN1/M/41-2026		
Status	First Draft		
Issue Date	24 August 2026		
Description	CEMPr		
Lead Author	Warren Lange	BL (Pret) Pr Larch (SACLAP) Reg. EAP (2020/1503) Pr. Sci. Nat. (147880)	
Co-Author	Anastasia Doyle	Cand. EAP (2023/6415) MSS Sociology	
Reviewer	Warren Lange	BL (Pret) Pr Larch (SACLAP) Reg. EAP (2020/1503) Pr. Sci. Nat. (147880)	
Registered Environmental Assessment Practitioner	Warren Lange		
Report Distribution	All interested and Affected Parties		
Report Version	Version 1		
Revisions	Revisions by	Date	Revision Notes (Changes Made)
1			
2			
3			
Final Date for EA			

TABLE OF CONTENTS

TABLE OF CONTENTS	3
EXPERTISE OF THE AUTHOR	6
1. INTRODUCTION	11
1.1. PROJECT BACKGROUND	11
1.2. PROJECT INFORMATION	12
1.3. EMPr OBJECTIVES	14
1.4. LEGAL REQUIREMENTS	15
1.5. GUIDING PRINCIPLES	16
2. ROLES AND RESPONSIBILITIES	18
2.1. THE PROPONENT	18
2.2. THE PROJECT MANAGER	19
2.3. THE CONTRACTOR	19
2.4. THE ENVIRONMENTAL CONTROL OFFICER	19
3. ENVIRONMENTAL MANAGEMENT PROGRAMME	21
3.1. PLANNING AND DESIGN PHASE	21
3.2. PRE-CONSTRUCTION PHASE	26
3.3. CONSTRUCTION PHASE	27
3.4. APPLICABLE CONDITIONS EXPECTED TO BE CONTAINED IN THE EA	34
3.5. SOCIO-ECONOMIC MANAGEMENT PROTOCOLS	38
3.6. OPERATIONAL PHASE	39
3.7. ASSUMED EA CONDITIONS AND RECOMMENDATIONS/MITIGATIONS RELEVANT TO THE PROJECT	41
1. General Environmental Compliance Actions	46
2. Vegetation Clearing	46
3. Invasive Alien Species Management	46
5. Visual Impact Mitigation	48
6. Topsoil Management	48
7. Noise Control	48
8. Dust Control	48
9. Health and Safety	49
10. Waste and Effluent Management	49
11. Contamination Prevention (Topsoil and Groundwater)	49
12. Biodiversity Protection (General and Indirect)	50
13. Employment and Socio-Economic Benefit	50
3.8. CLOSURE	59
4. AUDITING AND CORRECTIVE ACTION	60
5. SITE REPORTING AND DOCUMENTATION	60
6. ENVIRONMENTAL MONITORING	60
7. ENVIRONMENTAL COMPLIANCE	61
7.1. NON-COMPLIANCE	61
7.2. PENALTIES	61
8. ENVIRONMENTAL AWARENESS PLAN	62
9. EMERGENCY AND CONTINGENCY PLAN	63
9.1. INTRODUCTION	63
9.2. RISK ASSESSMENT	63
9.3. EMERGENCY RESPONSE TEAM AND COMMUNICATION	63
9.4. EMERGENCY EQUIPMENT AND SUPPLIES	63
9.5. FUEL SPILL CONTINGENCY PLAN	64

9.6.	SEWAGE SPILL CONTINGENCY PLAN	64
9.7.	ENVIRONMENTAL MONITORING AND REPORTING	64
9.8.	PUBLIC SAFETY AND COMMUNITY ENGAGEMENT	64
9.9.	TRAINING AND DRILL EXERCISES	65
9.10.	REVIEW AND UPDATES	65
10.	CONSISTENCY WITH IMPACT ASSESSMENT	65
10.1.	ALIGNMENT WITH KEY IMPACT FINDINGS	65
10.2.	PROTECTION OF CBA1 AND ECOLOGICAL FUNCTIONALITY	66
10.3.	MANAGEMENT OF INDIRECT IMPACTS TO THE ESTUARINE ENVIRONMENT	66
10.4.	OPERATIONAL PHASE SUSTAINABILITY AND LONG-TERM MANAGEMENT	66
10.5.	COMPLIANCE WITH NEMA PRINCIPLES	67
10.6.	OVERALL IMPACT OUTCOME	67
11.	CLOSURE PLANNING	67
11.1.	CLOSURE OBJECTIVES	67

DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

List of abbreviations

BA Basic Assessment

BAR Basic Assessment Report

BSP Biodiversity Sector Plan

CA Competent Authority

CBA Critical Biodiversity Area

DEDEAT Department of Economic Development Environmental Affairs and Tourism

DFFE Department of Forestry, Fisheries and Environment (National)

EA Environmental Authorisation

EAP Environmental Assessment Practitioner

ECO Environmental Control Officer

EIA Environmental Impact Assessment

EMPr Environmental management programme

IDP Integrated Development Plan

IEM Integrated Environmental Management

I&APs Interested and/or affected parties

MPA Marine Protected Area

NEMA National Environmental Management Act, 1998 (Act 107 of 1998)

PP Public Participation

PPP Public Participation Process

SANBI South African National Biodiversity Institute

SDF Spatial Development Framework

ECBCP Eastern Cape Biodiversity Conservation Plan

EXPERTISE OF THE AUTHOR

Contact Person

Mr Warren Lange
Tel: 064 783 1668
Email: warren@hortcouture.co.za

EAP's expertise and qualifications

Hort Couture is a consulting company offering holistic solutions in the disciplines of Environmental Planning & Consulting, and Landscape Architecture. We undertake a variety of specialized projects in the Residential, Commercial, Institutional and Industrial spheres, and have competency in all aspects of environmental planning and consulting. Our main areas of expertise include:

Environmental Planning and Consulting, including Environmental Impact Assessment (EIA), Public Participation Processes (PPP), Environmental Management Programme (EMPr), Protected Area Management Plans (PAMP), Feasibility Studies, Visual impact assessment (VIA), Environmental Auditing, Environmental Control Officer (ECO) and specialist environmental studies.

Urban Design, including Masterplanning, Urban Planning, Urban Design Frameworks (UDF), urban open space and land-use assessment and planning.

Landscape Architectural Services, including spatial assessment and full tailored landscape design package solutions for private, commercial, industrial and institutional clients.

Warren Lange is a principle member of Hort-Couture Landscape Architects and Planners.

Warren Lange holds a Bachelor of Landscape Architecture degree obtained from the University of Pretoria in 1994 and is registered as a professional member with the Environmental Assessment Practitioners of South Africa (EAPASA) as well as the South African Council for the Landscape Architectural Profession (SACLAP). His professional EAPASA registration number is 2020/1503 and SACLAP registration number is 20244. Warren is also registered with ILASA (the institute of Landscape Architects of South Africa, as well as IAASA (Institute of Environmental Assessment Practitioners of South Africa). Warren is also further registered a professional Natural Scientist with SACNASP (South African Council for Natural Scientific Professions) in the field of practice Environmental Science with registration number 147880.

Warren Lange has been involved in several environmental and terrestrial ecology specialist studies over the past several years. He currently resides in Port Alfred and is intimately knowledgeable about local environmental conditions within the Ndlambe Municipality as well as the Eastern Cape coast. His specialist skills further cover master planning and design with relation to environmental and social sustainability.

**Environmental Assessment
Practitioners Association
of South Africa**



Registration No. 2020/1503

Herewith certifies that

WARREN LANGE

is registered as an

Environmental Assessment Practitioner

**Registered in accordance with the prescribed criteria of Regulation 15. (1)
of the Section 24H Registration Authority Regulations
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the
National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).**

Effective: 01 April 2026

Expires: 31 March 2027

Chairperson

Registrar





REGISTRATION CERTIFICATE

THIS IS TO CERTIFY THAT

Warren Wayne Lange

IS REGISTERED AS A

Professional Landscape Architect

In terms of the regulations of Section 19(2)(a) of the Landscape Architectural Profession Act, 2000 (Act No.45 of 2000)

REGISTER PARTICULARS

REGISTRATION NUMBER: 20244
ID NUMBER: 7101295105083
REGISTRATION RENEWAL DATE: 1 August 2030
CERTIFICATE SERIAL NUMBER: PRCL 2008026
CERTIFICATE DATE OF ISSUE: 2020-08-24

CONTACT DETAILS

EMAIL ADDRESS: war*en@h*rtc*utu*e.co.*a
MOBILE: 082 *64 8*39

PROMOTE - GROW - TRANSFORM - SUSTAIN

Mr Ngwako Edward Hutamo
PRESIDENT

Mrs C. E. Chinga
REGISTRAR



SACLAP has confirmed the above information, for digital certification and sharing
by PrivySeal Limited, at 14:14 PM (Africa/Johannesburg) on 20 Mar 2026



POWERED BY
PRIVYSEAL®



herewith certifies that

Warren Lange

Registration Number: 147880

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)

in the following field(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **14 July 2022**

Expires **31 March 2027**



President of Council

Chief Executive Officer



To verify this certificate scan this code

**Environmental Assessment
Practitioners Association
of South Africa**



Registration No. 2023/6415

**Herewith certifies that
ANASTASIA ROXANE DOYLE
is registered as an
Candidate Environmental Assessment Practitioner**

**Registered in accordance with the prescribed criteria of Regulation 15. (1)
of the Section 24H Registration Authority Regulations
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the
National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).**

Effective: 01 April 2026

Expires: 31 March 2027

Chairperson

Registrar



1. INTRODUCTION

1.1. PROJECT BACKGROUND

The applicant, Mr. Pearton, appointed Hortcuture as the independent Environmental Assessment Practitioner (EAP) to undertake the environmental studies to identify and assess the potential environmental impacts associated with the proposed project and to prepare the necessary Environmental Application for submission to the Department of Economic Development, Environmental Affairs and Tourism (DEDEAT).

The proposed activity entails the development of a new private residential dwelling and associated infrastructure on Erf 3806, St Francis Bay.

The development components are anticipated to include the following:

- A multi storey brick and mortar residential dwelling with a total floor area of approximately 500 square metres.
- Associated decks, patios and external entertainment areas linked to the dwelling and canal frontage.
- A swimming pool and associated hard landscaped areas.
- An enclosed pergola or similar covered structure along the canal frontage.
- Solar power generation and backup infrastructure.
- Rainwater harvesting tanks and associated water storage infrastructure.
- Connection to existing Kouga Local Municipality bulk services, including water, electricity, sewerage or approved sanitation infrastructure and municipal solid waste services, where applicable.
- Landscaping, garden rehabilitation, access, parking and service areas associated with the residential use of the property.
- The total development footprint, inclusive of the dwelling footprint, decks, patios, pool, pergola, access, services, hard landscaping and associated external areas, is anticipated to be approximately 600 square metres.

Vegetation clearing is expected to be limited, as the site consists predominantly of maintained landscaped garden areas rather than intact natural coastal vegetation. No unnecessary removal of indigenous vegetation will be undertaken. Any disturbed areas will be stabilised and rehabilitated through appropriate landscaping, erosion control and environmental management measures.

The proposed development will be assessed through a Basic Assessment process, during which potential impacts on the estuarine environment, canal frontage, stormwater management, biodiversity, visual character and broader receiving environment will be identified and addressed through appropriate avoidance, mitigation and management measures.

1.2. PROJECT INFORMATION

Location

The approximate central coordinates of the study area are:

Latitude: 34°08'46.5"S

Longitude: 24°50'13.4"E

The subject property comprises Erf 3806, St Francis Bay, situated within the Kouga Local Municipality, Eastern Cape Province. The locality map below (Figure 1) further indicates the position of the study area in relation to the immediate and broader geographical surrounding.



Figure 1. Locality map

Activities Triggered by proposed development

In terms of Environmental Impact Assessment (EIA) Regulations published in the Government Notice No. R324 to R327 of 7 April 2017; in terms of section 24(5) of the National Environmental Management Act (Act No 107 of 1998), the following listed activities were identified as being triggered by the intended developments;

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 1 (GN R327)	Describe the portion of the proposed project to which the applicable listed activity relates.
GN R 327 (LISTING NOTICE 1):		
17(v)(e)	The development of infrastructure or structures with a development footprint of 50 square metres or more, where such development occurs within 100 metres inland of the high-water mark of the sea or an estuary, where no development setback line has been adopted.	This activity is applicable as the proposed residential dwelling and associated infrastructure will exceed 50 square metres and will occur within 100 metres of the high-water mark of the estuary or canal system.
19A(ii)	The infilling or depositing of any material of more than 5 cubic metres, or the excavation, removal or moving of soil, sand, pebbles or rock of more than 5 cubic metres from within 100 metres inland of the high-water mark of the sea or an estuary.	This activity is anticipated to be triggered by site preparation, excavation, foundation preparation, service installation, pool construction, landscaping, stormwater infrastructure and other associated earthworks required for the proposed development within the regulated coastal or estuarine proximity zone.
GN R 324 (LISTING NOTICE 3):		

Table 1 Listed Activities triggered by the proposed development

Site access

The site can be accessed from Harley Street by vehicle and by foot.

Bulk Water Supply

Bulk water supply will be from the Kouga municipal supply.

Water Demand

Rain water collection into storage tanks will be included in the activity, which will provide an additional water augmentation to the activity.

Bulk Electricity Supply

Bulk electricity supply is from the Kouga Municipality and will be supplemented by a solar photovoltaic (PV) system. The activity will adhere to all SANS 10400-XA fenestration and energy efficiency regulations, which will be applied to the design in order to comply with national and local building regulations.

Sewage Disposal

Effluent generated on site will be discharged directly into the existing municipal sewerage network for treatment by the local authority's sanitation services

1.3. EMPR OBJECTIVES

This Construction and Operational Environmental Management Programme (EMPr) is a comprehensive document that outlines the environmental management measures, performance standards and monitoring requirements necessary to guide the project through both the construction and operational phases. It serves to ensure that all relevant environmental, social and sustainability factors are identified, addressed and effectively managed in order to achieve an environmentally responsible development. For the construction phase, the COEMPr provides detailed specifications for best practice methodologies, impact mitigation measures and compliance monitoring to minimise short-term environmental disturbances. For the operational phase, it sets out procedures for ongoing environmental management, monitoring and maintenance to ensure sustained compliance with legal requirements, prevention of long-term degradation, and continuous improvement of environmental performance throughout the project's lifecycle.

The COEMPr seeks to inform all parties involved in the design, construction, operation and close-out phases of the project of their specific duties and responsibilities in relation to applicable environmental legislation, regulations, permit conditions and project-specific requirements. This includes, but is not limited to, the Architect, Project Manager, Contractor, Project Coordinator, Environmental Control Officer (ECO) and maintenance staff as well as all other parties contracted by Mr. Pearton. The COEMPr serves as a binding reference document to ensure that all phases of the project are undertaken in an environmentally responsible manner, with clear understanding of individual and collective obligations. It further promotes accountability and consistency in environmental management practices from project initiation through to long-term operational activities and eventual close-out, ensuring that compliance and sustainability objectives are met at every stage.

The objectives of the EMPr are to:

- Ensure compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and/or international during the design, construction, operation, and close-out phases;
- Ensure allocation of resources in the project budget so that the scale of COEMPr-related activities is consistent with the significance of project impacts across all phases;
- Verify environmental performance through information on impacts as they occur;
- Respond to unforeseen events or incidents that may arise at any stage of the project;
- Provide feedback for continual improvement in environmental performance and operational sustainability;
- Identify a range of mitigation measures which could reduce and mitigate the potential impacts to minimal or insignificant levels during construction and operation;
- Detail specific actions deemed necessary to assist in mitigating the environmental impact of the project throughout its lifecycle;
- Identify measures that could optimize beneficial impacts;
- Create management structures that addresses the concerns and complaints of I&APs with regards to the development;

- Establish a method of monitoring and auditing environmental management practices during all phases of the activity;
- Ensure that safety recommendations are complied with;
- Specify time periods within which the measures contemplated in the final COEMPr must be implemented, where appropriate;

1.4. LEGAL REQUIREMENTS

As set out in Appendix 4 of the 2014 NEMA, EIA regulations (GN982), as amended 07 April 2017 (GN326), the content of an environmental management programme must comply with section 24N of the act and Include:

- (a) details of -
 - (i) the EAP who prepared the EMPr; and
 - (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;
- (b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;
- (c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers;
- (d) a description of the impact management objectives, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-
 - (i) planning and design;
 - (ii) pre- demolition and Demolition
 - (iii) pre-construction activities;
 - (iv) construction activities;
 - (v) rehabilitation of the environment after construction and where applicable post closure; and
 - (vi) where relevant, operation activities;
- (e) a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);
- (f) a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (d) and (e) will be achieved, and must, where applicable, include actions to –
 - (i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - (ii) comply with any prescribed environmental management standards or practices;
 - (iii) comply with any applicable provisions of the Act regarding closure, where applicable; and
 - (iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;
- (g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);
- (h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);

- (i) an indication of the persons who will be responsible for the implementation of the impact management actions;
- (j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;
- (k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);
- (l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;
- (m) an environmental awareness plan describing the manner in which-
 - (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and
 - (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and
- (n) any specific information that may be required by the competent authority.

1.5. GUIDING PRINCIPLES

In South Africa, environmental management principles applicable to construction activities are guided by various regulations and best practices aimed at minimizing environmental impacts. General principles and practices include:

- **Legal Compliance:** Ensure compliance with South African environmental laws, including the National Environmental Management Act (NEMA) and its associated regulations. Obtain necessary permits and approvals before commencing construction.
- **Environmental Impact Assessment (EIA):** Conduct an EIA for significant projects to assess potential impacts on the environment during all phases and implement mitigation measures as required by law.
- **Environmental Management Plan (EMPr/COEMPr):** Develop, implement and regularly update a COEMPr specific to the project, detailing measures to minimise environmental impacts during all phases, including construction, operation, and eventual closure or decommissioning.
- **Biodiversity Conservation:** Identify and protect sensitive ecosystems and biodiversity in and around the construction site. Implement measures to avoid habitat destruction and minimize disturbance to wildlife during all phases of the project.
- **Water Management:** Implement measures to conserve water resources, prevent water pollution and manage stormwater effectively throughout the project's lifecycle. This includes erosion control during construction and ongoing measures such as pollution prevention devices, regular inspection of drainage systems and water use efficiency initiatives during operation
- **Air Quality Management:** Minimize dust and pollutant emissions by using dust suppression techniques and during operation through appropriate emission controls, maintenance of equipment and adherence to air quality standards.
- **Waste Management:** Implement a waste management plan applicable to both the construction and operational phases of the project, to reduce, reuse and recycle waste where possible. Proper handling, storage and disposal of hazardous materials is crucial to prevent soil and water contamination during the projects life cycle.

- **Energy Efficiency:** Promote energy-efficient practices during construction and operation, including the use of renewable energy sources where feasible to reduce greenhouse gas emissions and overall environmental footprint.
- **Community Engagement:** Engage with local communities and stakeholders throughout the project to address concerns, promote transparency and ensure that both construction and operational activities do not negatively impact nearby residents.
- **Monitoring and Reporting:** Regularly monitor environmental performance against established targets and requirements during all phases, including operational compliance monitoring for emissions, water quality and waste management. Report findings to regulatory authorities and stakeholders as per legal obligations.
- **Training and Awareness:** Train construction, operational and maintenance personnel on environmental best practices and ensure awareness of environmental responsibilities. Encourage a culture of environmental stewardship on site.
- **Continuous Improvement:** Continuously review and improve environmental management practices based on monitoring results, technological advancements, changes in legislation and lessons learned from past projects. Apply adaptive management to respond to evolving environmental risks and opportunities.
- **Risk Management:** Identify, assess and prioritise environmental risks for both construction and operational phases and implement preventative and contingency measures to minimise potential environmental harm.
- **Life Cycle Approach:** Consider the full life cycle of the project, from planning and construction through to operation and maintenance in all environmental management decisions

These principles reflect a proactive and lifecycle based approach to environmental management in South Africa, aiming to balance development needs with environmental conservation and sustainability goals. It's essential for all contractors, operators and associated stakeholders to integrate these principles into their operations and collaborate with environmental specialists as needed to ensure compliance and best practices.

In addition to the guidelines above, the following principles should also be adhered to at all times during the implementation and operation of this project:

1. The Environment is considered to be composed of both biophysical and social components.
2. Construction and operational activities are disruptive activities. Due consideration must be given to both the natural and social environment, during all phases of the project in order to minimize the impact on all surrounding biophysical and social components.
3. Areas disturbed by project activities (i.e. the footprint and immediate surrounds of the construction and operational areas) should be minimized throughout the project in order to reduce rehabilitation requirements and costs.
4. As minimum requirements, all relevant standards relating to international, national, provincial and local legislation, as applicable, shall be adhered to. This includes the following legislation which could have an effect on construction and operational activities as well as on the environment. This list is merely a guideline and the responsibility shall remain on the Contractor and operators to ensure that all relevant legislation is adhered to throughout both the construction and operational phases of the project.
 - Constitution Act (No. 108 of 1996)
 - National Environmental Management Act (NEMA) (No. 107 of 1998)

- National Environment Management Biodiversity Act (NEMBA) (No.10 of 2004)
 - National Water Act (No 36 of 1998)
 - National Environmental Management Integrated Coastal Management Act (No. 24 of 2008)
 - National Heritage Resources Act (No. 25 of 1999)
 - Conservation of Agricultural Resources Act (No 43 of 1983)
 - Eastern Cape Biodiversity Conservation Plan (Berliner and Desmet, 2007)
 - Eastern Cape Environmental Conservation Ordinance, No. 19 of 1974
 - Environment Conservation Act (ECA) of 1989
 - Provincial Nature Conservation Bill (Eastern Cape) of 2003
 - National Forest Act of 1998
 - National Environmental Management: Integrated Coastal Management Act (ICMA) of 2004
 - Occupational Health & Safety Act (No.85 of 1993)
 - 2022/27 Kouga Local Municipality Integrated Development plan (IDP)
 - The Spatial Planning and Land Use Management by-laws of the Kouga Municipality
 - All relevant provincial legislation, Municipal by-laws and ordinances.
5. Every effort should be made to minimise, reclaim and/or recycle “waste” material throughout all phases of the project.
 6. Due consideration must be exercised to ensure that the rights of others are respected. This requires that a risk averse and cautious approach to the management of activities associated with the project be adopted at all times.
 7. Environmental management should consider the full lifecycle of the project, including construction, operation and maintenance to ensure sustainable outcomes over the long term.

2. ROLES AND RESPONSIBILITIES

2.1. THE PROPONENT

The Proponent, Mr Pearton, will be responsible for:

1. Appointment of a principle agent being an Architect or Engineer to oversee the implementation of the works.
2. Appointment of a registered and competent contractor to perform the works on site.
3. Appointment of an Environmental Control Officer (ECO) to monitor and report on compliance during all phases of the project.
4. Having knowledge and an understanding of the contents of the EMPr.
5. Providing adequate financial allowance for the implementation of the EMPr including a provisional sum allowance for any unforeseen or additional environmental protection measures that may become necessary through the construction, operational and rehabilitation process.
6. Providing assistance to the principle agent in enforcing the Environmental Specifications.
7. Communicating with all role players in the interests of a co-ordinated effort to protect the environment.
8. Ensuring the continued implementation of the environmental specifications in the operation phase of the project.
9. Ensuring ongoing environmental monitoring and compliance reporting as required by regulatory authorities during operations.

2.2. THE PROJECT MANAGER

The principle agent will be responsible for:

1. Ensuring that all contractors and operational staff are familiar and aware of the contents of the EMPr.
2. Ensuring that all required permits, authorisations, approvals and associated conditions are in place prior to site establishment and commencement of construction activities.
3. Assisting with monitoring the Contractor's compliance to the specifications contained within the EMPr and enforce compliance if necessary.
4. Working together with the Environmental Control officer (ECO) to review and approve the contractor's method statements and operational procedures
5. Issuing site instructions giving effect to the ECO requirements contained in audit reports.
6. Discussing the application of any penalties and other possible enforcement measures where necessary with the ECO.
7. Facilitating communication between all role-players in the interest of effective Environmental Management.
8. Coordinating the transition from construction to operational phase, ensuring environmental specifications are implemented and maintained

2.3. THE CONTRACTOR

The contractor will be responsible for:

1. Being familiar with the contents of the EMPr and complying with the requirements therein.
2. Compiling an environmental site file maintaining accurate and detailed records of all activities on site.
3. Conducting regular environmental awareness training amongst all site personnel. All new personnel on site are to be inducted in Occupational Health and Safety and Environmental awareness.
4. Reporting all incidences of non-compliance with the content of the EMPr to the ECO.
5. Preparing method statements and obtaining approval from the CA and ECO for all work that will take place in environmentally sensitive areas.
6. Timeous implementation of mitigation measures for non-compliances identified in previous audit reports.
7. Ensuring that any operational contractors (e.g., maintenance or landscaping) are aware of relevant EMPr requirements.

2.4. THE ENVIRONMENTAL CONTROL OFFICER

The Environmental Control Officer will be responsible for:

1. Informing DEDEAT in writing prior to any construction commencing on site.
2. Conducting all environmental induction with the principle agent, main contractor and operational staff (when applicable) on the content and requirements of the EMPr.
3. Confirming that all required permits in terms of the applicable legislation have been obtained by the contractor prior to the commencement of any construction on site.
4. Undertaking regular site inspections so as to ensure that the all the provisions contained within the EMPr are met and complied with throughout the construction and operational phases.
5. Conducting regular audits in order to measure the Contractors compliance with the provisions of the EMPr and the distribution of such reports to all the relevant parties including DEDEAT.
6. Keeping photographic records of all progress on site throughout the duration of the construction phase.

7. Ensuring that all mitigation measures of the EMPr are implemented.
8. Monitoring of the Contractors environmental awareness training for all personnel on site.
9. Reviewing and approving construction method statements in conjunction with the principle agent prior to work commencing.
10. Undertaking detailed close-out audits post construction and periodically during operation, distributing reports to all relevant parties including DEDEAT.

DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

3. ENVIRONMENTAL MANAGEMENT PROGRAMME

A variety of potential impacts are associated with this project, thus requiring action and mitigation by responsible role players. The project has been categorized into four main phases namely planning and design phase; pre-construction and construction phase; operational phase and closure phase. The tables below highlight the activities or issue associated with each of the phases and discusses the actions which need to be undertaken to ensure that the project is executed successfully, and within in the principles of sustainable and best practice methodology.

3.1. PLANNING AND DESIGN PHASE

ACTIVITY OR ISSUE	MANAGEMENT ACTION	RESPONSIBILITY	MONITORING FREQUENCY
Appointments and duties of the ECO	The applicant, Mr. Pearton, must appoint an independent Environmental Control Officer (ECO) to monitor the contractor's compliance with the EMPr.	Applicant	Once-off
	The applicant must provide the relevant parties with a copy of the EMPr.	Applicant	Once-off
	The responsibility of the appointed ECO is to ensure that the conditions set out the EMPr are complied with.	ECO	Ongoing
	The ECO must form part of the management team overseeing the project and attend the scheduled team meetings	ECO	Ongoing
	It is the contractor's responsibility to see that construction personnel attend the site induction and environmental training presented by the ECO prior to commencement of activities in site.	Contractor and ECO	Once-Off
	The ECO must discuss environmental compliance issues during site visits that are conducted at least once per month and preferably twice monthly.	ECO	Minimum monthly or as necessary
Site Induction and Environmental training for site staff	It is the responsibility of both the Applicant and the ECO to ensure that all the contractors and their teams receive adequate environmental induction; and the necessary environmental training prior to the commencement of activities on-site, as per their obligations in terms of this EMPr.	Applicant and ECO	Once-Off or as necessary if non-compliance identified

	The contractor must ensure that all personnel on-site have received basic environmental awareness training. This includes the site foreman. The contractor must ensure that all workers operating heavy machinery (for example excavators) have received the required training and are equipped to operate such machinery. These staff members must also be adequately trained to identify any potential hazards associated with their job. Furthermore, the contractor must monitor the performance of construction staff to ensure that they are abiding by the instructions provided to them prior to the commencement of construction activities on-site.	Contractor	Once-Off or as necessary if non-compliance identified
	The ECO must ensure that everyone who attended the site induction and environmental awareness training program, signs the attendance register. A copy of the attendance register must then be kept on record by the ECO, for auditing purposes. The environmental awareness program presented by the ECO should focus on all the contractor's workers and particularly on workers employed from the local communities.	Contractor, ECO	Once-Off or as necessary if non-compliance identified
	Conduct mandatory training for all site personnel on possible hazards (Including demolition), EMP requirements, waste management and environmental protection. Keep attendance records.	Contractor and ECO	Once-off and for new personnel
	Clear stipulations as to who is responsible and accountable for what actions.	ECO/Contractor	Once-off or as necessary
Record keeping	It is suggested that a photographic trail of the development site is captured prior to the commencement of construction activity on-site, during the construction process and after the completion of the construction phase. These photographs should then be included in the Final post completion audit report submitted to DEDEAT after the project has been completed.	ECO	On-going

	The contractor must ensure that all the required permits, certificates and permission documents have been obtained from the relevant parties prior to the commencement of activities on-site; and see that they are strictly adhered to.	Contractor	On-going
	The contractor must also ensure that all the relevant documentation relating to this EMPr are kept in the site office, where such documentation can be easily presented on request thereof. This includes the ECO reports, site induction record, copy of the EA, incidents register, specialist studies and any other documents relevant to the development.	Contractor	As necessary
Layout Plan	The 32 m vegetated buffer adjacent to the Kromme Estuary must be formally demarcated as a strict no-go area prior to commencement of any works. No construction, access, stockpiling, material storage or disturbance of any kind is permitted within this buffer. This area represents the functional ecological component of the site and must be protected at all times.	Applicant and Architect	As necessary
	The planning and design of the proposed activity must consider, and comply with all relevant environmental legislation and policy, e.g.: ○ Local spatial development frameworks, i.e. Kouga SDF. ○ Local town planning scheme In addition to the above environmental legislation, the development must also comply with national and local municipal policy, e.g.: ○ Local Land Use Planning Ordinance ○ South African National Standards for the built Environment	Applicant, Town planner and Architect	Once-Off
	The proposed dwelling should fall within the determined developable area that was identified.	Applicant and Architect	Once-Off
	Ensure that the final layout avoids sensitive features and incorporates the existing 32m vegetation buffer between the development area and the estuary.	Applicant and Architect	Once-off

	All areas laying outside of the authorised development footprint are to be noted as no-go areas and need to be clearly demarcated on all final design drawings	Applicant and Architect	Once-off
Site establishments	Identify and designate the appropriate area for the site camp, laydown, stock piling, refuelling, chemical and material storage areas outside of no-go areas.	Contractor/ECO	Once-off
	Ensure site establishment areas are indicated on the final site layout plan and approved by the ECO prior to construction.	Contractor/ECO	Once-off
	Include provision for ablution facilities, waste storage, fuel storage, and parking within the designated camp footprint.	Contractor	On-going
	The contractor must ensure that the site has the necessary ablution facilities on-site prior to the commencement of construction activities. The ablution facilities are to remain on the site until the construction phase of the development has been completed.	Contractor	On-going
	Allocate space for the correct placement of portable ablution facilities within the designated site camp footprint, ensuring they are located away from all no-go areas.	Contractor	Once-off
	Portable ablution facilities are to be regularly checked and serviced to prevent any spills and contamination.	Contractor	On-going
	Water required must be sourced from the local water supply	Contractor	On-going
Stormwater management Design	Incorporate stormwater management measures that promote natural infiltration on-site (e.g. soakaways or infiltration structures) to prevent runoff towards the estuary.	Applicant and Architect	As necessary
	Identify natural drainage patterns on site and ensure the house placement does not obstruct stormwater flow.	Applicant and Architect	As necessary
	Design the roof guttering and downpipes to direct runoff into rainwater harvesting tanks before overflow is released to the ground.	Applicant and Architect	As necessary
	Avoid concentrating stormwater flow where erosion could occur (e.g., steep slopes).	Applicant and Architect	As necessary
	Include rainwater tank overflow integration into the overall stormwater layout to avoid erosion.	Applicant and Architect	As necessary

	Incorporate permeable surfaces (lawns, gravel strips) in the design to reduce runoff where feasible.	Applicant and Architect	As necessary
	Design paved areas and driveways with appropriate gradients for controlled stormwater discharge.	Applicant and Architect	As necessary
	Include basic erosion-prevention concepts (grass cover, stabilised outlets, paved aprons).	Applicant and Architect	As necessary
	Plan for temporary stormwater controls during demolition and construction (silt fences, swales, berms).	Applicant and Architect	As necessary
	Ensure stormwater discharge locations do not negatively affect neighbouring properties and sensitive areas.	Applicant and Architect	As necessary
	Confirm that the design complies with municipal stormwater guidelines and drainage policies.	Applicant and Architect	As necessary
	All construction activities must ensure that equipment, rubble, demolition material, and construction materials are placed outside of natural or designed drainage paths. Adequate planning and/or design measures must be implemented to prevent obstruction of stormwater flow and to minimize the risk of erosion, sedimentation, or localized flooding. Storage and handling of materials should be carefully located and secured to prevent runoff contamination and maintain proper stormwater management.	Applicant and Architect	As necessary
Stormwater Risk and Estuarine Protection	All stormwater management measures must be designed and implemented to prevent any direct or indirect discharge of untreated runoff toward the Kromme Estuary. The site forms part of the Estuarine Functional Zone and uncontrolled runoff represents the primary impact pathway.	Applicant and Architect	As necessary
	Stormwater design must therefore prioritise on site retention and infiltration dissipation of energy before discharge prevention of sediment transport avoidance of concentrated flow paths toward the vegetated buffer	Applicant and Architect	As necessary
	No stormwater runoff may be allowed to discharge into or through the 32 m buffer zone.	Applicant and Architect	As necessary

3.2. PRE-CONSTRUCTION PHASE

ACTIVITY OR ISSUE	MANAGEMENT ACTION	RESPONSIBILITY	MONITORING FREQUENCY
Site camp establishment and management	Prior to excavation, it is recommended to mark out the exact footprints of the development site.	Contractor	Once-off
	The delivery of bulk materials should be done within the demarcated and hoarded section where the construction will take place and not in public roads or anywhere outside the authorised area.	Contractor	On-going
	All material delivery must ensure that no materials are able to accidentally spill into the estuarine environment, with all materials secured within the site hoarding.	Contractor	On-going
	Access to the property is to be controlled and the general public prevented from gaining access to the site without permission.	Contractor	On-going
	Portable toilets are to be provided for use by construction workers and staff, and cleaned daily. All effluent waste from the portable toilet is to be disposed of in the correct manner by a reputable service provider.	Contractor	On-going
	The Contractor must ensure that sufficient information and emergency signage is provided at the site entrance.	Contractor	Once-Off
	Sufficient storage must be provided for on site for all waste and refuse. Such refuse must include closable lids that will not blow open in string winds to ensure that all lightweight refuse cannot be dispersed on to adjoining properties by wind.	Contractor	On-going
	Solid hoarding must be installed around the development footprint where practical to prevent the public from being able to gain free access to the site during the construction phase.	Contractor	Once-Off
Erosion and stormwater controls	Inspect and maintain the sediment barrier to ensure it remains intact and effective.	Contractor/ECO	Weekly and after rainfall

	Implement interim stormwater controls to ensure that rainwater infiltrates into the ground and does not wash soil downslope.	Contractor	Ongoing
	Prepare the site for construction by stabilising loose sand, covering stockpiles, and protecting exposed soils.	Contractor	Ongoing
	Laydown areas, mixing zones and refuelling stations must be established on impermeable surfaces.	Contractor	Once off before construction
Vegetation clearing	A plant search and rescue should be undertaken prior to the commencement of activities on-site.	Eco/Specialist	Once-off before clearing
	Clearly demarcate the vegetation clearing boundary to ensure clearing remains within the approved development footprint.	Contractor/ECO	Once-off

3.3. CONSTRUCTION PHASE

Stormwater management represents the primary environmental risk pathway for this development due to the proximity of the Kromme Estuary. All measures must therefore be implemented proactively and maintained throughout the construction phase to prevent erosion, sediment transport and contamination.

ACTIVITY OR ISSUE	MANAGEMENT ACTION	RESPONSIBILITY	MONITORING FREQUENCY
Vegetation clearing	All Identified alien invasive plant species must be eradicated in an appropriate manner.	Contractor/ECO	Once off
	All disturbed garden areas to be re-instated or rehabilitated after the completion of construction.	Contractor/Applicant	As necessary
	Only indigenous plant species should be used to re-establish the disturbed area	Applicant	As necessary
	Any disturbance, removal or moving of protected species are subject to a permit being obtained from the relevant competent authority and may not take place until the permit has been obtained.	Applicant	Once off
	Any viable topsoil should also be stockpiled to a secure location on site for re-use in the affected areas after construction.	Contractor	Once off
	Vegetation clearing should comprise of only what is necessary to allow for new dwelling.	Contractor	Once off

	A plant search and rescue should be undertaken prior to the commencement of activities on-site.	Specialist	Once off
Spread of Exotic Species	The Environmental Control Officer (ECO) is to identify all invasive species and report these to the relevant authorities if observed on site. The eradication of such species is to be done correctly with care being taken not to encourage the future spread of such species.	Contractor/ECO	As necessary
	The rehabilitated gardens must be planted with indigenous plant species that are endemic to the area and thus in keeping with the natural balance of existing process areas and systems.	Contractor	As necessary
	A plant list and general layout plan is to be approved by the environmental control officer for the re-instatement and rehabilitation of the gardens as part of the construction process of the activity.	Contractor	As necessary
	Only indigenous and endemic plant species are to be used post completion and during the operational phase of the activity.	Applicant	On-going
	The gardens and surrounding Public Open Space areas are to be monitored post completion for the presence of invasive and alien species. All identified threats are to be removed and eradicated.	Applicant	On-going
Visual Impact	The new dwelling must adhere to municipal height restrictions and by-laws.	Applicant/Architect	As necessary
	The final paint colors are to be neutral natural hues which assist in blending the dwelling into the existing landscape, and also fall within municipal by –laws and regulations.	Contractor/Applicant	As necessary
	All chimneys and structures that protrude beyond the roof line are to be kept to a minimum height allowable above the roof line and within municipal by –laws and regulations.	Contractor/Applicant and Architect	As necessary
	Roof pitches and heights are to be retained at low levels relative to the main structure and soffits.	Contractor/Architect	On-going
	All light fittings are to have diffusers or opaque covers so as to reduce the visual impact on the surrounding landscape and landowners.	Applicant	On-going
Loss of Topsoil	Stockpiled top soil is to be used to rehabilitate disturbed areas.	Contractor	As necessary
	The importing of organic materials and topsoil in order to condition and improve soil quality post construction.	Contractor	As necessary

	No additional alteration of slope gradients is permitted; existing steep slopes must not be further steepened or extended	Contractor	Once off
	The use of biodegradable soil saver fabrics is to be used on all final slopes with a gradient greater than 1:10	Contractor	Once off
	All discarded excavated material must be carted off site and disposed of at a registered waste treatment facility.	Contractor	On-going
	Sufficient erosion control measures must be stipulated and adhered to.	ECO/Contractor	On-going
	Existing steep slopes must be stabilised throughout construction to prevent loss of topsoil and downslope erosion.	Contractor	On-going
	Exposed soils on steep slopes must be covered immediately using appropriate measures such as mulch, geotextile, jute netting, or brush-packing.	Contractor	On-going
	Runoff must be prevented from flowing directly down steep slopes by installing temporary berms, diversion channels, or energy-dissipating structures.	Contractor	On-going
	Vegetation clearing on steep slopes must be limited to only what is absolutely necessary for construction.	Contractor	On-going
	Rehabilitate as soon as practicably possible using indigenous vegetation to re-establish root structure and bind the soil.	Contractor	On-going
Noise pollution	Where possible fit machinery and equipment with baffles to muffle sound to further reduce noise levels.	Contractor	On-going
	Where possible, larger equipment should not be used to reduce the amount of potential noise created.	Contractor	On-going
	Machinery and equipment that is not in use should be turned off	Contractor	On-going
	Handheld equipment should be used in the construction phase where possible.	Contractor	On-going
	All construction personnel are to wear PPE where required	Contractor	On-going

	All generators and handheld electric/pneumatic tools must employ noise reduction methods.	Contractor	On-going
	The local by-laws regulating building times must be followed and adhered to.	Contractor	On-going
	No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site	Contractor	On-going
	Construction noise on site must not exceed 85DB as required by the Health and Safety Act	Contractor	On-going
	The removal of all rubble and material is to be done by means of hand with wheel barrows to a central collection point, and then loaded for removal to a registered landfill site.	Contractor	On-going
	All neighbouring properties within a 50m radius must be consulted and advised of scheduled work times. These times must be strictly followed.	Contractor	Once-Off
Dust Pollution	All neighbouring properties within a 50m radius must be consulted and advised of scheduled working hours.	Contractor	Once-Off
	The sprinkling down with water of potential dust generating areas to be done at least 3 times per day.	Contractor	As necessary
	All rubble that is to be removed to the municipal landfill site, is to be sprinkled down with water prior to departure so as to limit the amount of dust blown from the vehicle during transport.	Contractor	As necessary
	The prevailing wind directions should be taken into consideration when earthworks are undertaken	Contractor	As necessary
	Speed restriction of 40km/h must be implemented for all construction vehicles	Contractor	As necessary
	Delivery of materials to be done within a hoarded section on-site.	Contractor	On-going
	Limit vehicle movement to identified access routes and ensure that dust suppression is exercised during dry seasons and during maximum vehicle movement	Contractor	On-going
Health and Safety	A qualified safety officer is to be appointed for the duration of the construction phase.	Applicant	Once-Off

	Hard hats and safety PPE to be worn at all times.	Safety Officer	On-going
	All workers to be inducted and deemed safe prior to starting work on site.	ECO, Contractor and Safety officer	Once-Off
	All mandatory requirements of the Occupational Health and Safety Act, Act 85 of 1993 are to be met.	Contractor	On-going
	Hoarding and scaffolding on the site must be implemented to create safe access on and around the site.	Contractor	On-going
	Adequate sanitary and ablutions facilities must be provided for construction workers	Contractor	On-going
	Access to the site must be strictly controlled	Contractor	On-going
Waste generation	All reusable material to be repurposed where possible.	Contractor	On-going
	All rubble generated from the activity is to be removed to the local licensed municipal landfill site.	Contractor	On-going
	All excavated material must be carted off site and disposed of at a registered waste treatment facility.	Contractor	As necessary
	All rubble and refuse generated is to be cleaned up daily and secured against wind in a secure and enclosed location on the property.	Contractor	On-going
	All effluent from portable toilets is to be removed by registered and approved suppliers.	Contractor	On-going
	All potentially contaminated rubble must be immediately reported to the ECO and the relevant authorities.	Contractor	As necessary
	All contaminated materials are to be discarded by means of licensed and registered operators.	Contractor	As necessary
	Any accidental spills are to be reported to the ECO and cleaned up immediately using appropriate methods for the type and classification of materials spilled.	Contractor	As necessary
	All hazardous material is to be stored in a secure and safe storage facility appropriate for the type and classification of materials spilled.	Contractor	As necessary
	Sufficient storage must be provided for on site for all refuse. Such refuse must include closable lids that will not blow open in string winds to ensure that all light weight refuse cannot be dispersed on to adjoining properties by wind.	Contractor	On-going

	All mixing of cement must be done on a surface such as plywood board or thick micro plastic to prevent leaching of cement residue in the subsoil	Contractor	On-going
	Any substrate contaminated by the spillage of hydrocarbons or other pollutants to be removed from the site and disposed of at a registered waste disposal site;	Contractor	On-going
	No servicing of vehicles and other machinery to take place on site and no fuel or other hazardous material to be stored on site;	Contractor	On-going
	All excess construction material and any waste generated during construction must be removed from site on an on-going basis and disposed of at a suitably registered waste disposal site	Contractor	On-going
	The contractor must provide adequate waste disposal facilities and must ensure that these facilities are properly used and maintained	Contractor	On-going
Contamination of topsoil	No construction, storage of materials or topsoil or development to take place beyond the municipal building lines; and no relaxation of the stipulated building lines are to be allowed.	Contractor	On-going
	Stripping and stockpiling of topsoil in areas where construction activities is to take place.	Contractor	As necessary
	Stockpiled topsoil is to be used to rehabilitate disturbed areas post construction activities.	Contractor	As necessary
	Stockpiling of excavated material is prohibited on or upslope of steep areas where it may erode or slump.	Contractor	Ongoing
	Soil protection techniques are to be used such as groundsheets or timber boarding to reduce the incidence of accidental contamination.	Contractor	On-going
	All handling and mixing of materials is to be done under controlled supervision, and in controlled areas within the hoarding zone.	Contractor	On-going
	Contaminated soil is to be removed from site and transported to the local licensed landfill site.	Contractor	On-going
	Adequate health and safety and environmental induction to all construction personnel.	Contractor	As necessary
	Limiting of construction activities and staff to the site only	Contractor	On-going
	No cement/concrete mixing to take place on the soil surface	Contractor	On-going

	Cement mixers to be placed on large trays to prevent accidental spills from coming into contact with the soil surface	Contractor	On-going
	Generators and fuel supply needed during construction must be placed on trays, which rest on clean sand. Once construction has been completed, this sand must be removed from site and disposed of at a registered waste disposal site;	Contractor	On-going
Contamination of groundwater	The handling of all hazardous materials is to be done under controlled supervision, and in controlled areas within the hoarding zone.	Contractor	On-going
	Construction machinery and vehicles must not be parked overnight near sensitive areas. All parked vehicles must have drip trays, which must be cleaned regularly and any waste must be disposed of appropriately.	Contractor	Daily, clean drip trays as needed
	The use of portable toilet facilities during the construction process with effluent from such facilities to be correctly handled and treated by registered service providers.	Contractor	On-going
	All material deliveries must ensure that no materials are able to accidentally spill into the estuarine environment, with all materials secured within the site hoarding.	Contractor	On-going
	Ablution facilities must be connected to the municipal bulk sewage network in accordance with Kouga Local Municipality requirements, SANBS standards, and applicable building regulations.	Contractor/Applicant	As necessary
Heritage chance finds	If archaeological material, graves or fossils are uncovered, work must stop immediately and the heritage authority notified.	Contractor	As necessary
Environmental Performance Indicators and Thresholds	- No visible sediment leaving the site boundary - No stormwater discharge entering the buffer zone - No evidence of erosion gullies forming on site - No hydrocarbon or cement contamination of soils - No disturbance within the demarcated buffer If any of the above indicators are not met, immediate corrective action must be implemented and recorded in the site register, and the ECO must be notified within 24 hours.	Contractor/Applicant /ECO	On-going

3.4. APPLICABLE CONDITIONS EXPECTED TO BE CONTAINED IN THE EA

ACTIVITY OR ISSUE	MANAGEMENT ACTION	RESPONSIBILITY	MONITORING FREQUENCY
General conditions of the EA	The holder of the Environmental Authorisation shall be responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of this Environmental Authorisation.	Applicant/Contractor/ECO	On-Going
	Should any environmental damage be detected, that in the opinion of DEDEAT, is the result of the development, then the applicant shall be required to make good that damage to the satisfaction of the said authority at his/her own expense.		
	In the event of any dispute as to what constitutes environmental damage, DEDEAT's opinion will prevail.	Applicant/DEDEAT	On-Going
	The authorisation applies strictly to the project description as outlined in this Authorisation. Should the applicant wish to amend any component or aspect of the project hereby authorised, then approval will be required from this Department. The Department will advise what information is required as well as the process that must be followed in order to apply for an amendment to this Environmental Authorisation or, if needed, for authorisation in terms of the applicable EIA regulations promulgated in terms of the National Environmental Management Act, Act 107 of 1998.	Applicant/ECO	On-Going
	The Environmental Authorisation must be made available to any interested and affected party who has registered their interest in the proposed development. The applicant is responsible for ensuring that a copy of this Environmental Authorisation is given to any such interested and affected party including the neighbouring landowners within 14 (fourteen) days of receiving this Environmental Authorisation.	Applicant/EAP	Once-Off

	The Environmental Authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the site. In this regard, the Environmental Authorisation or a certified copy thereof must be kept on site for the duration of the construction period.	Applicant/Contractor/ECO	On-Going
	In all cases, the holder of the Environmental Authorisation must notify the Department, in writing, within 30 days if a condition of this authorisation is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.	Applicant/ECO	On-Going
	Non-compliance with a condition of the Environmental Authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, Act 107 of 1998 and the regulations.	Applicant/Contractor/ECO	On-Going
Project Specific Conditions	Fourteen days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence.	Applicant/ECO	Once-Off
	The final development plans are to be submitted to the Department for endorsement once such plans have been approved by the Kouga Municipality. These plans to be based on the facility illustrations contained in Appendix A & C of the FBAR.	Applicant/ECO	Once-Off
	The EMPr must be revised and submitted to DEDEAT for approval prior to the commencement of construction and to be implemented for the construction phase of the project. The EMP to include, amongst others if it is not already specifically and explicitly contained therein: • Applicable conditions contained in the Environmental Authorisation; • General principles of environmental management as applicable to construction activities including environmental best practice, erosion prevention and control, minimization of dust, etc.;	Applicant/ECO	Once-Off

	• A general code of conduct for any contractor carrying out any work on the development site; • All mitigation measures and recommendations contained in the Final Basic Assessment Report; and • Contingency plans for any emergencies that may affect the public open space during construction, such as fuel spills, from the construction equipment and sewage spills from on-site sanitary facilities.		
	The actual footprint of the proposed dwelling/development must be demarcated prior to commencement of construction activities on site and all activities inclusive of the stockpiling of any material/soil to be restricted to within this demarcated area.	Applicant/Contractor/ECO	Once-Off
	Prior to the commencement of construction, a plant search and rescue must be undertaken in order to remove any species of special concern as well as any other species that could be translocated. Such species to be used in rehabilitation / restoration initiatives on the site.	Applicant/ECO	Once-Off
	All construction activities to be restricted to normal working hours being 08:00 to 17:00 on weekdays. No construction to take place on weekends and public holidays.	Applicant/Contractor/ECO	On-Going
	Excavations are to be limited to what is absolutely necessary for the house and foundations.	Applicant/Contractor/ECO	On-Going
	Sewage disposal shall be via the municipal waterborne sewerage system. All connections to the municipal network must comply with applicable SANS standards and municipal engineering specifications	Applicant/Contractor/ECO	Once-Off
	The South African Heritage Resources Agency (SAHRA) must be contacted immediately should any archaeological findings be discovered during the course of the development.	Applicant/Contractor/ECO	On-Going
	An ECO to be appointed for the duration of the construction activities to oversee implementation of the CEMP as well as adherence to the conditions contained within this Authorisation.	Applicant/ECO	On-Going
	The ECO to be appointed prior to the commencement of construction and the name and contact details of the ECO together with the 14 day	Applicant/ECO	On-Going

	notice to commence must be submitted to the Department once appointed. The ECO is amongst others responsible for the following: • To keep record of all activities on site, problems identified, transgressions noted as well as a schedule of tasks undertaken by the ECO; • To keep and maintain a detailed incident and complaints register (inclusive of any spillages of hazardous substances and other materials) indicating how these issues were addressed (including any rehabilitation measures implemented) and preventative measures implemented to avoid re-occurrence of such incidents; • To keep copies of all reports submitted to the Department on site; and • To obtain and keep record of all documentation, permits, licences and authorisations relevant to the project on site.		
	The construction phase as well as the post construction rehabilitation phase is to be audited on an ongoing basis by the ECO. The findings of such audits are to be consolidated and submitted to this Department on a quarterly basis. A final post construction and rehabilitation audit is to be conducted and submitted to this Department within one month of the completion of construction and associated rehabilitation.	Applicant/ECO	On-Going
	Mr. Pearton, will be held liable in the event of non-compliance with any conditions of this Authorisation Notice or any stipulation of the CEMP by any contractor associated with this activity. Non-compliance with any stipulation in the EMP will be regarded as non-compliance in terms of this Environmental Authorisation.		
	No encroachment of any nature inclusive of physical structures (permanent or movable) and gardening are to be allowed on Private Open Space.	Applicant/Contractor/ECO	On-Going
	Only limited landscaping / gardening are to take place on the remaining extent of the property and is to utilise vegetation species	Applicant/ECO	On-Going

	indigenous to the area. No landscaping or gardening to take place outside of the agreed upon development area within the erf.		
	All invasive alien plants occurring on the property or that may colonise any portion of the property in the future are to be systematically removed prior to reaching the seed formation stage.	Applicant/Contractor/ECO	On-Going
	Notwithstanding the provisions of any of these conditions, all recommendations, guidelines and standard conditions contained in the final basic assessment must be adhered to.	Applicant/Contractor/ECO	On-Going

3.5. SOCIO-ECONOMIC MANAGEMENT PROTOCOLS

ACTIVITY OR ISSUE	MANAGEMENT ACTION	RESPONSIBILITY	MONITORING FREQUENCY
Impacts Affecting Employment	Mitigation measures to reduce impact: - As far as possible, permanently employed skilled construction workers are to be from the local community. - All unskilled and temporary construction workers are to be from the local community. - Local building material suppliers are to be used where possible.	Applicant/Contractor/ECO	On-Going
Impacts on Socio-Economic factors	Mitigation measures to reduce impact: - As far as possible, permanently employed skilled construction workers are to be from the local community. - All unskilled and temporary construction workers are to be from the local community. - Encourage the support of local business and suppliers where possible. - Encourage the use of local sub-contractors where possible.	Applicant/Contractor/ECO	On-Going

3.6. OPERATIONAL PHASE

The operational phase presents low but ongoing environmental risks primarily associated with stormwater runoff, erosion, invasive species establishment, and potential indirect impacts to the adjacent estuarine environment. Management during this phase must ensure that the site remains stable, that runoff is controlled, and that no degradation of the buffer or surrounding environment occurs over time.

ACTIVITY OR ISSUE	MANAGEMENT ACTION	RESPONSIBILITY	MONITORING FREQUENCY
Biodiversity impacts	Rehabilitation of landscape to be ongoing and monitored by the landowner.	Applicant	On-going
	The owner is to remain vigilant of invasive species post completion and during the operational phase of the proposed activity.	Applicant	On-going
	Only indigenous and endemic plant species may be used in post-construction landscaping	Applicant/Landscaper/ECO	Once-off planting, with follow-up as needed
Contamination of ground and surface water.	The integrity of the municipal sewer connection must be monitored, and any leaks or blockages must be reported immediately to the Kouga Local Municipality for repair to prevent potential contamination.	Applicant	On-going
Alien and Invasive eradication	The owners are to maintain the property free from Alien and Invasive species that may pose a threat to biodiversity. Alien and eradication is to be on-going and managed to prevent any spread of unwanted species.	Applicant/ECO	On-Going
Stormwater and erosion management	Remove the sediment screen only once the site is fully stabilised, with vegetation established and erosion no longer a risk.	Applicant/Landscaper	Once-off
	Inspect and maintain stormwater drainage infrastructure to prevent blockages, erosion or uncontrolled runoff.	Applicant	On-going/As required
	Maintain effective stormwater infiltration systems to ensure runoff does not drain towards the dune or shoreline.	Applicant	On-going
	Repair and clear drains and channels as required.	Applicant	On-going/As required
	Clean and maintain stormwater infrastructure where provided. Repair or replace damaged infrastructure when needed	Applicant	On-going/As required

	Monitor stormwater outlets for signs of contamination and address sources immediately if detected.	Applicant	On-going/As required
	Keep all landscaped areas vegetated and stable to prevent long-term erosion risks.	Applicant/Landscaper	On-going/As required
	Prevent concentrated runoff by regularly checking that no channelisation or informal pathways have formed on the property.	Applicant	On-going/As required
	Ensure all gutters, downpipes and stormwater outlets direct water into approved infiltration or drainage systems and not onto bare soil.	Applicant/Landscaper	On-going/As required
	Avoid placing garden refuse or soil near the vegetation buffer boundary, where it could wash down the access pathway during heavy rain.	Applicant/Landscaper	On-going
	Do not remove vegetation or disturb soils along the buffer boundary unless essential and approved.	Applicant/Landscaper	On-going/As required
Visual Impact	Ensure all built infrastructure is maintained in good condition (paint, repairs).	Applicant	On-going/As required
	Remove litter and waste regularly to maintain the visual quality of the property and surrounding area.	Applicant	On-going/As required
	Lighting levels should be monitored to ensure they do not negatively affect surrounding residential areas or nocturnal wildlife.	Applicant	On-going/As required
Energy and water efficiency	Use energy-efficient lighting and appliances.	Applicant	On-going
	Monitor and reduce unnecessary electricity use.	Applicant	On-going
	Implement water-saving measures (rainwater harvesting, drip irrigation).	Applicant	On-going
	Repair leaks and faulty taps immediately.	Applicant	On-going/As required

Waste Management and Pollution Prevention	Ensure regular collection and correct disposal of household waste to prevent windblown debris from reaching the estuary and surrounding areas	Applicant/Landscaper	On-going/As required
	Store any hazardous household materials (paint, solvents, pool chemicals) in sealed containers and dispose of them via approved municipal facilities.	Applicant/Landscaper	On-going/As required
	Prevent any washing of vehicles, equipment, or paintbrushes where runoff could enter the dune pathway or stormwater system.	Applicant	On-going/As required
Pool and Chemical use	Pool backwash water must be disposed of into the municipal sewer system and never onto soil or into the stormwater system.	Applicant	On-going/As required
	Ensure pool chemicals are stored securely and that spills are cleaned immediately to prevent contamination of runoff.	Applicant	On-going/As required
Rainwater harvesting system	Maintain rainwater tanks, gutters and filters to ensure proper functioning and prevent overflow or blockages.	Applicant	On-going/As required
Stormwater verification	All stormwater infrastructure must be inspected after major rainfall events to ensure no erosion or channelisation is occurring.	Applicant	On-going/As required
	Any evidence of runoff movement toward the buffer must be rectified immediately.	Applicant	On-going/As required
Lighting control	All external lighting must be downward facing and shielded to prevent light spill toward the estuarine environment.	Applicant	On-going/As required

3.7. ASSUMED EA CONDITIONS AND RECOMMENDATIONS/MITIGATIONS RELEVANT TO THE PROJECT

<u>Requirements</u>	<u>Completed (Check)</u>
<u>General conditions & notification of the EA</u>	
In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014 as amended, you are instructed to notify all registered interested and affected parties, in writing and within fourteen (14) days of the date of this letter, of the Department's decision in respect of your application.	
<u>Duration of Authorisation</u>	

The development and associated infrastructure must commence within a period of 24 (twenty four) months from the date of issue of this Authorisation. If commencement of the activity does not occur within this period, this Environmental Authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.	
All construction associated with the Development, as defined in Section 2 above and the FBAR, is to be completed within 60 (sixty) months of the commencement.	
<u>Standard conditions and declarations</u>	
Authorisation is subject to the conditions contained in this Environmental Authorisation which conditions form part of the Environmental Authorisation and are binding on the holder thereof.	
This Environmental Authorisation applies only to the activities and property described therein.	
This Environmental Authorisation does not negate the holder thereof of his/her responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity, including but not limited to: • The National Environmental Management: Biodiversity Act, Act 10 of 2004; • The Spatial Planning and Land Use Management Act (No. 16 of 2013); • The Provincial Nature Conservation Ordinance, Ordinance 19 of 1974; • The National Water Act, Act 36 of 1998; • The Occupational Health and Safety Act, Act 85 of 1993; and • The Conservation of Agricultural Resources Act, Act 43 of 1983.	
The holder of this Environmental Authorisation shall be responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of this Environmental Authorisation.	
Mr. Pearton will be held liable in the event of non-compliance by any contractor and/or subcontractor involved in this activity.	
Should any environmental damage be detected, that in the opinion of this Department, is the result of the development, then the applicant shall be required to make good that damage to the satisfaction of the said authority at his/her own expense, this without limiting the generality of the provisions of Section 28 of the National Environmental Management Act, Act 107 of 1998.	
This Department reserves the right to impose additional conditions or requirements on the applicant in respect of impacts identified during the EIA process, or withdraw this authorisation, in the event that such impacts exceed its significance as predicted in the consultant's FBAR and supporting documentation referenced in Section 4.1 of this Environmental Authorisation.	
This authorisation applies strictly to the project description as outlined in Section 2 of this Authorisation read together with the Final BAR. Should the applicant wish to amend any component or aspect of the project hereby authorised, then approval will be required from this Department. The Department will advise what information is required as well as the process that must be followed in order to apply for an amendment to this Environmental Authorisation or, if needed, for authorisation in terms of the applicable EIA regulations promulgated in terms of the National Environmental Management Act, Act 107 of 1998.	

This Environmental Authorisation must be made available to any interested and affected party who has registered their interest in the proposed development. The applicant is responsible for ensuring that a copy of this Environmental Authorisation is given to any such interested and affected party including the neighbouring landowners within 14 (fourteen) days of receiving this Environmental Authorisation.	
This Environmental Authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the site. In this regard, the Environmental Authorisation or a certified copy thereof must be kept on site for the duration of the construction period.	
In all cases, the holder of the Environmental Authorisation must notify the Department, in writing, within 30 days if a condition of this authorisation is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.	
Non-compliance with a condition of this Environmental Authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, Act 107 of 1998 and the regulations.	
Project - specific conditions in relation to the design and construction phase	
Fourteen days' written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which the activity is anticipated to commence.	
The fourteen-day notice contemplated in the Condition above may only be submitted once all pre-construction conditions have been complied with and proof of such compliance to be submitted with the fourteen-day notice.	
Any recommendations / mitigatory measures contained in the FBAR and its appendices and not explicitly covered under the conditions contained in the Environmental Authorisation, are regarded as conditions in terms of this Environmental Authorisation. In the event that any such recommendation / mitigatory measure is contradictory to a condition contained in this Environmental Authorisation, such condition will be deemed to take precedence.	
Further to the Condition above, Mr. Pearton are to compile a detailed record of all Conditions, inclusive of recommendations / mitigatory measures contained in the FBAR, in tabular format for inclusion in the Construction phase Environmental Management Programme and / or Operational Phase Environmental Management Programme as applicable.	
Mr. Pearton will be held liable in the event of non-compliance by any contractor and/or subcontractor involved in this activity.	
Prior to any clearance, the areas to be cleared must be clearly demarcated and no disturbance of vegetation to take place outside the demarcated areas.	
A dedicated CEMPr to be compiled, submitted to and approved by the Department prior to the commencement of construction. In this regard sections of the EMPPr within the FBAR that deals specifically with construction can be used as a framework. The CEMPr to include as a minimum: • Applicable conditions of this Environmental Authorisation; • All recommendations, measures, responsibilities, key actions and other provisions contained in the FBAR; • General principles of environmental management as applicable to construction activities including environmental best practice, erosion and prevention and control, etc; • Measures to prevent erosion into nearby watercourses; • A rehabilitation plan, including the progressive rehabilitation of disturbed areas as soon as practically possible;	

• An alien vegetation management plan, inclusive of the method of removal and the stipulation that no herbicides may be used within 100m of a water course/wetland; • Copies of all permits / licences issued to Mr. Pearton in relation to this project that have relevance to the environment; • A general code of conduct for any contractor that may be carrying out any work on the relevant development sites; • A clear description of the construction activities to be carried out on the site; • Details regarding storage of construction material on site; and • A framework for all contracts associated with the construction phase of the development and the Environmental Method Statements that will be associated with such contracts.	
General principles of environmental management to be implemented during construction if not already included in the EMPr to include, amongst others, the following:	Information is contained in the EMPr and to be issued to main contractor at Environmental induction
• No cement/concrete mixing to take place on the soil surface. Cement mixers to be placed on large trays to prevent accidental spills from coming into contact with the soil surface; • Generators and fuel supply needed during construction must be placed on trays, which rest on clean sand. Once construction has been completed, this sand must be removed from the site and disposed of at a registered waste disposal site; • Any substrate contaminated by the spillage of hydrocarbons or other pollutants to be removed from the site and disposed of at a registered waste disposal site; • No servicing of vehicles and other machinery to take place on construction sites, and no fuel or other hazardous material to be stored on construction sites; • All excess construction material and any waste generated during construction must be removed from site on an on-going basis and disposed of at a suitably registered waste disposal site; • The contractor must provide adequate waste disposal facilities and must ensure that these facilities are properly used and maintained; • Clear stipulations as to who is responsible and accountable for what actions; • Sufficient erosion control measures must be stipulated and adhered to; and • All de-vegetated areas, and stockpiles of soil must have adequate erosion protection, such as silt fences, shade cloth etc.	
An Environmental Control Officer (ECO) to be appointed for the duration of the construction activities to oversee implementation of the CEMPr, as well as adherence to the conditions contained within this Authorisation. Details of the appointed ECO to be submitted together with the 14-day notice of commencement.	
• The ECO is amongst others responsible for the following; • A Pre-Commencement Audit of the conditions of this Environmental Authorisation, which must be submitted together with the notice of commencement	

• Ensuring that the CEMPr is implemented and strictly adhered to inclusive of the relevant conditions contained within this Environmental Authorisation; • To keep record of all activities on site, problems identified, transgressions noted as well as a schedule of tasks undertaken by the ECO; • keep and maintain a detailed incident and complaints register (inclusive of any spillages of hazardous substances and other materials) indicating how these issues were addressed (including any rehabilitation measures implemented) and preventative measures implemented to avoid re-occurrence of such incidents; • To keep copies of all reports submitted to the Department on site; and • To obtain and keep record of all documentation, permits, licences and authorisations relevant to the project on site.	
The relevant conditions of this Environmental Authorisation shall form part of any contracts entered into between the applicant and any contractor(s) and or any sub-contractor(s).	
The CEMPr referred to in Condition above is to be implemented and strictly adhered to for the duration of the vegetation clearance and construction.	
All no-go areas are to be clearly demarcated prior to construction activities being affected.	
The holder of this Environmental Authorisation being Mr. Pearton will be held liable in the event of non-compliance by any contractor and/or subcontractor involved in this activity.	
All construction activities to be restricted to normal working hours (8:00-17:00) during weekdays (i.e. Monday-Friday). No construction activities are to take place during weekends and public holidays.	
Prior to the commencement of the activity a plant search and rescue to be undertaken in order to remove any species of special concern as well as any other species that could be translocated. Such species to be used in rehabilitation / restoration initiatives on the site.	
Prior to the removal of any species contemplated in the Condition above, the necessary permits / approvals in terms of the relevant provincial and national legislation to be obtained.	
All sand, gravel stone or other building material to be used are to be obtained from a bona fide source and the building contractor is not allowed to source any such material from the surrounding environment.	
The South African Heritage Resources Agency (SAHRA) must be contacted immediately should any archaeological findings be discovered during debris and vegetation removal phase of the development.	
The construction phase to be audited on an ongoing basis by the ECO. The findings of such audits are to be consolidated and submitted to this Department on a quarterly basis and a final post construction audit to be conducted and submitted to this Department within three months of the completion of construction.	
As much as reasonably practicable, measures to mitigate the impacts of climate change must be implemented in the development to promote environmental sustainability e.g. the use of LED lighting, rainwater tanks etc.	
Prior to decommissioning of all or part of the operations the applicant must submit a decommissioning plan to DEDEAT.	
All decommissioned areas must be left in a state that is equal to or better than the original environment.	
Recommendations/Mitigation measures applicable extracted from FBAR and EMPr	

Recommendations of EAP in FBAR

1. General Environmental Compliance Actions

- Appoint a suitably qualified Environmental Control Officer (ECO) before commencement of any site works.
- Ensure all contractors and workers undergo a mandatory Environmental Induction prior to starting on site.
- Develop and implement a Method Statement and Site-Specific Environmental Management Plan (EMPr) for approval by the relevant authority.
- Establish a site layout plan indicating sensitive areas, no-go zones, construction boundaries, and material stockpile areas.
- Install hoarding and signage around the site prior to vegetation clearance.
- Ensure EMPr and all relevant permits are available on-site at all times.
- Implement regular site inspections and audits by the ECO to ensure compliance with the EMPr and environmental legislation.
- Maintain a daily diary for reporting incidents, spills, issues of environmental non-compliance and ensure immediate corrective action is taken.

This consolidated list of environmental and planning recommendations draws from the full impact assessment, specialist studies, and best-practice compliance guidance to inform responsible development.

2. Vegetation Clearing

- Conduct a plant search-and-rescue operation prior to site clearance.
- Obtain all required permits from the competent authority (e.g., for *Strelitzia reginea* under the Provincial Nature Conservation Ordinance No. 19 of 1974).
- A solid hoarding system should be installed around the proposed structure
- Limit vegetation clearance strictly to what is necessary within the approved building footprint.
- Clearly demarcate no-go areas to prevent accidental disturbance.
- Stockpile viable topsoil in a secure area for post-construction rehabilitation.
- Rehabilitate all disturbed areas using endemic and indigenous species only.
- Ensure biodiversity protection is incorporated into construction design and implementation.

3. Invasive Alien Species Management

- Avoid unnecessary disturbance to areas outside of the approved development footprint
- Remove and eradicate all identified invasive species (e.g. *Nerium oleander* in abundance and *Schinus terebinthifolia*,) before

construction begins.

- Dispose of all removed invasive plants in a manner that prevents re-establishment
- Implement a weed management strategy for construction and post-construction phases.
- Rehabilitated areas must be landscaped only with indigenous and endemic plant species.
- ECO to approve the final planting list and layout plan for reinstatement.
- Monitor for re-establishment of alien species post-construction and remove accordingly.
- Dispose of all removed invasive species correctly and off-site.

4. Stormwater management

- Incorporate a rational stormwater design using residential-scale Sustainable Urban Drainage Systems (SUDS) such as soakaways, infiltration trenches, permeable paving, and rainwater harvesting tanks.
- Ensure stormwater is managed on-site as far as practicable, with discharge rates that do not cause erosion or exceed the natural infiltration capacity of the landscape.
- Prevent concentrated runoff towards the estuary, Northern boundary, or the estuary access pathway by using level spreaders, infiltration areas, or landscaping that disperses flows evenly.
- Keep the stormwater network completely separate from the municipal wastewater system at all times.
- Avoid the accumulation of standing water by ensuring that all stormwater drainage features remove water efficiently without causing scouring or erosion.
- Install sediment control and energy-dissipation measures (e.g., gravel beds, stone pitching, splash pads) at discharge points to minimise soil loss on existing steep slopes.
- Ensure all exposed or vegetated areas remain stable, using indigenous vegetation, mulch, brush packing, or geotextiles to prevent erosion on steep and sensitive sections of the site.
- Do not place garden waste, soil, or stockpiles near the Buffer zone boundary where they may wash down the access pathway during rainfall.
- Maintain gutters, downpipes and stormwater infrastructure regularly to prevent blockages, overflow, or diversion of runoff towards unstable slopes.
- Monitor stormwater outlets and landscaped areas for signs of erosion or sediment mobilisation, and implement stabilisation measures immediately if detected.
- Keep stormwater free of contaminants, ensuring no greywater, paint, chemicals, cement slurry, or pool backwash enters the stormwater system.

- Implement emergency containment measures for accidental spills to prevent contaminated runoff from entering stormwater pathways or reaching the dune or shoreline.
- Regularly maintain and inspect all SUDS features (e.g., soakaways, permeable paving, infiltration trenches) to ensure their long-term effectiveness.

5. Visual Impact Mitigation

- Adhere to municipal height restrictions and local planning bylaws.
- Use neutral, earthy tones for all external finishes and roof structures.
- Minimise architectural features that break the skyline; retain low roof profiles.
- Incorporate indigenous screen planting along exposed edges.
- Use downward-directed, warm-colour lighting with full cut-off shielding.
- Avoid upward-facing, flood, or high-lumen exterior lighting near the estuary.
- Use low-mounted or bollard lighting along walkways only where necessary.
- Implement motion-sensor lighting and avoid lighting near vegetated or estuarine zones.

6. Topsoil Management

- Strip and store topsoil in a secure, designated location.
- Reuse topsoil during rehabilitation of landscaped and disturbed areas.
- Avoid creating steep slopes; use retaining walls or planters as needed.
- Use biodegradable soil saver fabrics (e.g., jute) on slopes >1:10.
- Excavate only to required depths for approved plans and reuse deeper fill onsite where possible.
- Post-completion rehabilitation must include composted mulch and organic soil enhancers.

7. Noise Control

- Restrict noisy operations to municipal construction hours.
- Avoid use of pneumatic tools unless essential.
- Use wheelbarrows for rubble removal to reduce noise.
- Notify adjacent property owners (within 50m) of construction times in advance.

8. Dust Control

- Water dust-generating surfaces at least three times daily during dry periods.
- Wet down all material and rubble before transport.
- Deliver materials into hoarded sections of the site to prevent spread.

9. Health and Safety

- Appoint a dedicated safety officer on site.
- Induct all workers and require appropriate PPE at all times.
- Erect hoarding and scaffolding to separate workers from public access.
- Control all access to the site.
- Adhere strictly to the Occupational Health and Safety Act, Act 85 of 1993.
- Ensure workers operating heavy machinery are properly trained to operate the equipment safely and identify potential hazards.
- Establish and communicate emergency procedures
- Regularly inspect and maintain machinery and equipment to prevent accidents.
- Clearly demarcate the site with warning signs to prevent unauthorized access.

10. Waste and Effluent Management

- Remove all rubble and refuse daily and store in a wind-secure enclosure.
- Cart all non-reusable waste to a licensed municipal landfill.
- Store hazardous materials in designated containment areas.
- Cement and mortar mixing to occur on impermeable surfaces (e.g., plastic sheeting).
- Provide portable toilets for workers and have waste removed by licensed service providers.
- Connect all wastewater to the municipal sewage system in accordance with local regulations
- Ensure regular monitoring and maintenance of connections to prevent blockages, leaks, or contamination..
- Report any spills or contaminated material to the ECO and dispose of via registered operators.

11. Contamination Prevention (Topsoil and Groundwater)

- Supervise all handling of wet or hazardous construction materials.
- Mix and store materials in hoarded areas only.
- Remove any contaminated soil for disposal at a licensed facility.
- Ensure fuelling, maintenance and cleaning of equipment occur in designated bunded areas.

• Ensure that spill kits are readily available on-site and that personnel are properly trained in their correct use • Avoid any washing of implements or hosing on natural ground surfaces. • Connect to the bulk municipal sewage network in accordance with SANBS standards, ensuring all connections are approved and serviced by authorized providers. 12. Biodiversity Protection (General and Indirect) • Conduct environmental induction training for all staff. • Limit activity to within approved site boundaries, enforce no-go zones. • Implement and maintain solid hoarding to restrict site access. • Monitor and report any wildlife sightings, nests, or habitat disturbances. • Avoid use of reflective or metallic lighting finishes and fixtures. • Maintain dark zones outside essential areas to preserve nocturnal species behaviour. • Remove all alien and invasive vegetation and limit impact to surrounding open space. • Ensure rehabilitated areas are stabilised with endemic cover and erosion control measures. • Locate temporary stockpiles away from vegetated areas and stabilize to prevent erosion or runoff. 13. Employment and Socio-Economic Benefit • Maximise use of local labour (skilled and unskilled) where feasible. • Procure from local building material suppliers and subcontractors. • Promote fair working conditions and transparency in hiring. • Encourage the inclusion of youth and women in short-term job opportunities.	
Mitigation measures contained in the FBAR	
<u>Mitigation to reduce vegetation clearing impacts:</u> • A plant search and rescue must be undertaken prior to the commencement of activity on site. • Relevant permits to be obtained from the CA, where required and prior to any disturbance taking place. • Identify all alien invasive plant species and eradicate in the appropriate manner. • Only planting that falls within the building footprint is to be disturbed, unless identified as alien and invasive species. • Any viable topsoil should also be stockpiled to a secure location on site for re-use in the affected areas after construction. • All disturbed areas to be re-instated or rehabilitated after the completion of construction. • Only indigenous plant species should be used to re-establish the disturbed area. • Due care and consideration must be implemented in the design, construction and operational phase to ensure that biodiversity is not disturbed,	

but rather supported and protected.	
<u>Mitigation to reduce impacts of spread of alien and invasive species:</u> • The Environmental Control Officer (ECO) is to identify all invasive species and report these to the relevant authorities if observed on site. The eradication of such species is to be done correctly with care being taken not to encourage the future spread of such species. • The rehabilitated areas to be planted with indigenous plant species that are endemic to the area and thus in keeping with the natural balance of areas and systems. • A plant list and general layout plan is to be approved by the environmental control officer for the re-instatement and rehabilitation of the area as part of the construction process of the activity. • Only indigenous and endemic plant species are to be used post completion and during the operational phase of the activity. • The site and surrounding areas are to be monitored post completion and during the operational phase for the presence of invasive and alien species. All identified threats are to be removed and eradicated. • A suitable weed management strategy to be implemented in construction and operation phases.	
<u>Mitigation to reduce impacts on ground water contamination:</u> • Adequate health and safety induction to all construction personnel. • All hazardous materials (e.g., fuel, lubricants, cement slurry, paints, chemicals) must be stored in designated, bunded, and impermeable areas within the hoarding zone. • Handling and mixing of all hazardous materials is to be done under controlled supervision, using drip trays or containment measures to prevent soil infiltration. • Portable toilets must be provided on-site, positioned on impermeable surfaces away from sensitive areas and any drainage lines. • Portable toilet facilities must be regularly emptied and serviced to prevent leakage or overflow. • Fuelling and maintenance of machinery must occur in a designated area with spill containment (e.g., bunded pads) and spill kits readily available. • Accidental spillages must be cleaned immediately, with contaminated soil removed and disposed of at a licensed facility. • Stormwater and runoff from construction areas should be diverted away from the estuary to prevent potential contamination. • All construction activities must be restricted to the site; no-go zones must be enforced. • Permanent ablution facilities must comply with SANBS and all local building regulations and bylaws. • Spill response procedures and kits must be maintained on-site for rapid containment and cleanup. • Staff should be trained on the correct handling and disposal of hazardous materials to reduce the risk of accidental infiltration into the soil. • Surface runoff should be directed away from sensitive areas, with drainage infrastructure designed to prevent contaminated water from reaching the adjacent littoral active zone.	
<u>Mitigation to reduce Visual impact; continue from here</u> • The proposed development must adhere to municipal height restrictions and by-laws. • The final paint colours are to be neutral natural hues which assist in blending the dwelling into the existing landscape, and also fall within municipal by-laws and regulations. • All chimneys and structures that protrude beyond the new roof line are to be kept to a minimum height allowable above the roof line and within	

municipal by-laws and regulations. • Roof pitches and heights must be designed to remain low and unobtrusive, ensuring that the new structure maintains a similar visual scale to the surrounding built environment • Screening of the development using indigenous vegetation along visually exposed edges. • No exterior lighting should face directly towards sensitive areas (reduce night-time glare), use full cut-off fixtures that direct light downward only, with no upward light spill. Avoid flood lights in sensitive areas, use low lumen soft lighting with warm colors. • Use motion sensors for security lighting, lights should only be active when needed, this is to reduce electricity use and wildlife disruption. • Strictly avoid any lighting that shines toward or reflects onto sensitive areas in order to protect sensitive fauna and preserves the natural ambience. • Lighting at night is to be diffused and directed into the properties with no lights directly exposed to streets or neighbors. • All light fittings are to have diffusers or opaque covers so as to reduce the visual impact on the surrounding landscape and landowners.	
<u>Mitigation to reduce impacts related to loss of topsoil:</u> • Stockpiled topsoil is to be used to rehabilitate disturbed areas. • The importing of organic materials and topsoil in order to condition and improve soil quality post construction. • No additional alteration of slope gradients should be permitted unless necessary for approved plans; existing steep slopes must not be further steepened or extended, all gradients greater than 1:10 must be stabilized using biodegradable geo-jute, erosion control mats, or retaining walls where necessary • All discarded excavated material must be carted off site and disposed of at a registered waste treatment facility. • Only deep excavations are to be permitted where necessary for approved plans • Topsoil stockpiles must be located away from construction activities to avoid contamination and erosion. These stockpiles must be kept as far away from stormwater drainage paths . • The use of retaining walls and constructed planters is to assist in accommodating level changes. • Endemic and indigenous plant species must be used in post-construction landscaping to stabilize soil, prevent erosion and restore the ecological integrity of the site	
<u>Mitigation to reduce noise pollution:</u> • Limit the use of pneumatic or high-noise equipment to essential tasks only. • The removal of all rubble and material is to be done by means of hand with wheelbarrows where feasible to reduce noise. • Adhere strictly to local by-laws regulating construction times and working hours. • Consult and notify neighbouring properties, especially those within a 50 m radius, of scheduled work times and adhere to these times.	
<u>Mitigation to reduce impacts on air and dust pollution:</u> • The sprinkling down with water of exposed areas and stockpiles (including removed vegetation) at least 2–3 times per day during dry conditions to limit dust generation. • All rubble that is to be removed to the municipal landfill site, is to be sprinkled down with water prior to departure so as to limit the amount of dust blown from the vehicle during transport.	

• All neighboring properties within a 50m radius must be consulted and advised of scheduled working and such neighbours to be informed about the potential for elevated dust pollution. • Appropriate dust suppression measures or temporary stabilizing mechanisms must be used when dust generation is unavoidable (e.g. dampening with water, chemical soil binders, straw, brush packs, chipping), particularly during prolonged periods of dry weather. Dust suppression to be undertaken for all bare areas, including construction area, access roads, borrow pits, etc. • Delivery of construction materials to be done within hoarded or enclosed sections on-site to limit dust release.	
<u>Mitigation on health and safety impacts:</u> • The contractor must ensure that all workers operating heavy machinery have received the required training and are equipped to operate such machinery. These staff members must also be adequately trained to identify any potential hazards associated with their job. • Workers must wear appropriate Personal Protective Equipment (PPE), including but not limited to respirators, disposable coveralls, gloves, hard hats and safety goggles • The site must be clearly demarcated with warning signs to prevent unauthorized access • A qualified safety officer is to be appointed on site to oversee adherence to safety protocols. • All workers to be inducted and deemed safe prior to starting work on site. • All mandatory requirements of the Occupational Health and Safety Act, Act 85 of 1993 is to be met. • Hoarding and scaffolding on the site must be implemented to create safe access on and around the site. • Access to the site must be strictly controlled, only authorized personnel are allowed entry. • Emergency procedures, including first aid and fire response, must be established and clearly communicated to all site personnel. • Machinery and equipment must be regularly inspected and maintained to prevent accidents. • Safety briefings should be conducted at the start of each workday, with updates as necessary. • Adequate sanitary and ablutions facilities must be provided for construction workers.	
<u>Mitigation relating to employment opportunities:</u> • As far as possible, permanently employed skilled construction workers are to be from the local community. • All unskilled and temporary construction workers are to be from the local community. • Local building material suppliers are to be used where possible. • Local service providers (e.g., catering, security, cleaning) are to be prioritized for operational needs.	
<u>Mitigation to reduce waste impacts:</u> • All relevant waste removal, handling, and disposal certificates must be submitted to the Environmental Control Officer (ECO) and included in compliance monitoring reports. • All reusable material to be repurposed where possible. • All rubble generated from the activity will be transported and disposed of at a licensed municipal landfill site in compliance with local regulations. • All excavated material must be carted off site and disposed of at a registered waste treatment facility. • All rubble and refuse generated is to be cleaned up daily and secured against wind in a secure and enclosed location on the property.	

• Portable toilets are to be placed on site for construction personnel. • All effluent from portable toilets is to be removed by registered and approved suppliers. • All potentially contaminated rubble must be immediately reported to the ECO and the relevant authorities. • All contaminated materials are to be discarded by means of licensed and registered operators. • Spill kits for hydrocarbons, cement and other hazardous substances must be available on site at all times, with staff trained to use them. • Any accidental spills are to be reported to the ECO and cleaned up immediately using appropriate methods for the type and classification of materials spilled. • All hazardous material is to be stored in a secure and safe storage facility appropriate for the type and classification of materials spilled. • All mixing of cement and mortar must be done on a surface such as plywood board or thick micro plastic to prevent leaching of cement residue in the subsoil. • Effluent from ablution facilities must be directed into the municipal bulk sewage network, ensuring no risk of contamination to the estuary. • Green waste from ongoing maintenance (e.g., grass cuttings, pruning's) should be composted on site where possible or taken to an approved green waste facility.	
<u>Mitigation reducing biodiversity impacts:</u> • Adequate environmental induction prior to the start of the construction process for all staff. • Due care and consideration must be implemented in the design, construction and operational phase to ensure that biodiversity is not disturbed, but rather supported and protected. • Construction activities to be limited to the site only with surrounding properties, 32m vegetation buffer and POS being considered as no-go areas. • Strict control of the removal of any vegetation is to be limited to only that on the site and which is to be affected by the construction activities. • The removal and destruction of all identified listed invasive species. • Reporting of any vertebrate or invertebrate species to the Environmental Control Officer observed on or near the site during the construction phase. • Reporting of any nests, burrows or animal dwellings observed on or near the activity. • A solid hoarding must be implemented around the activity area. • Warm-colored, low-intensity lighting should be used throughout the property. Only LED lights with a color temperature of 3000 Kelvin or lower (warm white). • All external lights must be fully shielded (full cut-off type) to direct light downwards only and prevent horizontal or upward light spill. • No floodlights, spotlights or upward-facing decorative lighting should be used. • Where lighting is necessary for safety or access, motion-activated or timer-controlled fixtures should be installed to ensure lights are on only when needed and automatically. • Low-mounted or bollard-style lights (not exceeding 1 m in height) should be used for external paths and entrances and must be shielded to direct light onto the walking surface only. • Lighting must be kept away from densely vegetated areas, thicket patches or any preserved natural habitat.	

• All external lighting fixtures should be non-reflective and should avoid using shiny or metallic finishes. • The use of clustered lighting in essential areas only is encouraged. Dark zones must be maintained elsewhere on the property to support nocturnal species activity. • No artificial lighting may be directed towards any natural habitat zone.	
<u>Mitigation reducing topsoil contamination:</u> • Stripping and stockpiling of topsoil in areas where construction activities is to take place. • Stockpiled topsoil is to be used to rehabilitate disturbed areas post construction activities. • Soil protection techniques are to be used such as groundsheets or timber boarding to reduce the incidence of accidental contamination. • All handling and mixing of materials is to be done under controlled supervision, and in controlled areas within the hoarding zone. • Contaminated soil is to be removed from site and transported to the local licensed landfill site. • Adequate health and safety and environmental induction to all construction personnel. • Limiting construction activities and staff to the site only.	
<u>Mitigation affecting socio-economic impacts:</u> • As far as possible, permanently employed skilled construction workers are to be from the local community. • All unskilled and temporary construction workers are to be from the local community. • Encourage the support of local business and suppliers where possible. • Encourage the use of local sub-contractors where possible.	
Recommendations of Specialists in FBAR	
Mitigation measures related to Paleontological, heritage and cultural recommendations	
Based on the available information, the development does not trigger any of the S38(1) criteria in terms of the NHRA. No further heritage studies are recommended - the application should proceed in terms of NEMA as it is highly unlikely that significant heritage resources will be affected. ECPHRA Recommendations • The project proponent/representative must notify ECPHRA of the date of commencement of the project or share the project schedule and the Environmental Authorisation (EA), if applicable. • Heritage induction and training for all ground crew, must include identification of archaeological, palaeontological, historical, and burial-related material. This ensures lawful heritage compliance during all phases of the project. • A Heritage and Fossil Chance Finds Protocol must be adhered to. • There must be monitoring during vegetation clearing and excavations	

Mitigation affecting terrestrial biodiversity;	
• An Environmental Control Officer (ECO) must be appointed to oversee construction activities, ensuring compliance with the Environmental Authorisation, Environmental Management Programme (EMPr) and the mitigation measures contained within this report. • A plant Search and Rescue must be undertaken by a suitably qualified individual prior to the commencement of vegetation clearing or other activities which may affect vegetation on site. • Protected plant species, including <i>Sideroxylon inerme</i>, <i>Aloe arborescens</i>, <i>Cotyledon orbiculata</i>, <i>Cynanchum obtusifolium</i> and <i>Strelitzia nicolai</i>, must be identified and appropriately managed prior to construction. Where feasible, these species should be retained in situ and incorporated into the final landscaping design. • Where the removal, disturbance or relocation of protected plants or trees cannot be avoided, the necessary permits or licences must be obtained from the relevant competent authorities prior to vegetation clearing. • The approved development footprint, site camp, access routes, material storage areas and designated delivery areas must be clearly demarcated prior to the commencement of construction. • Construction activities must be strictly confined to the approved development footprint. Areas outside Erf 3806, neighbouring properties and the adjoining canal environment must be regarded as no-go areas unless specifically authorised for project-related activities. • No construction equipment, building materials, rubble, spoil, fuels or hazardous substances may be stored outside the approved construction area or where they may enter the adjoining canal system. • No dumping of garden refuse, construction waste, rubble or any other material may occur beyond the property boundary or into the adjoining canal. • Vegetation clearing must be limited to the minimum area required for construction and should be undertaken progressively where possible to reduce the extent of exposed soil at any one time. • Where viable topsoil is present, it should be carefully stripped and stockpiled in a secure designated area for reuse during rehabilitation and landscaping. • All disturbed areas not required for permanent infrastructure must be stabilised and rehabilitated as soon as reasonably possible following completion of construction. • Indigenous plant species suitable for the local coastal environment should be favoured for rehabilitation and landscaping. The introduction of listed invasive alien plant species must be avoided.	

- Any alien invasive plant species that establish on the property during or following construction must be appropriately controlled and removed in accordance with the applicable legislative requirements.
- Stormwater management must be implemented in accordance with best practice to prevent erosion, sedimentation and the uncontrolled discharge of stormwater from the construction area into the adjoining Marina Glades canal system.
- Sediment, soil, cement, concrete wash water, paint, fuels, oils and other pollutants must not be permitted to enter the canal or wider estuarine environment.
- Refuelling, vehicle servicing, cement mixing and the storage of fuels or hazardous substances must take place within appropriately designated and controlled areas away from the canal frontage.
- Spill kits must be available on-site during construction and any accidental spillages must be contained and appropriately managed.
- Natural drainage patterns must not be unnecessarily altered and stormwater generated from the developed property must be appropriately managed to prevent erosion and pollution of the adjoining canal system.
- All excavated areas associated with services or other temporary works must be stabilised and rehabilitated once works have been completed.
- All external lighting should be downward-directed and appropriately shielded to minimise unnecessary light spill towards the adjoining canal and wider estuarine environment. Excessive floodlighting of the canal frontage should be avoided.
- A comprehensive environmental induction must be provided to all construction staff prior to commencement of works, with particular emphasis on footprint control, protected flora, fauna, waste management, spill response and the protection of the adjoining canal and estuarine environment.
- Should fauna be encountered during vegetation clearing or construction, the animal must be allowed to move away from the construction area unharmed. No fauna may be intentionally captured, harmed or killed.
- Construction activities must be limited to standard daytime working hours to reduce unnecessary disturbance to surrounding residents and fauna that may utilise the canal and surrounding environment.
- All construction waste must be appropriately stored and removed to a suitably authorised waste disposal facility.
- All waste bins on site must have closeable lids to prevent wind-blown waste and avoid attracting local wildlife.
- No activities may extend into the adjoining canal or beyond the approved development footprint unless separately authorised in terms of the relevant environmental and other legislative requirements.
- Due care and consideration must be exercised during the design, construction and operational phases to ensure that terrestrial biodiversity is not unnecessarily disturbed and that the adjoining estuarine environment is appropriately protected.

Post-construction monitoring should be undertaken by the appointed ECO to confirm that disturbed areas have been stabilised and rehabilitated and that the environmental management measures have been appropriately implemented	
Mitigation measures related to Aquatic recommendations	
Construction Phase • It is recommended that a sediment barrier be placed along the southern edge bordering the canals during construction until the area is stabilised (paved or landscaped), and there will be NO IMPACT. • Any cement mixed on site must be done in a demarcated area towards the northern end of the property on a non-permeable surface that can contain the mixture. • There must be no mixing on the bare ground to prevent leaching; • All spills onto the ground must be cleaned up by hand and removed from site; and • All machinery or tools must be washed off at an off-site location or in containers that can be emptied off-site. • Any machinery (e.g., cement mixers, generators) must be located on drip trays containing a layer of fine sand (small particle size) that can trap hydrocarbons through adsorption, and which should be cleaned out regularly for disposal at a suitable waste treatment site. • Any accidental spills on site must be cleaned up manually and disposed of off-site. Operational Phase • Any foul odours and leaks (dampness) around the conservancy tank site must be investigated, and repairs must be conducted immediately if required. • On its own, wastewater from Erf 3806 is unlikely to have any negative effects, and there will be NO IMPACT if these guidelines are adhered to. Cumulative Impacts • All footpaths traversing saltmarshes should be “closed”, and the areas rehabilitated as detailed in Van Niekerk et al. (2019); • sewerage infrastructure must be regularly maintained; and the capacity to service (empty) conservancy tanks must be ensured.	

- | | |
|--|--|
| <ul style="list-style-type: none">• The future development of vacant, untransformed plots, or the rezoning of areas for development within the EFZ, needs to be discouraged. | |
|--|--|

3.8. CLOSURE

As the proposed activity relates to the construction of a residential dwelling the operational phase is intended to be permanent and ongoing. It is therefore doubtful that a decommissioning phase will be required for the project in the foreseeable future. However, in the event where decommissioning becomes necessary, formal notice must be given to DEDEAT, as well as all relevant stakeholders. Decommissioning and rehabilitation must be undertaken in line with applicable legislation, municipal requirements and best practice environmental guidelines.

DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

4. AUDITING AND CORRECTIVE ACTION

Auditing and implementation of corrective action, should it be required, forms an important component of the EMPr management cycle for the proposed development. These measures ensure that:

- The required EMPr management conditions are being implemented, and reported appropriately;
- The desired outcomes are being achieved;
- On-going inspections of operational activities are undertaken and reported appropriately;
- Internal audits must be undertaken during construction phase to assess the compliance to the EMPr or to focus on particular performance issues in relation to the conditions of the EA.

There are several mechanisms for implementing corrective action both during construction and operational phases. The main instruments used to address non-compliances are the following:

- Minor transgressions to the EA and EMPr – Verbal instructions by the ECO and Project Management Team
- Written instructions – To support and formalise verbal instructions by the ECO
- Contract Notice – Following a material breach in contract issued by the Project Management Team;
- Directive from Regulating Authority – Following a material non-compliance with the conditions of the EA and the EMPr.

5. SITE REPORTING AND DOCUMENTATION

All non-compliance issues will be recorded by the ECO and reported to the Applicant and Project Manager on a regular basis during the construction phase.

The following site documentation must be kept on the activity site at all times and be available for inspection by anyone requesting proof of such documentation:

- Certified copy of the EA;
- Environmental Management Programme;
- Project Risk Register;
- Project SHE Plan;
- Complaints register;
- Environmental Incident Register;
- Interim audit reports of compliance and non-compliance to EMPr and EA conditions;
- Written corrective action instructions;
- Proof that incidents and non-compliances have been closed out appropriately.

The findings of all inspections and internal audits will be structured into instructive reporting which will be provided to the Project Manager. Corrective actions must be clearly defined as appropriate and reasonable, where required.

Within the reporting function a structured review component will be required from the Project Management Team. This review function will assist in prescribing appropriate and reasonable corrective actions, and ensuring their timeous implementation.

6. ENVIRONMENTAL MONITORING

The aim of compliance monitoring is to verify that the responsible parties adhere to the procedures, management conditions, and specifications contained within this EMPr and the conditions set out in the EA.

An environmental monitoring programme will be implemented for the duration of the construction phase of the proposed activity.

The environmental program is to include:

- The appointment of a suitably qualified individual by the project proponent to be assigned as the Environmental Control Officer (ECO).
- A baseline is to be established by means of taking photographs of the site so as to identify environmental aspects and potential impact on site prior to construction.
- The ECO is to visit the site at least once a month throughout the construction phase of the development which is expected to be a period of approximately 12 months
- The ECO must record any incidence of non-compliance, and recommend corrective measures. All corrective measures are to be submitted to the project proponent, principle agent and main contractor.
- The ECO is to compile regular audit reports rating compliance with the EMPr. The audits are to include photographic records of all progress and non-compliance.
- A post completion audit report summarising all previous audits is to be compiled and submitted to the project proponent, principle agent and main contractor after completion of the construction phase.

7. ENVIRONMENTAL COMPLIANCE

7.1. NON-COMPLIANCE

The contractors shall be responsible for complying with the EMPr at all times throughout the construction phase of the project. Where non-compliance is identified, notice of this will be issued for the contractor to act upon act and correct whatever non-compliance was identified.

Non-compliance will be deemed to have occurred where the contractor has acted outside of the agreed procedures of the EMPr and is a transgression of the various statutes and laws that define the manner by which the environment is managed. Failure to correct the issues of non-compliance shall be reported to the relevant authority for them to attend to any such transgression, as it deems fit.

Through the principal agent, the ECO shall have the right to order work to be stopped in the event of significant infringements of the EMPr. Work on site may resume when all non-compliance has been rectified and the status quo returned. Any such stoppages are not eligible for claims of delays on the project.

Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register on site, and the response noted with the date and action taken. The ECO should be made aware of any complaints and included in any audit reports.

7.2. PENALTIES

Where environmental damage is caused by any means whatsoever, or where failure to comply with any of the environmental specifications contained in the EMPr, the proponent and/or contractor shall be liable. This liability and corresponding penalty will comprise an amount at least equivalent to the cost to remedy any environmental damage.

It is important to note that such penalties do not replace the rights of DEDEAT as the Competent Authority to issue fines or work stoppages for any transgressions under the applicable environmental legislation.

Recommended fines for the activities detailed below, will be imposed by the Applicant on the Contractor.

1. Any employees, vehicles, plant, or thing related to the Contractor's operations operating within the designated boundaries of a "no-go" area. R 10 000
2. Disposing of contaminated water in Municipal systems R 10 000
3. Any vehicle driving in reckless manner. R 1 000

4. Persistent and un-repaired oil leaks from machinery. R 3 000
5. Persistent failure to monitor and empty drip trays timeously. R 1 000
6. The use of inappropriate methods for refuelling. R 1 000
7. Litter on site associated with construction activities. R 1 000
8. Deliberate lighting of illegal fires on site. R 5 000
9. Employees not making use of the site ablution facilities. R 2 000
10. Failure to implement specified noise controls, particularly during blasting R 2 000
11. Failure to manage waste bins on a regular basis. R 1 000
12. Inadequate dust control. R 1 000
13. Destruction and /or removal of flora R 5 000
14. Trapping and/or killing of fauna R 5 000
15. A spillage, pollution, or any damage to any water course resulting from negligence on the part of the Contractor. R 10 000

For each subsequent similar offence, the fine shall be doubled in value to a maximum value of R100 000.

8. ENVIRONMENTAL AWARENESS PLAN

Prior to construction, on-site training must be provided to all contractors and personnel working on site during the construction phase of the project. No personnel may be allowed onto the site without having been instructed on the requirements of the approved EMPr.

It is important to ensure that the Contractor has the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimisation of environmental damage. It is critical that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

The Contractor shall ensure that its employees and sub-Contractors who carry out all or part of the Contractor's obligations are adequately trained with regard to the implementation of the EMPr, as well as environmental legal requirements and obligations.

The environmental training is aimed at:

- Promoting environmental awareness;
- Informing the Contractor of all applicable environmental procedures, policies and programmes;
- Providing generic training on the implementation of environmental management specifications; and
- Providing job-specific environmental training in order to understand the key environmental features of the construction site and the surrounding environment.

Training will be done in a verbal manner and will be a once-off event. In addition to training, general environmental awareness must be fostered among the project's workforce to encourage the implementation of environmentally sound practices throughout its duration. This ensures that environmental accidents are minimised and environmental compliance maximised.

The Contractor shall ensure that records of all training interventions are kept in accordance with the record keeping and documenting control requirements as set out in this EMPr and records must be sent to the ECO. The training records shall verify each of the personnel's training experience.

The Environmental Training shall address the following:

- The importance of conformance with all environmental policies;
- The environmental impacts, actual or potential, of all work activities;
- The environmental benefits of improved personal performance;

- Workers' roles and responsibilities in achieving conformance with the environmental policy and procedures and with the requirement of the EA, EMPr and relevant permits, including emergency preparedness and response requirements;
- The mitigation measures required to be implemented when carrying out their work activities.
- Environmental legal requirements and obligations;
- The importance of not littering;
- The importance of using supplied toilet facilities;
- The need to use water sparingly;
- Details of and encouragement to minimise the production of waste and re-use, recover and recycle waste where possible; and
- Details regarding archaeological and/or historical sites which may be unearthed during construction and the procedures to be followed should these be encountered.

9. EMERGENCY AND CONTINGENCY PLAN

9.1. INTRODUCTION

This contingency plan is designed to address potential emergencies, specifically fuel spills and sewage spills, that may unintentionally impact public open spaces during construction activities in adjacent ecologically sensitive coastal areas. This plan aims to ensure prompt and effective response to mitigate environmental damage and protect public health and safety.

In the event of a spill or contamination event, all measures must be taken to prevent migration toward the buffer and estuarine environment. Spill containment must prioritise upslope interception and immediate removal of contaminated material.

9.2. RISK ASSESSMENT

Identify High-Risk Areas:

Conduct a thorough assessment of the construction site to identify areas prone to spills, considering proximity to water bodies, sensitive habitats, and public access points.

Ecological Sensitivity:

Understand the unique ecological characteristics of Sea Vista, St Francis Bay area, including protected species, habitats, and water quality concerns.

9.3. EMERGENCY RESPONSE TEAM AND COMMUNICATION

Emergency Response Team:

Designate and train personnel responsible for spill response and cleanup. Include roles for site managers, environmental officers, spill responders, and communications coordinators.

Communication Protocols:

Establish clear channels for internal communication among construction teams and external communication with regulatory authorities, emergency services, and local communities.

9.4. EMERGENCY EQUIPMENT AND SUPPLIES

Spill Response Kits:

Maintain readily accessible spill response kits containing absorbents, booms, pumps, PPE (personal protective equipment), and spill containment materials.

Specialized Equipment:

Ensure availability of equipment suitable for spill containment and cleanup in sensitive coastal environments.

9.5. FUEL SPILL CONTINGENCY PLAN**Immediate Response:**

Upon discovery of a fuel spill, personnel should:

- Secure the area to prevent further spread.
- Notify the emergency response team and relevant authorities.
- Begin containment using booms and absorbent materials.

Cleanup Procedures:

Follow established procedures for:

- Removing contaminated soil or materials.
- Proper disposal of hazardous waste according to local regulations.
- Monitoring affected areas post-cleanup to ensure effectiveness.

9.6. SEWAGE SPILL CONTINGENCY PLAN**Containment and Mitigation:**

In case of a sewage spill:

- Isolate the spill area to prevent contamination of water bodies.
- Initiate containment using barriers or absorbent materials.

Cleanup and Disinfection:

Procedures should include:

- Safely removing and disposing of contaminated materials.
- Disinfecting affected areas using appropriate biocides or sanitizers.
- Restoring sanitary facilities to prevent future spills.

9.7. ENVIRONMENTAL MONITORING AND REPORTING**Monitoring Procedures:**

Implement monitoring to assess environmental impacts and effectiveness of cleanup efforts.

Reporting Requirements:

Document incidents, response actions taken, and outcomes for regulatory compliance and public transparency.

9.8. PUBLIC SAFETY AND COMMUNITY ENGAGEMENT**Public Notification:**

Develop protocols for notifying the public about spills, associated risks, and safety precautions.

Community Engagement:

Engage with local communities to address concerns, gather feedback, and promote understanding of emergency response measures.

9.9. TRAINING AND DRILL EXERCISES

Training Programs:

Conduct regular training sessions for construction personnel on spill prevention, emergency response protocols, and use of spill response equipment.

Drill Exercises:

Organize mock spill response drills to test the effectiveness of the plan and familiarize responders with their roles.

9.10. REVIEW AND UPDATES

Periodic Review:

Schedule regular reviews of the contingency plan to incorporate lessons learned, changes in regulations, and advancements in spill response technology.

Continuous Improvement:

Encourage feedback from stakeholders to enhance environmental management practices.

By implementing and regularly updating this contingency plan, construction activities can effectively minimize the environmental impact of emergencies such as fuel spills and sewage leaks. Proactive planning, rapid response capabilities, and stakeholder engagement are crucial to ensuring the protection of sensitive ecological habitats and maintaining community trust.

The Property owner and Contractor, along with all subcontractors is to be aware of the requirements of emergency and contingency planning for all unintended events that may affect the immediate environment and beyond.

10. CONSISTENCY WITH IMPACT ASSESSMENT

This Environmental Management Programme (EMPr) has been specifically developed to give effect to the findings and recommendations of the Basic Assessment Report (DBAR) and to ensure that all identified environmental impacts are appropriately avoided, minimised and managed throughout the lifecycle of the development.

The EMPr translates the impact assessment into enforceable management actions, monitoring requirements and performance outcomes for the planning, demolition, construction, operational and closure phases of the project. It provides a structured framework to ensure that all impacts identified in the DBAR are reduced to low significance following the implementation of mitigation measures.

The EMPr is therefore directly aligned with the impact pathways, sensitivities and mitigation hierarchy identified in the DBAR, and has been informed by site verification, specialist input and applicable environmental policy frameworks.

10.1. ALIGNMENT WITH KEY IMPACT FINDINGS

The DBAR identified that the primary environmental risks relate to construction phase disturbance and indirect impact pathways to the adjacent Kromme Estuary, particularly through stormwater runoff, erosion and potential contamination. The EMPr specifically addresses these risks through targeted and enforceable measures, including

- strict demarcation and protection of environmentally sensitive areas
- implementation of stormwater management measures that prioritise on site retention, infiltration and energy dissipation
- erosion prevention and soil stabilisation measures during and after construction
- pollution prevention and waste management controls
- monitoring and adaptive management to address any non-compliance or unforeseen impacts

These measures ensure that the primary impact pathways identified in the DBAR are effectively controlled.

10.2. PROTECTION OF CBA1 AND ECOLOGICAL FUNCTIONALITY

Although the site is mapped as a Critical Biodiversity Area (CBA1), the DBAR confirms that the development footprint is largely transformed and does not constitute functional CBA1 habitat. The EMPr reinforces this finding by ensuring that

- all development activities are confined to previously disturbed areas of the site
- the approximately 32 metre vegetated buffer adjacent to the Kromme Estuary is retained and protected as a strict no-go area
- no encroachment, clearing, stockpiling or disturbance is permitted within the buffer

The EMPr therefore ensures that the functional ecological component of the site is maintained and that no loss of functional CBA1 habitat occurs, consistent with the Eastern Cape Biodiversity Conservation Plan guidelines.

10.3. MANAGEMENT OF INDIRECT IMPACTS TO THE ESTUARINE ENVIRONMENT

The DBAR identifies indirect impacts, particularly stormwater runoff, sediment transport and contamination pathways, as the primary risk to the adjacent estuarine system. The EMPr addresses these risks through

- proactive stormwater management design and construction phase controls
- installation and maintenance of temporary and permanent erosion control measures
- prevention of concentrated flow paths toward the buffer and estuary
- strict control of materials, fuels and waste to prevent contamination
- ongoing inspection and maintenance of stormwater infrastructure during the operational phase

These measures ensure that no uncontrolled discharge or degradation of the estuarine environment occurs as a result of the development.

10.4. OPERATIONAL PHASE SUSTAINABILITY AND LONG-TERM MANAGEMENT

The EMPr extends beyond the construction phase to include operational phase controls that ensure the long term stability and environmental performance of the site. These include

- maintenance of stormwater infrastructure to prevent erosion and uncontrolled runoff
- ongoing management of alien and invasive plant species
- protection of the vegetated buffer from encroachment or disturbance
- appropriate management of waste, chemicals and household activities
- monitoring of lighting and visual impacts to reduce effects on surrounding environments

This ensures that the site remains environmentally stable and that no gradual degradation occurs over time.

10.5. COMPLIANCE WITH NEMA PRINCIPLES

The EMPr gives effect to the principles of the National Environmental Management Act by

- avoiding and minimising disturbance of ecosystems and biodiversity
- preventing pollution and environmental degradation
- adopting a precautionary and risk averse approach to environmental management
- ensuring that impacts are mitigated and managed within acceptable limits
- promoting sustainable development within an existing urban footprint

The implementation of the EMPr ensures that the development proceeds in a manner that is environmentally responsible, socially appropriate and economically viable.

10.6. OVERALL IMPACT OUTCOME

Based on the implementation of the EMPr, the following outcomes are achieved

- no loss of functional CBA1 habitat will occur
- the 32 metre vegetated buffer will be protected as the primary ecological feature on site
- all construction and operational activities will be confined to previously disturbed areas
- stormwater, erosion and pollution risks will be effectively controlled
- indirect impacts to the Kromme Estuary will be avoided and minimised
- no medium or high significance residual impacts are anticipated following mitigation

Accordingly, the EMPr provides a robust and enforceable mechanism to ensure that the findings of the impact assessment are realised in practice and that the development remains environmentally acceptable throughout its lifecycle.

11. CLOSURE PLANNING

11.1. CLOSURE OBJECTIVES

Final site cleaning - the contractor shall be responsible to clear and clean the site of all materials and equipment that do not form part of the permanent structure, and those items that were used in the construction process. The site is to be signed off by both the principle agent and ECO.

Rehabilitation - the contractor shall be responsible for rehabilitating and re-establishing the landscaping to original state/condition in areas where disturbance occurred. All rehabilitation should be performed by suitably qualified personnel and shall be to the satisfaction of the proponent, principle agent and ECO.

Post Completion Audit - the ECO is to undertake a post completion audit and submit to the competent authority after construction activities and garden rehabilitation have been completed. If any deviances from the EMPr and environmental authorisation are detected, the audit is to include rectification measures.

APPENDIX A

HEALTH AND SAFETY SIGNAGE

Health and Safety Signage

Colour	Meaning	Information
Red	Prohibition	Dangerous behaviour; stop; shutdown; emergency cut-out devices; evacuate
Yellow	Warning	Be careful; take precautions; examine, e.g caution: slipping hazard
Blue	Mandatory	Specific behaviour or action, e.g wear protective equipment.
Green	First aid No danger information	Exits; escape routes; equipment and facilities Return to normal, first aid and information.

Prohibition signage



Not drinkable



No access for unauthorised persons



No access for pedestrians



Smoking and naked flames forbidden



No smoking



Not cutting trees



No alcohol permitted on-site



No littering



Warning Signage



Mandatory signage



Safety helmet
must be worn



Safety boots
must be worn



Safety harness
must be worn



Eye protection
must be worn



Ear protection
must be worn



Safety gloves
must be worn

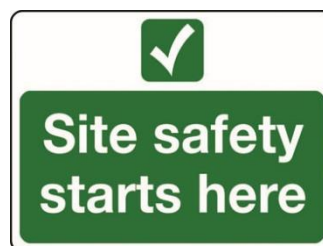
No danger, first aid and site Information



First aid



**Emergency
telephone**

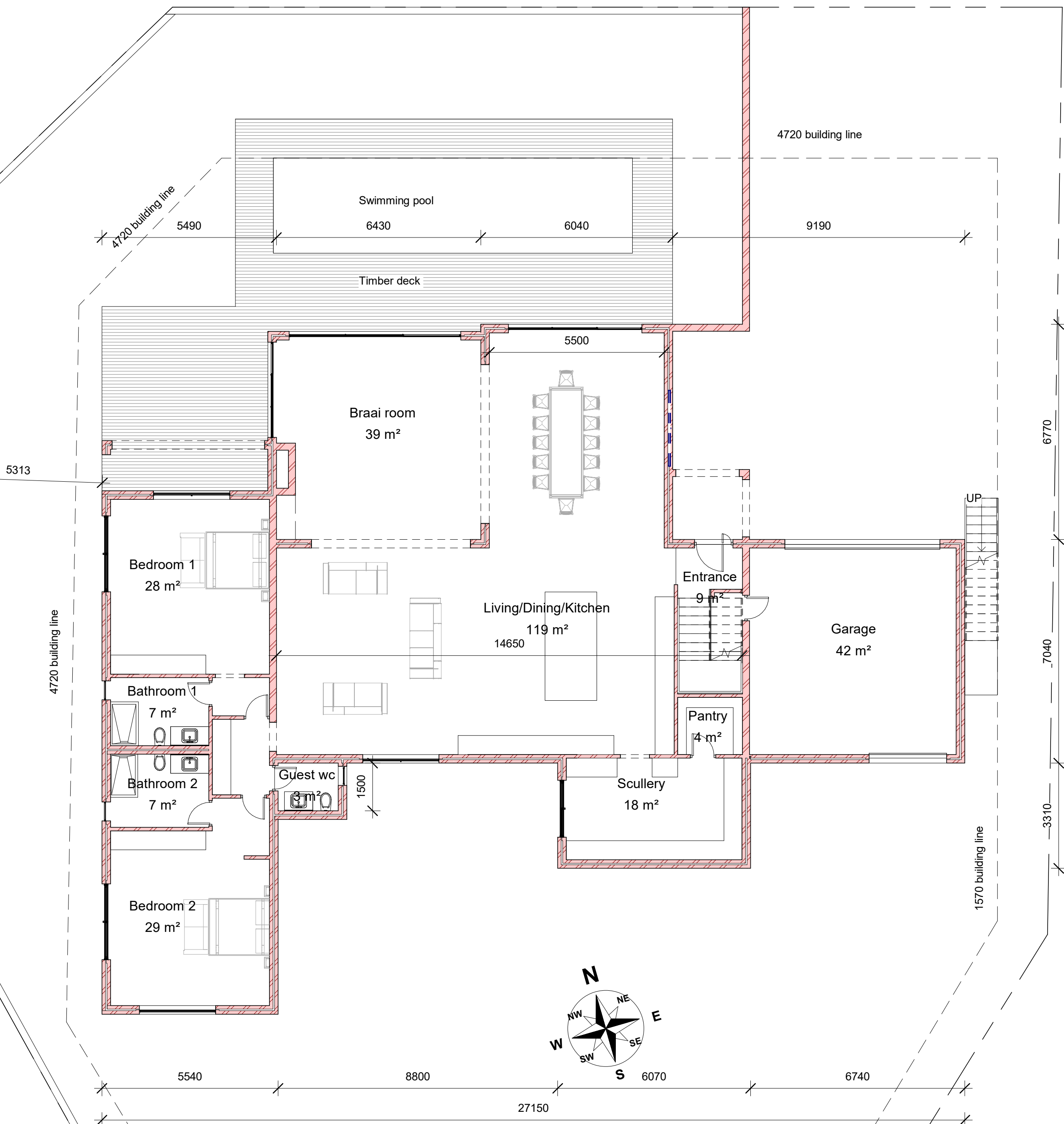


DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

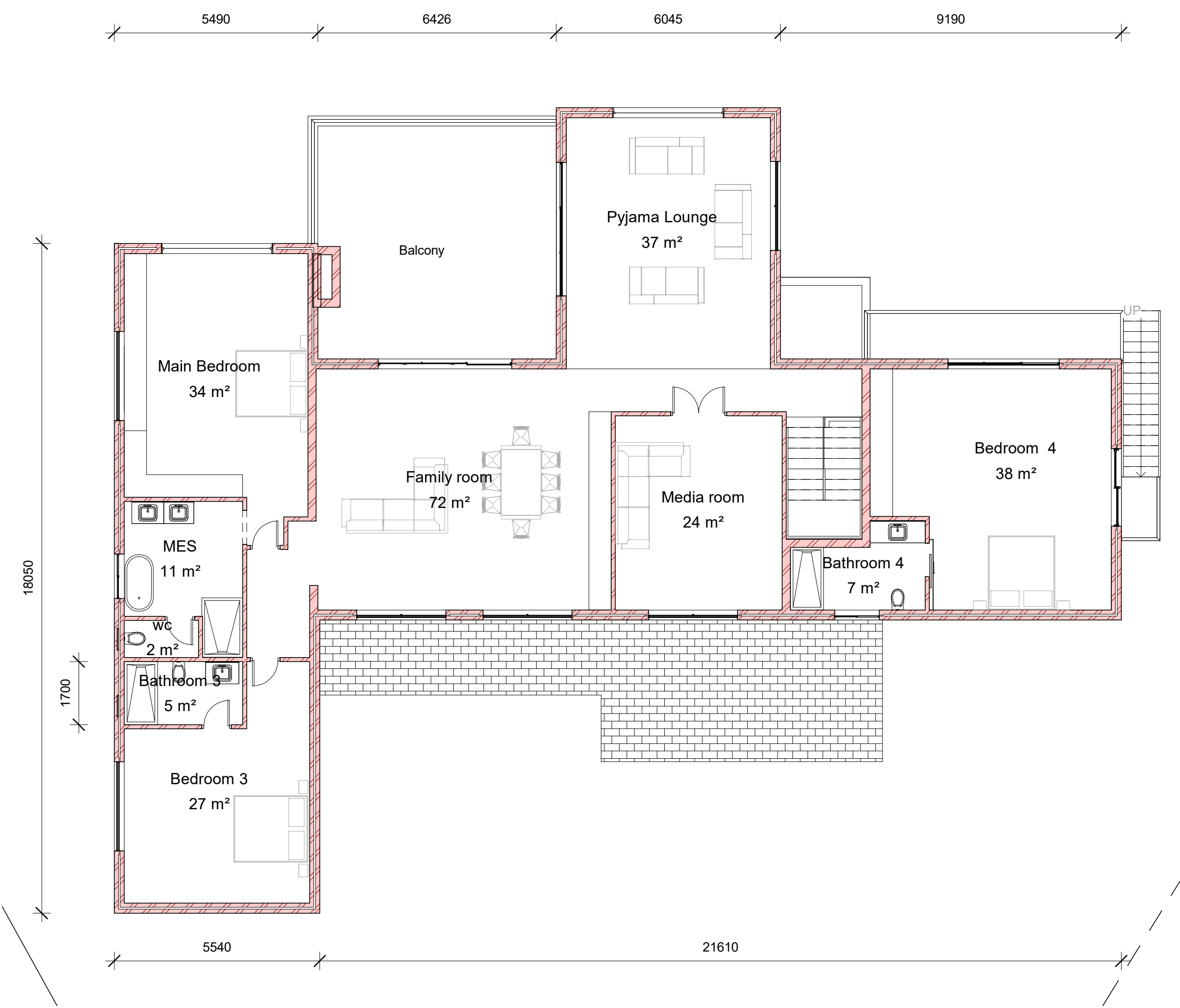
APPENDIX B
PRELIMINARY PLAN

DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

SHORE ROAD



1 Level 1- ground floor
1: 100



2 Level 2- first floor
1 : 100

Notes:

1. Copyright reserved
2. Contractor to check all dimensions and levels on site before work commences
3. No dimensions to be scaled from plan.
4. Any discrepancies must be reported immediately to the designer

AREA OF ERF	1697m ²
GROUND FLOOR DWELLING	358m ²
FIRST FLOOR DWELLING	293m ²
GAZEBO	20m ²
TOTAL	681m ²



JENNY STARK
ARCHITECTURAL DESIGN

SACAP ST1527
SAIAT 71754
Cell : 0832369259



PROFESSIONAL SENIOR ARCHITECTURAL
TECHNOLOGIST
JENNY RAE STARK



REVISIONS

No.	Description	Date

Proposed New Dwelling on Erf 3806 Sea Vista for Mr & Mrs Pearton	
Prelim plan	
Project number	SV3806
Date	July 2026
Drawn by	J. Stark
Scale	1 : 100
P3806-1	

2026/07/21 17:08:15