

APPENDIX H – Environmental Management Programme Report (EMPr)

Pre-Application Draft Basic Assessment Report

**Basic Assessment for Mixed-Use Development on Project
Parcels O, P, A1, And A2 on Erven 158570 RE, 149294 RE,
177854 and 179076, Breakwater Precinct, V&A Waterfront,
Cape Town by the V&A Waterfront**

2026

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ENVIRONMENTAL MANAGEMENT PROGRAMME

MIXED-USE DEVELOPMENT ON PROJECT PARCELS O, P, A1, AND A2 ON ERVEN 158570 RE, 149294 RE, 177854 AND 179076, BREAKWATER PRECINCT, V&A WATERFRONT, CAPE TOWN BY THE V&A WATERFRONT

EA Application Reference Number: 16/3/3/6/7/1/A7/4/3064/26



August 2026



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PRECINCT, V&A WATERFRONT, CAPE TOWN BY THE V&A WATERFRONT

EA Application Ref. No.: 16/3/3/6/7/1/A7/4/3064/26

August 2026

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LIST OF ABBREVIATIONS

Anchor	Anchor Environmental Consultants (Pty) Ltd
BA	Basic Assessment
CA	Competent Authority
dEO	Developer Environmental Officer
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EMS	Emergency Medical Services
EO	Environmental Officer
IMS	Integrated Management System
MSDS	Material Safety Data Sheet
NEM:AQA	National Environmental Management: Air Quality Act, 2004
NEM:BA	National Environmental Management: Biodiversity Act, 2004
NEM:ICMA	National Environmental Management: Integrated Coastal Management, 2008
NEM:WA	National Environmental Management: Waste Act, 2008
NEMA	National Environmental Management Act, 1998
NHRA	National Heritage Resources Act, 1999
NWA	National Water Act, 1998
PPE	Personal Protective Equipment
QMS	Quality Management System
V&A	Victoria and Alfred Waterfront

DEFINITIONS

In this EMPr, any word or expression to which a meaning has been assigned in the NEMA or EIA Regulations has that meaning, and unless the context requires otherwise –

Clearing: The clearing and removal of vegetation, whether partially or in whole, including trees and shrubs, as specified.

Contractor: The Contractor has overall responsibility for ensuring that all work, activities, and actions linked to the delivery of the contract, are in line with the Environmental Management Programme and that Method Statements are implemented as described.

Construction camp: The area designated for key construction infrastructure and services, including but not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste and wastewater management.

Method Statement: A written submission by the Contractor to the Project Manager in response to this EMPr or a request by the Project Manager and Environmental Control Officer (ECO). The Method Statement must set out the equipment, materials, labour and method(s) the Contractor proposes using to carry out an activity identified by the Project Manager when requesting the Method Statement. This must be done in such detail that the Project Manager and ECO is able to assess whether the Contractor's proposal is in accordance with this specification and/or will produce results in accordance with this specification.

Hazardous Substances: A substance governed by the Hazardous Substances Act, 1973 (Act No. 15 of 1973) as well as the Hazardous Chemical and Substances Regulations, 1995.

Slope: The inclination of a surface expressed as one unit of rise or fall for so many horizontal units.

Solid waste: All solid waste, including construction debris, hazardous waste, excess cement/concrete, wrapping materials, timber, cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Spoil: Excavated material which is unsuitable for use as material in the construction works or is material which is surplus to the requirements of the construction works.

Topsoil: A varying depth (up to 300 mm) of the soil profile irrespective of the fertility, appearance, structure, agricultural potential, fertility and composition of the soil.

Works: The Works to be executed in terms of the Contract.

I SCOPE AND CONTENT OF AN ENVIRONMENTAL MANAGEMENT PROGRAMME

I.1 BACKGROUND AND SCOPE OF AN EMPr

An Environmental Management Programme (EMPr) is mandated under Section 24 of the National Environmental Management Act (NEMA, Act 107 of 1998) and is required for any project subjected to an Environmental Impact Assessment (EIA), whether a Basic Assessment (BA) or Scoping and EIA (S&EIA). It also reflects the Duty of Care imposed by Section 28(1) of NEMA on any person who causes, has caused, or may cause significant pollution or environmental degradation.

The EMPr is a proactive management tool that guides consistent and ongoing environmental management throughout the life cycle of a development, from pre-construction through construction, operation, and ultimately decommissioning. Its purpose is to prevent or minimise negative impacts through mitigation measures, while enhancing the positive benefits of a development through optimisation measures.

The EMPr follows an outcome-based approach. This means that the focus is on achieving defined environmental management outcomes, rather than prescribing rigid actions in all circumstances. To achieve these outcomes, the EMPr sets out a range of management actions consisting of mitigation and optimisation measures and recommendations identified during the EIA by the specialists and Environmental Assessment Practitioner (EAP). These may include specific practical site management actions, monitoring programmes, supporting management plans, rehabilitation measures, species search-and-rescue operations, or other environmental management interventions. In this way, the EMPr ensures that a project's actual impacts remain consistent with those assessed during the EIA, and that commitments made during planning and assessment are carried through to implementation. **Mitigation / impact management measures** for mitigating negative impacts are classified as either:

- **Essential:** Mandatory measures that must be implemented and are non-negotiable; or
- **Best Practice / Recommended:** Non-mandatory measures that should be implemented where feasible and appropriate. Alternative measures or approaches may be adopted, provided that the required environmental outcome is still achieved and a clear and defensible motivation is provided for not implementing the recommended measure.

Optimisation measures aimed at enhancing potential benefits are generally considered **Best Practice / Recommended** and are non-mandatory.

The EMPr is therefore intended to allow a degree of flexibility in implementation, provided that the required environmental outcomes are achieved and compliance with the EA and relevant environmental legislation is maintained. More information on the implementation and amendment of management outcomes and actions is provided in Section 1.3 and Section 3.12.

The EMPr is legally binding on the Environmental Authorisation (EA) holder (i.e. the Developer), Contractor(s), and anyone acting on their behalf. It is usually included as a condition of the EA and must therefore be implemented accordingly.

It further outlines the Developer/ Contractor's responsibilities in achieving the environmental outcomes, especially with regards to preventing and mitigating any negative environmental effects resulting from project-related construction and operational activities.

I.2 CONTENT OF AN ENVIRONMENTAL MANAGEMENT PROGRAMME

The EMPr must be prepared in accordance with Appendix 4 of the NEMA Environmental Impact Assessment Regulations (EIA Regulations) 2014 (as amended). The EMPr must address the management and monitoring of the potential environmental impacts of the proposed activity on the environment throughout the project life cycle. Table 1.1 lists the prescribed requirements for an EMPr and identifies the relevant section or appendix where each item is addressed. This table serves as both a directory to assist readers in navigating the report and a checklist demonstrating compliance with the EIA Regulations.

Table 1.1. Legally Required Content of an Environmental Management Programme, as detailed in Appendix 4 of the Environmental Impact Assessment Regulations (published in GNR 326 and GNR 517).

Content of the Environmental Management Programme Report		Section/ Page Numbers
An EMPr must comply with section 24N of the Act and include-		Relevant Section
	details of-	
(a)	(i) the EAP who prepared the EMPr; and	Section 4.2 and Appendix 1
	(ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;	Section 4.2 and Appendix 1
(b)	a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Section 2
(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 should be avoided, including buffers	Section 2 and Appendix 2
(d)	a description of the impact management outcomes, 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-	Section 5; Section 6 and Section 7
	(i) planning and design;	Section 5
	(ii) pre-construction activities;	Section 5
	(iii) construction activities;	Section 6
	(iv) rehabilitation of the environment after construction and, in the case of a closure activity, closure; and	Section 5.5
	(v) where relevant, operation activities;	Section 7
(f)	a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to-	Section 5; Section 6 and Section 7
	(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;	Section 5; Section 6 and Section 7
	(ii) comply with any prescribed environmental management standards or practices; and	Section 5; Section 6 and Section 7
	(iii) comply with any applicable provisions of the Act regarding closure, in the case of a closure activity;	N/A
(g)	the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 3
(h)	the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 3
(i)	an indication of the persons who will be responsible for the implementation of the impact management actions;	Section 2, Section 5; Section 6 and Section 7
(j)	the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Section 3
(k)	the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Section 3
(l)	a program for reporting on compliance, taking into account the requirements as prescribed by the regulations;	Section 3
(m)	an environmental awareness plan describing the manner in which-	Section 3
	(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and	Section 3

Content of the Environmental Management Programme Report	Section/ Page Numbers
(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and	Section 3
(n) any specific information that may be required by the competent authority.	N/A

1.3 ASPECTS OF THE ACTIVITY THAT ARE COVERED BY THE EMPR

This EMPr has been compiled to guide the management of all project components and associated activities, as described above. It applies across the pre-construction, construction, and operational phases (Section 5, Section 6 and Section 7). It addresses a wide range of aspects, including: Planning and Design; Environmental Training, Health and Safety Training, Rehabilitation Plans and the management of Dust, Soil and Earthworks, Erosion, Waste, Hazardous Substances and Spills, Fires, Ecological Receptors, Storm Water, Effluent, Potable Water, Traffic, Heritage Resources, Community and Social Aspects, Visual Aspects, Economic Aspects and Noise.

The EMPr sets out specific management actions to achieve defined outcomes, with the goal of preventing or mitigating negative environmental impacts on key receptors such as fauna and flora, water resources, heritage resources, and the surrounding community, while enhancing the positive benefits.

This outcome-based approach focuses on achieving defined environmental outcomes rather than prescribing rigid actions in all circumstances. The EMPr therefore allows a degree of flexibility in implementation, provided that the required outcomes are achieved and compliance with the EA and applicable environmental legislation is maintained. This approach also enables adaptive management and refinement of actions based on practical implementation experience during the project lifecycle.

Any amendments to management actions must be approved by the Environmental Control Officer (ECO), in consultation with the relevant specialist where necessary, depending on the nature of the alteration and whether the ECO has sufficient expertise in the relevant field. Such changes must also be undertaken in accordance with Regulation 36(1) of the EIA Regulations, 2014, as outlined in Section 3.12, and must remain consistent with the NEMA Precautionary Principle.

It should further be noted that management actions are classified as either Essential or Best Practice / Recommended, as mentioned in section 1.1. Essential measures are mandatory and non-negotiable, and any changes to these require ECO approval as described above. Best Practice / Recommended measures are non-mandatory and may be adapted or replaced where appropriate, provided that the required environmental outcome is still achieved and a clear motivation is provided for not implementing the recommended approach. These measures do not necessarily require formal amendment procedures.

It should be noted that Sections 1, 2 and 3 provide general guidance and background information and are not legally binding, while Sections 4, 5, 6 and 7 are legally binding. Effective implementation of the legally binding sections requires adherence to the guidance in the earlier sections. The successful implementation of this EMPr also depends on the participation of several role-players, each with defined responsibilities (see Section 2).

Sections 1, 2, 3 should therefore still be followed to the extent necessary to ensure full compliance with the binding requirements. For this reason, it is recommended that the entire EMPr be implemented as comprehensively as possible. The holder of the EA and the Contractor are informed that they will be monitored and audited on their compliance with Sections 5, 6 and 7 (refer to Section 3.9 and Section 3.10).

2 ROLES AND RESPONSIBILITIES

The effective implementation of the EMPr is dependent on established and clear roles, responsibilities, and reporting lines. Table 2.1 identifies the key stakeholders and their roles and responsibilities in the implementation of the EMPr. This list is not exhaustive and additional roles and responsibilities might be identified by the Competent Authority, Developer, Contractor and/ or ECO. Also note that some of the roles and responsibilities might, in some instances, overlap or be undertaken jointly/ shared.

Table 2.1. Stakeholders and their roles and responsibilities in the implementation of the EMPr.

Function	Roles and Responsibilities
Competent Authority	Department of Environmental Affairs and Development Planning, Region 1 <u>Responsibility</u> Overseeing compliance with the Environmental Authorisation and EMPr by reviewing audit reports submitted by the appointed independent experienced ECO, or other designated person.
Holder of the Environmental Authorisation (EA)/ Developer and Project Manager	V&A Waterfront, Cape Town Holds legal responsibility for compliance with the EA and EMPr and is accountable for the potential impacts of the activities that are undertaken. Any other arrangements must be entered into between such holder and such other party (e.g., Contractor). The Developer's Project Manager will have overall responsibility for the management of the project and the implementation of the EMPr. <u>Responsibilities:</u> - Must be fully conversant with the conditions of the EA and management outcomes and actions of this EMPr; - Overall management of the project and ensuring compliance with the EA and approved EMPr; - Ensure that all stipulations within the EA and EMPr are communicated and adhered to by the Developer and its Contractor(s); - Appointing an independent experienced Environmental Control Officer (ECO); - Ensure that the Contractor appoints a Contractor's Environmental Officer (EO); - Liaising with Authorities, Contractor, ECO, and any other parties involved in this project; - Works together with the Contractor or Contractor's EO to assist in the implementation of their Responsibilities and in addressing environmental challenges where needed/ required; - Ensuring sufficient budget and resource allocation for the implementation of the EA conditions and EMPr requirements; - Monitor the implementation of the EMPr throughout the project by means of site inspections and meetings; - Ensure all permits, authorisations and licences are obtained, monitored and adhered to;

Function	Roles and Responsibilities
	- Reviewing and approving all method statements (see Section 3.2) prior to the commencement of activities (or as required throughout the various project phases); and - Ensuring adherence to all statutory safety, health and environmental standards. - Can appoint a Developer Environmental Officer (dEO) or another representative to assist with responsibilities outlined above.
Contractor	Appointed Contractors The Contractor (including Subcontractors and contract workers) is responsible for all activities undertaken during the contract period. Together with the Developer, the Contractor is accountable for any potential environmental impacts arising from these activities and is responsible for ensuring that such impacts are effectively managed. The Contractor will be held liable for any remedial work required in terms of the EMPr owing to environmental negligence, mismanagement, or non-conformance. <u>Responsibilities:</u> - Ensure work conducted is done within the framework of the EA, EMPr, approved method statements and applicable legislation. - Ensure that all Sub-Contractors have a copy of, and are fully conversant with, the contents of the EA, EMPr and approved method statements. - Confine the construction site to the demarcated area; - Drafting Method Statements (see Section 3.2) and ensuring the drafting of Method Statements by Subcontractors, and submitting these to the Developer for approval prior to the commencement of activities (or as required throughout the various project phases); - Appoint an EO; - Ensuring adherence to all statutory safety, health and environmental standards; - Notifying the Developer of any incident as defined in Section 30(1)(a) of NEMA (Control of Emergency Incident). - Notifying the Developer of changes in the development that may result in significant environmental impacts. - Compile and maintain relevant documentation for the ECO. - Any other responsibilities as determined by the Developer. .
Contractor's EO (or Safety, Health and Environmental (SHE) Officer) <i>Note: Where appropriate, references to "EO" may be substituted with "SHE Officer" throughout the report, depending on project-specific requirements and sensitivity.</i>	The Contractor's EO/ or SHE is appointed by the Contractor. This person is responsible for assisting the Contractor, and monitoring compliance of the Contractor, with the on-site implementation of (and compliance with) the EA, EMPr (or relevant sections of the EMPr) and Method Statements. The Contractor's EO must be a dedicated resource to the project. The Contractor must ensure that the Contractor's EO is suitably qualified to perform the necessary tasks and is appointed at a level such that they can interact effectively with other site Contractors, labourers, the Developer, the ECO and the public. <i>Appointment of an EO vs a SHE officer is project dependent. In areas of low environmental sensitivity, a suitably qualified SHE Officer may fulfil this role, focusing on health, safety, and general compliance. Where higher environmental sensitivity exists, a dedicated EO with a suitable environmental diploma or degree and relevant environmental experience is required.</i>

Function	Roles and Responsibilities
	<u>Qualification</u> This person will, as a minimum, have the following qualifications and experience: • Be an appropriately qualified EO/ SHE officer; • Have demonstrated environmental or SHE experience in the construction industry; • Be senior enough to have authority over all the contractors' staff working on-site; • Understand the hierarchy of Environmental Compliance Reporting, and the implications of non-compliance; and • Be able to resolve conflicts and make recommendations on site, in terms of compliance with requirements of EA and EMPr. <u>Responsibilities:</u> • Must be fully conversant with the conditions of the EA; management outcomes and actions of this EMPr, how to implement these, and with all relevant environmental legislation; • Know the background of the development and understand the implementation programme; • Ensure that all the requirements stipulated in the EA, EMPr and Method Statements are communicated to all staff on site through conducting environmental awareness training; • Confine the construction site to the demarcated area; • Manage the "day-to-day" on-site implementation of the requirements stipulated in the EA, EMPr (this document) and Method Statements by ensuring that these are adhered to by all staff on site. Further refer to Section 5, Section 6 and Section 7 for the specific Environmental Management Measures which must be implemented and monitored for compliance; • Conduct weekly site inspections during the construction phase and, where appropriate depending on the nature of the operational activities, monthly site inspections during the operational phase to ensure implementation of the requirements contained in the EA, EMPr, and Method Statements, and to confirm that these measures remain effective in preventing or mitigating impacts. The EO is therefore not required to be permanently present on site, nor required during the operational phase where activities do not include an ongoing monitoring component, such as typical residential, commercial, or mixed-use developments; • Monitor impacts upon the surrounding environment; • Act as liaison and advisor on all environmental and related issues; • Measure and communicate environmental performance of staff to the Contractor; • All environmental monitoring and reporting (Section 3); ○ Assist Contractor in incident management, investigation and reporting and reporting these to Contractor and ECO. ○ Can issue non-conformances to Contractors; ○ Undertake corrective actions, within the stipulated timeframes, where non-compliances occurred; ○ Maintain the relevant Registers as outlined in Section 3; ○ Summarise all findings of the above responsibilities in a weekly and in a monthly monitoring report during construction (Section 3) and a monthly report during operation;

Function	Roles and Responsibilities
	• Compile and maintain all documentation for submission to the ECO for their reporting; and • Conducting monitoring to ensure that project-related activities do not have an adverse effect on the local economy, the environment, or the health of workers and community members (See Sections 5, 6, and 7).
Independent Environmental Control Officer (ECO)	The ECO should be employed by the Developer. The ECO should have appropriate training and experience in the implementation of environmental management specifications. The primary role of the ECO is to act as a quality controller and monitoring agent regarding all environmental concerns and associated environmental impacts. The ECO should be employed for the duration of the project and under any conditions stipulated within the EA. The ECO is to conduct periodic site inspections, attend regular site meetings, pre-empt problems and suggest mitigation, and be available to advise on incidental issues that arise. Site visits and reporting frequency should be done as stipulated in the EA or, if not stipulated in the EA, should be done at least monthly during construction and at least once per year during operation (if applicable). The ECO is also required to conduct internal compliance audits, verifying the monitoring reports submitted by the Contractor's EO. The ECO provides feedback to the Developer and Contractor regarding all environmental matters. The Contractor's EO is answerable to the ECO for non-compliance with the specifications as set out in the EA and EMPr. Issues of non-compliance raised by the ECO, or to the ECO, must be taken up by the Developer, and resolved with the Contractor as per the conditions of their contract. The ECO must also report to the Competent Authority as and when required, in accordance with the EA. <u>Responsibilities:</u> • The responsibilities are similar to those of the Contractor's EO, with the key distinction that the ECO is an independent experienced party who also monitors and verifies the EO's reports and performance. • Be aware of the findings, conclusions and conditions of the EIA/ BA, EA and any other Environmental Licences. • Be familiar with the recommendations and management outcomes and actions of this EMPr; • Be conversant with relevant environmental legislation, policies and procedures, and ensure compliance with them; • Preparing the reports to be submitted to the Developer (as per Section 3); • Reviewing all Method Statements prior to the commencement of activities (or as required); • Manage and monitor the implementation of the requirements stipulated in the EA, EMPr (this document), and Method Statements by the Contractors and all staff on site, to ensure compliance with these documents. Further, refer to Sections 5, 6 and 7 for the specific Environmental Management Measures which must be implemented and monitored for compliance; • Undertake regular site inspections at the frequency stipulated in the EA. If the EA does not specify a frequency, inspections must be conducted at least once per month during construction and once per year during operation (if applicable). • Must actively pursue opportunities to enhance environmental outcomes; • Tracking and reporting on environmental performance and compliance with the EA, EMPr and any other applicable licenses, and compile results into an Auditing Report, at the frequency stipulated in the EA. If the EA does not specify a frequency, these audits and auditing reports must be conducted at least once per month during construction and once per year during operation (if applicable). Brief monthly reports by the ECO must also be compiled during operation, based on the EOs monthly visits and reports (note, these internal audits are not the audits referred to in Section 34 and Appendix 7 of the EIA Regulations, 2014);

Function	Roles and Responsibilities
	• Ensuring that the requisite remedial actions are implemented in the event of non-compliance; • Calling for the restriction of activities affected an incident or non-compliance until remedial action has been taken; • Compiling and maintaining all documentation (the same as that required of the Contractor's EO), which may consist of a combination of the ECOs own records and those provided by the EO. • Educate the construction team about the management measures contained in the EMPr and environmental licenses; • In consultation with the Developer, order the removal of person(s) and/or equipment which are in contravention of the specifications of the EMPr and/or environmental licenses; • Liaison between the Developer, Contractors, authorities and other lead stakeholders on all environmental concerns; • Checking all documentation compiled by the Contractor's EO; • Assisting in the resolution of conflicts; • In case of non-compliances, the ECO must first communicate this to the Contractor, who has the power to ensure this matter is addressed. Should no action or insufficient action be taken, the ECO may report this matter to the authorities as non-compliance; • Maintenance, update and review of the EMPr; • Communication of all modifications to the EMPr to the relevant stakeholders; • Decisions regarding environmental procedures, specifications and requirements which have a cost implication (i.e. those that are deemed to be a variation, not allowed for in the Performance Specification) must be endorsed by the ECO.
External Auditor	To be employed by the Developer. <u>Responsibility</u> • Conduct External Audit and prepare External Environmental Audit Report as per Section 34 and Appendix 7 of the EIA Regulations, 2014, at a frequently as determined by the EA or the EIA Regulations.

3 DOCUMENTATION, COMPLIANCE AND REPORTING

3.1 DOCUMENT CONTROL/ FILING SYSTEM

The completed EMPr must be signed and dated by both the contractor and the holder of the EA in Section 1 before the activity commences, and each page must be initialled. This template, once signed and dated, is legally binding. The holder of the EA will remain responsible for its implementation.

Once completed and signed, the Applicant must make this EMPr available to the public in accordance with regulation 26 (h) of the Environmental Impact Assessment Regulations, 2014. Copies of this EMPr must be stored in such a manner that it is accessible to all on site personnel, and must be distributed to all senior contract personnel, who are required to familiarise themselves with its contents.

To ensure accountable and demonstrated implementation of the EMPr, several reporting systems, documentation controls and compliance mechanisms must be in place. The holder of the EA is responsible for the management of an EMPr file in which all documentation detailed below must be filed. The EMPr file must be made available at all times on request by the CA or other relevant authorities.

The EMPr file will form part of any environmental audits undertaken as prescribed in the EIA Regulations. The following documents must be placed in the EMPr filing system and be accessible at all times:

- 1) Signed EMPr, as well as any amendments thereof;
- 2) Signed EA from the Competent Authority (Attach as Annexure A);
- 3) Approved Site Layout Plan (Attach as Annexure B);
- 4) All Approved and signed Method Statements by Contractor(s)/ Sub-contractor(s) (Attach as Annexure C);
- 5) Minutes and attendance register of site meetings;
- 6) On-site Registers to be kept by Contractor's EO:
 - Incident Register
 - Waste Register
 - Weekly site inspection
 - Fauna & Flora Encounter Register
 - Complaints Register (from community)
 - Environmental Awareness Training Register
 - Non-conformance Register
- 7) Photographic record;
- 8) A copy of all corrective actions signed off;
- 9) Reports:
 - **Construction:**
 - Weekly Environmental Reports by the Contractor's EO, followed by a summarised Monthly Environmental Report (summary of weekly reports);
 - Monthly (or at a frequency stipulated in the EA) Internal Environmental Audit Reports by ECO;

-
- **Operation (if applicable):**
 - Monthly Environmental Reports by the Contractor's EO, followed by a summarised Annual Environmental Report (summary of monthly reports);
 - Brief monthly reports by the ECO based on the EOs monthly visits and reports)
 - Annual (or at a frequency stipulated in the EA) Internal Environmental Audit Reports by ECO;
 - **External Environmental Audit Report:** As per Section 34 and Appendix 7 of the EIA Regulations, 2014 by an Independent External Auditor at a frequently as determined by the EA or the EIA Regulations.

3.2 METHOD STATEMENTS

A method statement is a written document that sets out in detail the materials, labour and methods for carrying out a specific activity; the measures that will be taken to minimise environmental impacts; and the way in which relevant management actions/mitigation measures in the EMPr will be implemented. It must be prepared by the Developer, Contractor, Sub-Contractor, or any party undertaking the task. It must be prepared in such detail that the Developer, EO and ECO are able to assess the Contractor's compliance with the EMPr.

Method Statements must be submitted by the Contractor or Subcontractors (as and when required), to the Developer and ECO, at least 14 days before the start of the activity to which the Method Statement applies, unless the ECO specifies otherwise. Method Statements are not required to be submitted to the CA.

If the method statement is deemed insufficient, it will be returned to the Contractor for revision and resubmission. Each accepted Method Statement must be signed and dated on each page by both the Contractor and Developer as a sign of commitment to following the agreed-upon methods. Signed Method Statements must be included in the EMPr file as Annexure C. Given that the Method Statement is a dynamic document, it may require regular updates in-line with actual implementation and any changing requirements.

Some management activities may overlap, which could also result in overlapping Method Statements. The ECO must confirm whether any of these Method Statements may be combined. Unless otherwise indicated by the ECO, the Contractor must provide the following Method Statements (where applicable):

- EOs strategy for Environmental Monitoring to ensure compliance with EA and EMPr;
- Environmental awareness training strategy;
- Soil, Earthworks, Stockpiles, Erosion Management and Dust management strategy;
- Storm water and run-off management strategy during construction;
- Water use strategy (source, abstraction and disposal for construction activities);
- Solid & liquid waste management strategy (transport, storage, segregation, classification, disposal; all waste streams);
- Handling, transport and storage of Hazardous Chemical Substances strategy;
- Fire control/ management strategy;

-
- Vegetation management strategy: In terms of clearing, felling, alien clearing in terms of the Invasive Alien Plant Management Plan, as well as disposal of removed vegetation, etc.;
 - Search and Rescue strategy for animal species prior to clearing to ensure that nests, small reptiles and mammals are moved out of the area.
 - Fauna interaction and risk management plan during construction activities (e.g. encountering snakes or nests);
 - Traffic management strategy, including access roads;
 - Heritage, archaeology and palaeontology management strategy;
 - Social interaction management strategy (communication and complaints);
 - Construction camp and laydown area strategy;
 - Workshop, servicing and maintenance strategy (construction phase);
 - Routine inspection, maintenance and cleaning management strategy (operational phase);
 - Noise management strategy;
 - Rehabilitation strategy/ plan (if applicable and for areas not within the identified impact footprint);
 - Impact/ Aspect Register; and
 - Site-specific Emergency preparedness and incident management strategy.

Section 5, Section 6 and Section 7 outline the management actions and desired outcomes for the various aspects of the project (e.g., noise, fire, heritage management, etc) and should be used to guide the preparation and drafting of the method statements. The guideline methodology for preparing method statements have been included in Appendix 4.

3.3 ENVIRONMENTAL AWARENESS TRAINING

Environmental awareness training courses must be conducted for all personnel on site. All staff must be trained prior to starting work, and proof of training must be submitted to the ECO. The Contractor's EO must develop an awareness training program, which will be submitted to the ECO for approval. Training must be based on the information outlined in Section 5, Section 6 and Section 7 so as to ensure that the actions are implemented and outcomes achieved. The Contractor's EO will be responsible for managing and implementing the training program before the operational activities commence. All employees who spend more than one day per week, or four days per month on site, must attend the training. Two types of courses will be offered: one for Contractor and Subcontractor management, and one for all site staff and labourers. The training sessions will be held during normal working hours at a suitable venue provided by the Contractor. All attendees must remain for the full duration of the course, and sign an attendance register, which will be forwarded to the ECO. The Contractor must allow for sufficient training sessions to accommodate all personnel, including any new hires. The Contractor may be required to provide additional on-site training on any environmental aspects that are unclear to the personnel. Every employee needs to undergo the following:

- A site-based induction before working on site;
- task-based learning and skills development;
- weekly toolbox talks;

-
- annual environmental induction refresher training sessions; and
 - must be retrained based on the outcome(s) of corrective action (where relevant).

The following information must be included in the training register:

- Those trained;
- The date and time of the training;
- The trainer's name;
- A synopsis of the training's subject matter; and,
- The efficacy of training initiatives.

3.4 CORRECTIVE ACTION RECORDS

Corrective action is essential as it enables ongoing improvement. For each non-conformance notice issued, a documented corrective action must be recorded by the Contractor's EO, who will also formally notify the Contractor through a Corrective Action Request. The Contractors must take action to correct the matter as soon as possible, but no later than two weeks from the incident, or within a timeframe agreed with the Environmental Officer, depending on the nature of the incident.

The Corrective Action Request documents:

- The nature of the non-compliance/ environmental damage;
- The actions or outcomes required to correct the situation; and
- The date by which each corrective or preventive action must be completed.

On completion of the corrective action, the EO must issue a Corrective Action Report to the ECO. If satisfied that the corrective action has been completed satisfactorily, the ECO is to sign-off on the Corrective Action Report, which must be included with the non-conformance notice in the EMPr file. A corrective action is considered complete once the report has been signed off by the ECO. The Contractor/ Developer will be required to report in the external audit how the required actions were implemented, as well as the success or failure of the corrective action(s). Where repeated non-compliance is recorded, procedures may need to be altered accordingly to avoid the need for repeated corrective action.

3.5 PHOTOGRAPHIC RECORD

A digital photographic record must be kept. The photographic record will be used to show the progress of the work.

3.6 COMPLAINTS REGISTER

A complaints register should be kept by the EO to record all complaints received from communities, stakeholders and individuals. All complaints received must be investigated and a response should be given to the complainant within two weeks of receipt of the complaint. The Complaints Register must:

- Record the name and contact details of the complainant;
- Record the time and date of the complaint;
- Contain a detailed description of the complaint;
- Where relevant and appropriate, contain photographic evidence of the complaint or damage; and
- Contain a copy of the EO/ ECOs written response to each complaint received and keep a record of any further correspondence with the complainant. The EO/ ECOs written response must include a description of any corrective action to be taken and must be signed by the Contractor, EO/ ECOs and affected party.

3.7 ASPECTS, IMPACTS AND RISK ASSESSMENT

A detailed Environmental Aspect/ Impact Register, based on specific contractor methodologies and activities, must be developed and must be submitted to the Developer for approval prior to commencement of works. This register is intended to capture site-specific risks not fully defined during the BA process. An example template is provided in Appendix 5.

The assessment process includes four key steps:

- i. Identify all elements that could interact with the environment, considering factors such as environmental characteristics and sensitivity.
- ii. Evaluate the potential impacts of the activities, including their duration, intensity, and the extent to which they can be mitigated.
- iii. Rank the risks based on the likelihood of adverse impacts and the severity of consequences, using a 'worst-case scenario' as defined by the risk matrix of 'likelihood and consequence probability.'
- iv. Determine the level of mitigation required for each environmental aspect. Higher potential severity and greater consequences of unmanaged effects necessitate more rigorous environmental management.

3.8 EMERGENCY PREPAREDNESS AND INCIDENT MANAGEMENT

Prior to starting construction or operational activities, the Contractor must submit a site-specific Emergency Preparedness and Incident Management Plan (method statement) for approval by the Developer. This plan should be reviewed and updated annually. This plan will be based on the Aspects/ Impact register. As mentioned above, the Contractor must use an Impact/Aspect Risk register to identify potential environmental incidents on site and implement measures to prevent or mitigate their effects. The Emergency Preparedness and Incident Management Plan must ensure the following:

- Employees receive adequate training on incident management and emergency situations;

-
- Organisational details, including manpower, responsibilities, accountability, and liability of personnel, are documented;
 - A list of key personnel with contact numbers is provided;
 - Information on emergency services (e.g., fire department, spill clean-up services) is included;
 - Internal and external communication plans, including reporting procedures, are outlined;
 - Actions for different types of emergencies are detailed (such as protocols for preventing, containing, and reporting accidental spills);
 - Procedures for incident recording, progress reporting, and remediation measures are established;
 - Information on hazardous materials, their potential impacts, and measures for accidental release are provided; and
 - Significant risks identified using the Impact/Aspect register are addressed.

3.8.1 EMERGENCY REPORT PROCEDURE

Effective risk management and emergency prevention are essential for all project activities. The implementation of the EMPr focuses on anticipating, preventing, and mitigating foreseeable risks associated with the project. A key component of this risk management strategy is having pre-established plans to ensure prompt response, notification, and recovery in the event of an emergency.

The Contractor's Emergency Preparedness and Incident Management Plan must define the structure of emergency teams, communication processes, and necessary resources for managing emergencies. This plan should include:

- General responsibilities;
- Incident management and notification procedures;
- Event classification and notification protocols; and
- Resource and training requirements.

The objectives of the Emergency Preparedness and Incident Management Plan are to:

- Reduce risks to life, property, and the environment;
- Outline how an emergency response is triggered and how emergency teams are mobilised;
- Define command, control, and communication protocols between the Developer, ECO, the Contractor, and external response and government authorities;
- Specify the roles and responsibilities of all personnel involved in or present at the emergency site;
- Identify required emergency response equipment;
- Determine training requirements for response personnel; and
- Serve as the foundation for training all individuals who might be involved in emergency response.

The following key incident reporting contact numbers relevant to operational related activities must be included in the Emergency Preparedness and Incident Management Plan:

- Contractor/ Engineer Representative or Project/ Site Manager;
- Environmental Control Officer;
- Health, Safety and Environmental Officer;
- Contractor's Environmental Officer;
- Fire Department;
- Hospitals / clinics;
- South African Police Services (SAPS);
- Local Police Station;
- Emergency Medical Services (EMS) & Ambulance; and
- Spill response team.

3.8.2 ENVIRONMENTAL INCIDENTS

An environmental incident is defined as:

- Unplanned events with negative outcomes, which may include human injury, environmental damage, or asset loss;
- Near misses—extraordinary events that could have reasonably resulted in such incidents;
- Any deviation from the environmental management actions stipulated in this EMPr, that may be addressed immediately by the EO/ ECO (for example, a contractor's staff member littering or a drip tray that has not been emptied);
- Any environmental impact resulting from an action or activity by a Contractor which is in contravention of the environmental stipulations and guidelines listed in this EMPr which, as a single event, would have a minor impact, however, if cumulative and continuous, would have a significant impact (i.e. no toilet paper available in the ablutions for an afternoon); and
- General environmental information such as road kills or injured wildlife.

Incident Registers

All incidents that occur during the construction must be recorded in an Incident Register by the EO. This register must be used to record all environmental incidents for which a non-conformance notice would not be issued. These incidents must be managed according to the Contractor's Emergency Preparedness and Incident Management Plan. The Contractor must address/ acknowledge the issue as soon as possible, but no later than one week from the incident, and also correct the issue as soon as possible, but no later than two weeks from the incident, or within a timeframe agreed with the Environmental Officer, depending on the nature of the incident. These incidents must be reported to the Contractor, Developer and ECO. The Log is to be kept in the EMPr file. The Environmental Incident Log will be captured in the relevant Environmental Audit Report by the ECO. At a minimum, the following will be recorded for each environmental incident:

- The date, time, location and description of the incident;
- The cause of the incident;
- The type/ nature of incident;

- The name of the Contractor responsible;
- The impact/ significance of the Incident (minor or significant) and any associated risks (an assessment of both immediate and long-term effects);
- If the incident is listed as significant, a non-conformance notice must be issued, and recorded in the log;
- Toxicity of the substances involved;
- Details of any spillages, damages, injuries, or fatalities and the parties involved;
- What remedial or corrective action was taken to mitigate the incident; and
- Measures or corrective/ remedial action taken to mitigate or prevent the effects of the incident and avoid future occurrences; and
- A record of repeat minor offences by the same contractor or staff member.

The following are examples of environmental incidents and near misses should be recorded in the incident register, including:

- Loss of containment incidents or releases of liquids, solids, or gases;
- Spills of dangerous goods or hazardous substances (regardless of volume or weight);
- Complaints from regulatory authorities;
- Regulatory breaches, including directives, fines, or breaches of authorisation/license conditions;
- Stakeholder complaints; and
- Damage or loss to third-party property.

3.9 NON-COMPLIANCE AND NON-CONFORMANCE REGISTER

Non-compliance refers to the failure of the Contractor or Developer to adhere to the requirements, conditions, or standards set out in the EMPr (i.e., the management outcomes and actions), Environmental Authorisation, or relevant environmental legislation. This generally involves planned or ongoing activities that do not meet regulatory or procedural requirements, such as failing to follow dust suppression measures, using unapproved vehicles, or not implementing required mitigation measures. While some unplanned incidents with significant impacts could also be considered non-compliance, most cases relate to deviations from established procedures. In the case of non-compliance, a non-conformance notice will be issued in writing by the Contractor's EO to the responsible Contractor or person. This notice, which will contain the same information as the incident register, is used to log, track, and manage instances where requirements are not met. For each non-conformance notice, a documented corrective action must be recorded. The Contractor must address/ acknowledge the issue as soon as possible, but no later than one week from the non-compliance/ incident, and also correct the issue as soon as possible, but no later than two weeks from the incident, or within a timeframe agreed with the Environmental Officer, depending on the nature of the incident. Failure to comply shall be reported to the ECO. Any costs incurred by a Government Department or Municipality due to non-compliance with environmental legislation by the Developer will be charged to the Developer. Reporting will follow the same procedure as outlined for incident reporting.

Reporting of major environmental incidence/ non-compliances

Once an incident is stabilised and initial notifications/ non-conformance issued, a full investigation must be conducted, including corrective and preventive measures. A formal report, building on the non-conformance register, should detail the actions taken to remediate damage and prevent recurrence. This report must be submitted to the ECO within two weeks after the investigation has been completed and within 4 weeks after the incident.

Non-compliances/ major environmental incidents that are reportable

Non-compliances/ major environmental incidents which are reportable include those that cause substantial environmental damage; or have a significant potential impact on the environment. Examples of reportable incidents are:

- Spills into watercourses, the estuarine or marine environment, or drains, as defined by relevant legislation;
- Loss of hydrocarbons or chemicals exceeding 20 litres on land;
- Spills or releases, including soil movement, that extend offsite and have a negative impact;
- Death or injury to livestock, wildlife, or any fauna caused by construction or operational activities;
- Disturbance of previously undetected culturally significant sites without proper approval;
- Transfer of known alien invasive species or diseases due to construction or operational activities;
- Fires;
- Traffic incidents;
- Damage to property outside the development area;
- Unresolved landowner disputes where no agreement can be reached;
- Incidents likely to generate regional or widespread negative publicity;
- Serious environmental damage or imminent risk of such damage;
- Significant environmental degradation, pollution, or non-compliance with the EA, this EMPr or other legislative requirements; and
- Exceedances of prescribed dust fall standards where dust monitoring is mandated.

3.10 MONITORING AND FREQUENCY OF MONITORING

Implementation of the requirements stipulated in the EA, EMPr (this document) and Method Statements must be monitored throughout the project. The Contractor's EO and the ECO are responsible for assisting the Contractor and monitoring compliance by the Contractor and all site staff with these requirements. For certain management measures outlined in Sections 5, 6 and 7, specialist studies may have indicated examples of how compliance can be demonstrated (e.g. appointment records, contracts, monitoring records, photographs, or registers). Where this has not specifically been indicated, the Developer should consult with the Contractor's EO and ECO regarding appropriate proof of compliance. The form of proof required will be determined by the EO and ECO based on the nature of the management measure. Refer to Sections 5, 6, and 7 for the specific Environmental Management Measures that must be implemented and monitored. The specific responsibilities of each role are outlined in Section 2.

The Contractor's EO will conduct weekly site inspections during the construction phase, to ensure and monitor the implementation of these requirements, and to ensure that the management actions and outcomes are appropriate for preventing or minimising impacts. The EO is therefore not required to be present on site every day. The ECO will undertake regular site inspections at the frequency stipulated in the EA. Where the EA does not specify a frequency, inspections must take place at least once per month during construction.

Due to the nature of the development and the absence of a dedicated operational phase contractor, it will not be feasible for the Contractor's EO or the ECO to undertake regular day-to-day operational inspections following completion of construction. As such, it is recommended that the Developer appoint a representative (Developer's representative) to conduct monthly inspections during the first year of operation, and thereafter as required by the Developer in accordance with applicable legislation, health and safety requirements, and general best practice. The ECO must also undertake operational phase audits/inspections at the frequency stipulated in the EA. Where no frequency is specified in the EA, at least one inspection/audit must be undertaken within one year following completion of construction.

3.11 REPORTING, MONITORING AND AUDITING FREQUENCY

Construction Phase

Weekly Reports by the Contractor's EO

The Contractor's EO will draft a weekly report where the findings from the weekly site inspections are summarised. The weekly report will be submitted to the relevant Contractor's manager to ensure effective corrections of findings. The weekly report will include the following information:

- An overview indicating the activities conducted during the past week, the highlights and lowlights of the week, current outstanding issues, concerns, and the environmental toolbox talk topics;
- Any Environmental Awareness Training conducted (Environmental Awareness Training Register);
- An overview of the site inspection findings;
- A detailed description, with quantities, of the waste generated on site during the week (Waste Register);
- An overview of the incidents that occurred (Incident Register);
- An overview of the complaints that were received from community/ other people (Complaints Register);
- An overview of any non-compliances (Non-Conformance Register);
- An overview of any corrective actions (Corrective Action Records);
- An overview of any Fauna that were encountered and/or removed from site (Fauna & Flora Encounter Register);
- An Overview of any Flora that were relocated and/or removed from site (Fauna & Flora Encounter Register);
- Photographic record of the above (where applicable); and
- An overview of findings with appropriate close out findings.

Monthly Reports by the Contractor's EO

The Contractor's EO must compile a monthly report that consolidates and summarises the findings of the weekly inspections and reports. This report provides an overview of monitoring outcomes for the reporting period and must be submitted to the ECO and the Developer. The monthly report must include:

- A summary of the weekly site inspections and reports for the reporting period (including the information specified for weekly reports);
- A summary of the work, tasks completed, and activities undertaken during the reporting period;
- A summary of any specific environmental actions or plans implemented (e.g. search and rescue operations);
- An overview of all audits undertaken during the reporting period (if applicable);
- An evaluation of Contractor and staff performance in terms of compliance with the EA, EMPr and Method Statements (as applicable); and
- A progress update on any reinstatement or rehabilitation activities.

Internal Environmental Audits and Audit Reporting by ECO

In addition to the Contractor's EO monitoring and reporting discussed above, comprehensive audits must be conducted to ascertain the effectiveness of the management strategies put in place to control and mitigate impacts. The ECO must undertake regular internal environmental audits of the Contractor and Developer's compliance with the EA and EMPr and any other applicable licences, and compile the results into an Audit Report, at the frequency stipulated in EA. Where the EA does not specify a frequency, audits must be conducted at least once per month. These reports will be submitted to the Developer. The term internal audit is used here to distinguish these smaller, routine ECO audits from the formal audits required under Section 34 and Appendix 7 of the EIA Regulations, 2014.

The purpose of these internal audits is to provide continuous oversight, to ensure ongoing compliance by the Contractor and Developer, and to maintain regular reporting. These records will serve as the foundation for the formal audits required in terms of the EIA Regulations, therefore creating a comprehensive compliance record and reducing the burden on the appointed external auditor. The external auditor will therefore be given access to these reports.

These comprehensive internal audit reports will draw on both the ECOs own records, and the information contained in the monthly EO reports. They must identify system flaws, instances of non-compliance, and any unfavourable (or potentially unfavourable) environmental conditions arising from project activities. These reports must also provide conclusions on contractor compliance and performance, their capacity to effectively avoid, manage, and mitigate environmental impacts, and the overall level of compliance with the EMPr and other regulatory requirements.

Operational Phase (only where applicable).

Internal Compliance Monitoring by the Developer's representative

The Developer's representative must ensure that applicable management measures in Section 7 relating to water, stormwater, wastewater and run-off; waste; hazardous substances and spills; and fire management are implemented and maintained. Compliance should be periodically recorded as part of the Developer's existing internal management and compliance processes, with records retained and made available to the Competent Authority on request.

No formal reporting or auditing is therefore required during the Operational Phase of the development.

External Environmental Audits (Section 34 and Appendix 7 of the EIA Regulations, 2014)

In terms of Section 34 of the EIA Regulations, 2014 (as amended), the Developer's compliance with the conditions of the EA and EMPr must be audited by an independent external auditor, as specified in the EA. These audits are mandatory once an EA has been issued, and for as long as the EA/ EMPr remains valid. The frequency of audits must align with the intervals specified in the EA or, where not specified, with the requirements of Section 34 of the EIA Regulations, which states at least once per 5 years. The findings must be documented in an Environmental Audit Report, which is submitted to the Competent Authority for acceptance. All audit reports must comply with the requirements of Section 34 and include the information specified in Appendix 7 of the EIA Regulations, 2014.

The reporting timeframes for the various required reports are provided in Table 3.1.

Table 3.1. Reporting timeframes for the various reports required throughout the project's life cycle.

Report	Timing	Prepared by	Reviewed by
Construction Phase			
Weekly EO Reports	Weekly	EO	Contract Manager & ECO
Monthly EO Reports	Monthly	EO	ECO & Developer
Internal Audit Reports	Monthly (or as specified within the EA)	ECO	Developer & Competent Authority
General			
Grievance	Within two weeks of grievance	EO	ECO
Incident and Non-Compliance Reporting	Within two weeks after the investigation has been completed and within 4 weeks after the incident.	EO	ECO
Management Review	Within two weeks of management review	Contractors Senior Management	ECO
Change Management	Whenever required	EO/ ECO	Developer

3.12 AMENDMENTS TO THE IMPACT MANAGEMENT OUTCOMES AND ACTIONS

Once the activity has commenced, the holder of an EA may make amendments to the impact management outcomes and actions in the following manner:

- Amendment of the impact management outcomes – in line with regulation 37 of the EIA Regulation, 2014
- Amendment of the impact management actions – in line with regulation 36 of the EIA Regulations, 2014

3.13 QUALITY CONTROL SYSTEM

Every environmental and social monitoring project must adhere to recognised monitoring guidelines, conventions, and standards and must take baseline study results into consideration. As such, an integrated management system (IMS) consisting of an environmental management system based on ISO 14001 and a quality management system (QMS) based on ISO 9001 must be developed and maintained by the Contractor's EO, in consultation with the ECO.

All sample analysis must be completed at a laboratory accredited by SANAS 17025, unless otherwise indicated in the contractor's method statement and authorized by ECO.

In addition, the Contractor must provide comprehensive terms of reference for the selection of a professional service provider to carry out the environmental monitoring program for marine and estuarine ecological receptors, and the quality of the water and sediment. The professional service provider shall meet minimum professional requirements for:

- qualifications;
- professional registrations;
- experience and track record;
- demonstrated proficiency in use of relevant monitoring and sampling equipment;
- equipment requirements and tolerances for detection limits;
- reporting and analysis; and
- confirmation of laboratory accreditation, capacity, delivery and performance within reasonable timeframes.

4 PROJECT BACKGROUND, LOCATION AND DESCRIPTION

4.1 DETAILS OF THE APPLICANT

Name of applicant: Victoria & Alfred Waterfront Holdings (Pty) Ltd.

Name of contact person for applicant: Neil Schwartz

Tel No: 082 777 7330

Postal Address: Postal address P O Box 50001, Waterfront, Cape Town, 8002

Physical Address: Merchant House, 19 Dock Road, Cape Town, 8001

Email Address: nschwartz@waterfront.co.za

4.2 DETAILS AND EXPERTISE OF THE EAP

Name of EAP: Ms Cheruscha Swart

Tel No: 021 701 3420

E-mail address: cheruscha@anchorenvironmental.co.za

Company: Anchor Environmental Consultants (Pty) Ltd.

Expertise of the EAP (Curriculum Vitae included):

- MSc Zoology; BSc (Hons) & BSc Biodiversity and Ecology
- EAPASA (Reg EAP no. 2021/3298)
- SACNASP Pr.Sci.Nat. Reg: 155305 (Environmental Science; Zoological Science)

A full professional CV have been appended to this Report, as Appendix 1.

4.3 PROJECT TITLE

Proposed mixed-use development on project Parcels O, P, a1, and a2 on Erven 158570 RE, 149294 RE, 177854 and 179076, Breakwater Precinct, V&A Waterfront, Cape Town by the V&A Waterfront.

4.4 BRIEF PROJECT OVERVIEW

The Victoria & Alfred Waterfront (V&AW) in the City of Cape Town (CoCT) is a 123-hectare unique urban regeneration project that, over the past thirty years, has transformed a historic and previously under-utilised section of the Port of Cape Town into the City's premier tourist, retail, entertainment, commercial, and residential destination. The V&A Waterfront is developing a mixed-use development within its Breakwater Precinct, on Erven 158570 RE, 149294 RE, 177854 and 179076, situated north of the Table Bay Hotel (Figure 4.1). The project involves the redevelopment of the site into a mixed-use precinct with a total development footprint of approximately 12 700 m² (1,27ha). It will comprise three primary development parcels, namely Parcels O, P and a1 &a2, as well as the improvement of the existing promenade and the creation of a new public open space, Atlantic Park. The proposal also includes all associated infrastructure and structures located between these components. The site is currently zoned as Mixed Use 3 (MU3) in terms of the City of Cape Town's Municipal Planning Bylaw (2025 as amended).



Figure 4.1 Location of the proposed mixed-use development on Erven 158570 RE, 149294 RE, 177854 and 179076 within the V&A Waterfront, Cape Town. The original layout and land use of the site are also visible, including existing infrastructure such as roads, parking areas, landscaped lawns with palm trees, and storage containers.

4.5 PROJECT LOCATION

The proposed development site is located within the Breakwater Precinct of the V&A Waterfront in Cape Town, adjacent to the Port of Cape Town and V&A Waterfront Harbour and north of the Table Bay Hotel Figure 4.1.

4.6 DETAILED PROJECT DESCRIPTION

The project involves the redevelopment of the site (portions of Erven 158570 RE, 149294 RE, 177854 and 179076) into a mixed-use precinct. It will comprise three primary development parcels, namely Parcels P, O, and a1 & a2, as well as the expansion of the existing promenade and the creation of a new public open space, Atlantic Park (Figure 4.2). The proposal also includes all associated infrastructure and structures located between these components. The development will have a total development footprint of approximately 12 700 m² and a maximum building height of 32 m above Existing Ground Level (EGL) for Parcel O. Key development parameters, including building dimensions and footprints, are summarised in Table 2 and Table 3.

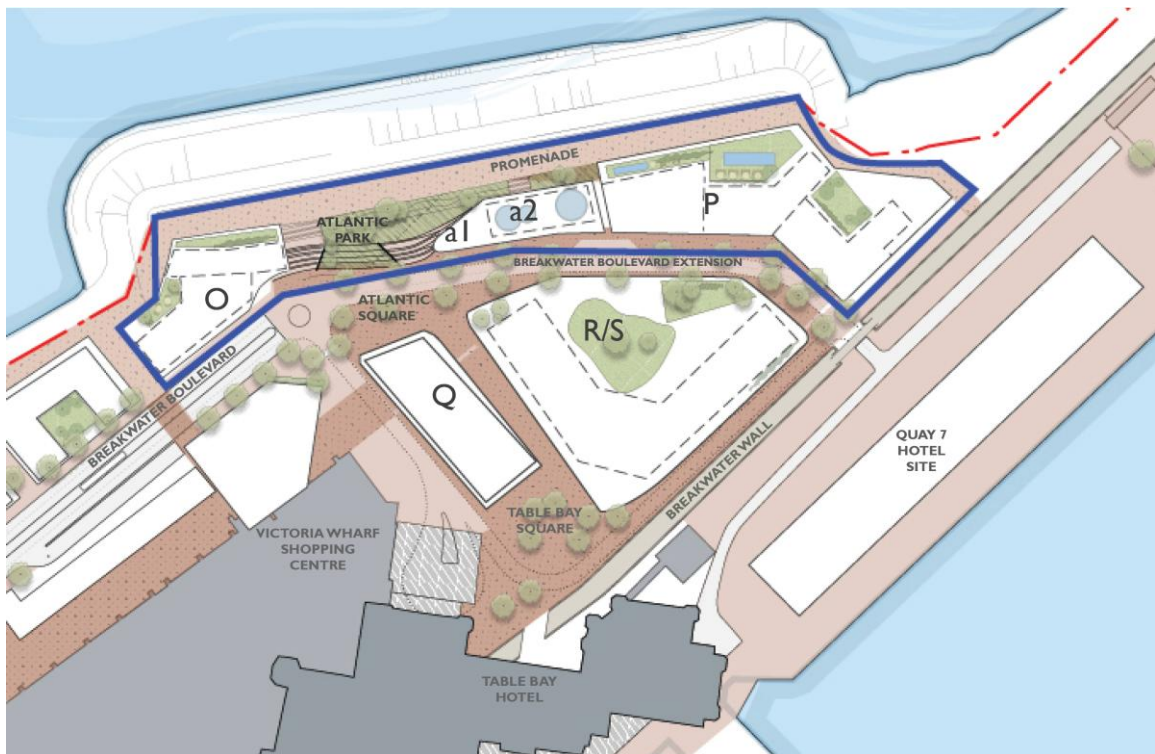


Figure 4.2. Proposed development layout and design for this project. This phase includes Block P, O and a1 & a2, Atlantic Park and the Promenade.

Table 2. Building dimensions and proposed land-use for Blocks P, O, a1 and a2.

Building Block	Max Height from Existing Ground Level	Building Footprint (m ²)	Gross Building Area (Gba) /Block (m ²)	Proposed Land Use
Block P	+21m	4200	14 270	Mixed Use: Primarily Hotel/ Residential
a1 &a2	a1—+10m a2 —+17 m	1200	4 200	Mixed Use: Primarily Cultural
Block O	+32m	1750	10 000	Mixed Use: Primarily Residential /Hotel

Table 3. Erf number, cadastral size and anticipated development footprint.

Property	Cadastral size	Approximate extent to be utilised
158570 RE	29 338 m ²	900 m ²
149294 RE	854 442 m ²	10 000 m ²
177854	1 095 m ²	420 m ²
179076	4125 m ²	90 m ²

4.6.1 SERVICES

GENERAL PIPELINE INFRASTRUCTURE

The proposed development will utilise existing approved bulk development rights, and therefore the CoCT is obliged to meet the service infrastructure demands of the proposed development. No additional bulk pipelines (freshwater, wastewater, sewage, etc.) are to be laid as part of this project. Existing pipeline infrastructure is located within the Breakwater Street, adjacent to the proposed site.

SOLID WASTE

The proposed development will produce typical construction-related waste, during the construction/ development phase. While the type and quantity of the waste cannot be reported on at present, these are not expected to exceed thresholds for licensing. The type of waste to be produced during the operational phase will be typical of residential, commercial, and retail land uses, however volumes cannot be reported on at present. No hazardous waste production is anticipated, and volumes cannot be reported on at present.

WASTEWATER/ SEWAGE

Effluent of approximately 44 m³/day will be produced from the development and will be typical of effluent produced from residential and commercial land uses during operation. The effluent will be conveyed through existing bulk sewer infrastructure to the Green Point Marine Outfall Pipeline.

WATER

The proposed development will require water during both the construction and operational phases, with non-potable water being utilised during construction, and potable (drinking quality) water will be utilised during the operational phase. Once operational, the development will require for 39m³/day of potable water, which will be drawn from the municipal water supply, and supplemented by the V&AW licensed

desalination plant as required. This is in alignment with the V&AWs long-term objective to reduce reliance on the City of Cape Town for their water supply. This will be implemented in a phased manner, with the objective of eventually relying on the City's mains connections to the V&AW only for critical situations only. In this regard, the V&AWs Desalination Plant (located outside the application site area on V&AW owned property) has been designed to meet current water demands, and to cater for future growth of the property, including the application site.

ELECTRICITY

The CoCT is the local electrical supply authority and there is sufficient capacity within the City's network to service the anticipated demand for the precinct.

4.7 ENVIRONMENTAL SENSITIVITY MAPPING, BUFFERS AND NO-GO AREAS.

The BA process did not identify the need for any specific No-Go areas or buffer zones (areas around sensitive receptors where works must not occur). However, project activities should occur within the designated development footprint. All sensitivity maps have been included in Appendix 2.

5 PLANNING AND DESIGN AND PRE-CONSTRUCTION ENVIRONMENTAL MANAGEMENT MEASURES

5.1 OVERVIEW

The holder of the EA and the Contractor are reminded that their compliance with Sections 5, 6 and 7 will be subject to monitoring and auditing, which must be carried out in accordance with Sections 3.9 and 3.10, and using the information and guidance provided in Section 2 and Section 3.

5.2 BASELINE PHOTOGRAPHY

Impact management outcome: Maintain a clear record of the site's pre-construction condition and any environmental changes or incidents using photographic record.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) The Contractor must photograph all areas to be affected by construction, including surroundings, work areas, site setup and laydown areas, access roads, gates, no-go and natural areas, debris, boundary fences, and existing structures/infrastructure. Any existing defects or issues must be captured. Photos must be provided to the Developer and made available to the EO and ECO for reporting.	Contractor/ Contractors EO	During planning phase prior to any work commencing

5.3 NOTIFY INTERESTED AND AFFECTED PARTIES (I&APs) OF COMMENCEMENT OF CONSTRUCTION

Impact management outcome: Notify all registered and relevant I&APs of the commencement of the project and construction activities to allow increased stakeholder awareness and transparency, allowing affected parties to anticipate and respond to construction activities.		
Essential Management/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) The Developer must notify the following I&APs of the availability of the signed EMPr and the commencement of construction. i. Registered I&APs, including the local municipality. ii. The local Fire Protection Agency (FPA). The details of the Contractor/ EO and ECO must also be shared with them. iii. The South African Heritage Resources Agency (SAHRA)/ Heritage Western Cape (HWC).	Developer	As soon as EMPr is signed and prior to the start of construction/ As per legislated timeframe

5.4 CAMP AND LAYDOWN AREA SITE ESTABLISHMENT

Impact management outcome: Establish camp and laydown area to minimise impacts on the environment when developing new infrastructure and the development footprint are kept to demarcated development area.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) A method statement must be provided by the Contractor prior to any onsite activity that includes the layout of the construction camp in the form of a plan (Construction Camp and Laydown Area Plan) showing the location of key infrastructure and services (where applicable), including but not limited to offices, overnight vehicle parking areas, stores, the workshop, stockpile and lay down areas, hazardous materials storage areas (including fuels), the batching plant (if one is located at the construction camp), designated access routes, equipment cleaning areas and the placement of staff accommodation, cooking and ablution facilities, waste and wastewater management. b) Location of camp/s and any project activities must be within approved area (development footprint). c) Sites should be located where possible on previously disturbed areas; d) The site design should consider the ease of delivery access, future construction needs, and the security concerns of neighbours, whilst also minimising disturbances. e) The Contractor shall construct and maintain fences of the type and in the locations specified by the developer (should they be necessary). These should be installed before starting the operations. f) Although the BA process did not identify the need for any specific No-Go areas or buffer zones, the EA may specify such areas. In this instance, the Contractor must, set up No-Go area demarcation fencing before any building in the vicinity of one of these areas and make sure that no equipment or material is entered, piled, dumped, or stored in any of the designated No-Go areas without permission.	Engineer/ Contractors	During planning phase prior to construction work commencing

5.5 VISUAL CONSIDERATIONS

Impact management outcome: Minimise visual impacts through appropriate design controls.

Recommended/Best Practice Optimisation Measures	Person responsible for Implementation	Timeframe of Implementation
a) It is encouraged that the space at Atlantic Park, both on the lower edge and the upper/promenade edge, receive special design and landscaping attention and treatment, in a way that reflects its unique sense of place, incorporating vegetation and public amenity elements that reflect the positioning of this space at the waters' edge. b) That a Landscape Plan and Elevations incorporating these aspects be produced for any future SDP applications (to be assessed by the local authority, the City of Cape Town Municipality).	Developer/ Engineer/ Contractor/ Architect	During planning phase, to ensure compliance during operation

6 CONSTRUCTION ENVIRONMENTAL MANAGEMENT MEASURES

6.1 OVERVIEW

The following section outlines the various aspects that need to be managed, along with the management outcomes and associated management actions that must be implemented during the construction phase to manage and mitigate potential impacts of the development on various receptors.

The holder of the EA and the Contractor are reminded that their compliance with Sections 5, 6 and 7 will be subject to monitoring and auditing, which must be carried out in accordance with Sections 3.9 and 3.10, and using the information and guidance provided in Section 2 and Section 3.

6.2 ENVIRONMENTAL TRAINING

Impact management outcome: Provide environmental awareness training to ensure all onsite staff are aware and understands the individual responsibilities in terms of this EMPr to ensure effective implementation and compliance.

Essential Management Actions/Mitigation Measures (Method of implementation)	Person responsible for Implementation	Timeframe of Implementation
a) To be Implemented as per the Environmental Training Method Statement. b) All staff must receive environmental awareness training prior to commencement of the activities to explain the potential environmental and species impacts of construction activities, promote practices that reduce these impacts, and ensure compliance with the EA and EMPr—as demonstrated through training records and induction documentation. c) All staff are aware of the conditions and controls linked to the EA and within the EMPr and made aware of their individual roles and responsibilities in achieving compliance with the EA and EMPr; d) Training must cover all the aspects outlined in this EMPr, specifically those aspects and management measures detailed in Section 6 and 7 (for construction and operation, respectively) e) The Contractor must allow for sufficient sessions to train all personnel with no more than 20 personnel attending each course; f) Refresher environmental awareness training is available as and when required; g) The Contractor must erect and maintain information posters at key locations on site, and the posters must include the following information as a minimum: i. Safety notifications;	Contractor/ Contractors EO/ ECO	Prior to working on site and a refresher course every six-months thereafter. Monthly environmental toolbox talks.

Impact management outcome: Provide environmental awareness training to ensure all onsite staff are aware and understands the individual responsibilities in terms of this EMPr to ensure effective implementation and compliance.

Essential Management Actions/Mitigation Measures (Method of implementation)	Person responsible for Implementation	Timeframe of Implementation
ii. Suitable handling and disposal protocols; and i. No littering. h) Environmental awareness training must include as a minimum the following: i. Description of significant environmental impacts on the environmental and species related to their work activities. This includes explaining the detrimental impacts of pollution on aquatic species; i. Mitigation measures to be implemented when carrying out specific activities; ii. Heritage induction and training for ground crew (Incl. ECO) must be conducted, in identifying heritage resources. iii. Emergency preparedness and response procedures; iv. Emergency procedures, including spill and disaster management; v. Procedures to be followed when working near or within sensitive areas; vi. Wastewater management procedures; vii. Water usage and conservation; viii. Solid waste management procedures (including littering and pollution); ix. Sanitation procedures; i. Fire prevention (Contact numbers for the local FPA and emergency services must be communicated during training and displayed at a central location on site). ii. Disease prevention; and iii. Hazardous substances management. h) A record of all environmental awareness training courses undertaken as part of the EMPr must be available; i) Course material must be available and presented in appropriate languages that all staff can understand. j) Monthly environmental toolbox talks must be given to remind staff of their responsibilities.		

6.3 OVERALL ENVIRONMENTAL MANAGEMENT

Impact management outcome: Ensure overall Environmental Management to ensure compliance with the EMPr, EA and legislation and enable effective monitoring of compliance.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) The Contractor, Developer, and all personnel on site must comply with all applicable environmental legislation. b) The EO, ECO, or another designated responsible person must be present on site to monitor earthworks and construction activities, and to check for any heritage resources. c) Take photos as needed to record progress and any environmental changes during construction. d) Photograph any incidents or non-compliances where possible to support records and reporting.	Contractor/ Contractors EO/ ECO	Throughout Construction Phase

6.4 MANAGEMENT OF SOCIO-ECONOMIC ASPECTS

Impact management outcome: Maximise positive and minimise negative socio-economic impacts associated with the development by prioritising local employment and procurement, supporting skills development, and promoting opportunities for local businesses and inclusive hiring.		
Recommended/Best Practice Optimisation Measures	Person responsible for Implementation	Timeframe of Implementation
a) The developer should encourage the contractor to increase the local procurement practices and promote the employment of people from local communities, as far as feasible, to maximise the benefits to the local economies. b) Source construction materials, goods and services from local suppliers wherever practical. c) Where practical, support subcontracting opportunities for local SMMEs. d) Where possible, promote inclusive hiring practices. e) Where feasible, maximise local employment opportunities.	Developer/ Contractor	Must be considered during Planning Phase and Implemented during Construction Phase

6.5 DUST AND AIR QUALITY MANAGEMENT

Impact management outcome: Maintain earthworks and dust management practices in a manner that ensures that public health and safety are assured and environmental, air and water quality degradation are minimised.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Develop and implement Dust Management Plan (as per method statement in 3.2). b) Ensure full compliance with all relevant national and municipal policies, regulations, and guidelines regarding noise and dust management, particularly when working near roads, sensitive receptors, and existing infrastructure, demonstrated through monitoring records and site inspection reports. c) Implement regular cleaning and maintenance of the construction site to prevent dust accumulation on surfaces, access roads, and surrounding areas, demonstrated through site logs, photographic evidence. d) Cover or securely store loose construction materials, soil, and debris to prevent windblown dust, as demonstrated through site logs and photographic evidence. e) Take all reasonable measures to minimise the generation of dust as a result of project development activities to the satisfaction of the ECO. f) Removal of vegetation must be avoided until such time as soil stripping is required and similarly exposed surfaces must be re-vegetated or stabilised as soon as is practically possible. g) Appropriate dust suppression measures must be used when dust generation is unavoidable, e.g. dampening with water (particularly during prolonged periods of dry weather in summer), clearing loose sand, covering stockpiles/ dust generating products, cover products when transported, implement temporary stabilising measures (e.g., straw, brush packs, chipping). These measures should be demonstrated through site logs and photographic evidence. h) For significant areas of excavation or exposed ground, or during dry and, or windy periods, a water tanker should be available (where required) for the control of dust, but ensure that the sprays do not generate excess run off. i) Where possible, excavation, handling and transport of erodible materials must be avoided under high wind conditions or when a visible dust plume is present. j) During high wind conditions, the EO/ ECO will evaluate the situation and make recommendations as to whether dust-dampening measures are adequate, or whether working will cease altogether until the wind speed drops to an acceptable level. k) Vehicle speeds must not exceed 40km/h along dust roads or 20km/h when traversing unconsolidated and non-vegetated areas.	Contractor/ Contractors EO	Throughout Construction Phase

6.6 NOISE MANAGEMENT

Impact management outcome: Minimise noise and associated disturbance and nuisance to surrounding communities, workers, and wildlife.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Develop and implement Noise Management Plan (as per method statement in 4.2). b) Ensure full compliance with all relevant national and municipal policies, regulations, and guidelines regarding noise management, particularly when working near roads, sensitive receptors, and existing infrastructure. To be demonstrated through monitoring records and site inspection reports. c) Efforts must be made to limit noise during construction (including all unnecessary noise production). d) All construction related vehicles, plant, and equipment shall be properly maintained to avoid creation of unnecessary additional noise. e) Where possible, local community/nearby workers should be forewarned before noisy operations commence, should it be likely that they will be impacted. f) Loud maintenance activities are to be constrained to reasonable hours during the day. g) Where possible, noisy operations shall be combined so that they occur concurrently, to reduce the total period of noise generation.	Contractor/ Contractors EO/ ECO	Throughout Construction Phase

6.7 STAFF HEALTH AND SAFETY AND EMERGENCY PROCEDURES

Impact management outcome: Ensure the Health and Safety of Staff by complying with the Occupational Health and Safety Act (OHSA) and through proper awareness, training and materials and equipment skills.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Compile an Emergency Response Action Plan (ERAP) prior to the commencement of the proposed project. The Emergency Plan must deal with accidents, potential spillages and fires in line with relevant legislation; b) Construction activities must be conducted in accordance with the Operational Health and Safety Act (OHSA) and its Regulations, as well as the Health and Safety (H&S) Plan for the project. c) Co-ordinate emergency evacuation procedures with the local emergency services and conduct regular emergency drills (as per the H&S plan). d) All employees shall receive general H&S construction related work skills training required to enable them to work safely and effectively and to limit any impact on the environment—as demonstrated through training records and induction documentation. i. Training will include: i. Emergency procedures as part of the ERAP; ii. Spill, Emergency and Disaster Management. iii. Hazardous substances management. iv. Health and Safety. v. Proper Waste Disposal and Management (including littering and pollution). vi. Firefighting & fire prevention and fire safety training (including fire drills). e) No accommodation at camp sites shall be allowed. f) Personal Protective Equipment (PPE) must be available and worn by staff and visitors—as demonstrated through PPE records. g) Implement site access controls—as demonstrated through site inspection reports/logs. h) All staff working with hazardous substances shall wear appropriate PPE as indicated in the relevant Material Safety Data Sheet (MSDS)—as demonstrated through PPE records. i) The Contractor shall ensure a safe clean working environment. j) Up-to-date contact list of all emergency services must be frequently updated, and be kept on site.	Contractor/ Contractors EO/ Health and Safety Officer	Prior to working on site and throughout Construction Phase

6.8 MANAGEMENT OF COMMUNITY AND SOCIAL ASPECTS

Impact management outcome: Preserve good relations with neighbouring communities to ensure maximum social benefits, and minimum negative impacts.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) ECO or contractor EO to act as community liaison and provide contact details on site boundary signage b) Development boundary shall display relevant signage. c) Communications register shall be kept on site to record any comments/ complaints/ interactions from community. d) The Contractor shall adhere to the following timeframes for dealing with stakeholder concerns: - Record the concern within the Communications Register and verbally notify the ECO immediately. - Respond to the concern – within two weeks of the concern being raised – this includes consulting with the stakeholder. - Rectify/mitigate the concern – within two weeks of the concern being raised. - Respond in writing to the stakeholder on “close out” of the concern – within 7 days of the concern being rectified. - Submit to the ECO a detailed report – within 7 days of the concern being raised. e) During work hours the Contractor shall be vigilant of potentially negative interactions between staff and the surrounding communities. f) Trespassing on land adjacent to the project area is not allowed. g) Access to site by people not involved in the project shall be controlled.	Contractor/ Contractors EO/ ECO / Developer	Throughout Construction Phase

6.9 VISUAL CONSIDERATIONS

Impact management outcome: Minimise visual impacts through appropriate design controls, contained construction and site rehabilitation.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Limit construction to within hoarded areas. b) The site must be kept tidy, and equipment and material must be stored neatly. c) Site rehabilitation and management to commence following completion of the works; d) Install lighting in such a manner so as to provide adequate lighting for Health and Safety requirements at night, but to not disturb surrounding properties.	Developer/ Engineer/ Contractor	During planning phase
Recommended/Best Practice Optimisation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Where possible green elements such as the existing palm trees in the central street island should be retained.		

6.10 ARCHAEOLOGICAL RESOURCES MANAGEMENT

Impact management outcome: Management of activities to ensure impact on heritage resources, including archaeological resources, is minimised and preservation thereof increased.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Any groundworks on the Breakwater North Precinct Phase 1B site, to levels that may intersect with the former seabed must be subject to archaeological monitoring, with the necessary contingencies in place to allow the mitigation of shipwreck remains or pre-colonial archaeological material, should they be encountered b) Monitoring visits should be conducted by a suitably experienced archaeologist at least once per week, or as required c) Archaeological information should be presented as part of the environmental training programme for all site staff and machine operators d) Should anything of interest be found by construction staff, this must immediately be reported to the project ECO and site manager, and the monitoring archaeologist called to site to assess the find and establish whether any form of mitigation is required	Contractor/ Contractors EO/ Heritage Specialist/HWC/ SAHRA	During planning phase and prior to construction work commencing

6.11 PROTECTION OF MARINE ENVIRONMENT

Impact management outcome: Minimise destruction and contamination of marine environment and disturbance and mortality of species.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Intentional disposal of any substance into the environment is strictly prohibited, while accidental spillage must be prevented, contained and reported immediately. b) All hazardous substances must be accompanied by a permit, a hazard report sheet, and a first aid treatment protocol and may only be handled by suitably trained operators. c) Spill kits must be available on site at all times, and staff must be trained in their proposed use.	Contractor/ Contractors EO/ ECO	Throughout Construction Phase/ Some actions to occur as and when required/ Some actions to occur post-Construction Phase

6.12 SOIL, EARTHWORK, EROSION AND STOCKPILE MANAGEMENT

Impact management outcome: Minimise erosion, sedimentation, dust emission and degradation of water quality by implementing good soil, earthwork, erosion and stockpile management		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Develop and implement management plan (as per method statement in 3.2). b) Any groundworks on the Breakwater North Precinct Phase 1B site, to levels that may intersect with the former seabed must be subject to archaeological monitoring, with the necessary contingencies in place to allow the mitigation of shipwreck remains or pre-colonial archaeological material, should they be encountered c) When soil is excavated, the different natural layers of soil (horizons), such as the nutrient-rich topsoil, the subsoil beneath it, and any deeper layers, must be removed and stored in separate piles rather than mixed together to ensure that the layers are replaced in the correct order during rehabilitation, preserving soil quality, fertility, and proper drainage for vegetation recovery. All soils shall be reinstated in the reverse order to that in which they have been removed (where relevant). Topsoil must be kept in separate stockpiles and used for rehabilitation. This action is only applicable if development occurs on natural environment. d) All reasonable measures will be implemented to control erosion and sedimentation during construction, including the use of stabilisation techniques, silt fences, anti-erosion measures, etc, especially in areas at risk of erosion/runoff. e) All material that is excavated during construction must be stored appropriately on site in order to minimise impacts to the marine environment. f) During periods of strong winds and heavy rain, the stockpiles should be covered with appropriate material (e.g. cloth, tarpaulin etc.). g) Where possible, sandbags (or similar) should be placed at the bases of the stockpiled material in order to prevent erosion of the material. h) Stockpiles must not exceed 2 m in height. i) All stockpiled material must be maintained and kept clear of weeds and alien vegetation growth by undertaking regular weeding and control methods. j) Refuelling and other activities with the potential to cause pollution shall not be allowed on or adjacent to a stockpile. k) Polluted soil should be collected and disposed of appropriately, during and after construction. l) Spoil shall be used as backfill to rehabilitate areas impacted upon by construction activities. m) Excess spoil material shall be disposed of at locations as identified by the ECO. n) Stabilise cleared, exposed and other areas prone to erosion to prevent and control erosion. o) Monitor construction areas for erosion regularly, especially post rainfall and repair any damage where erosion and/or sedimentation has occurred. p) Exposed areas shall be stabilised within one week of their exposure.	Contractor/ Contractors EO	Throughout Construction Phase

Impact management outcome: Minimise erosion, sedimentation, dust emission and degradation of water quality by implementing good soil, earthwork, erosion and stockpile management

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
q) Runoff from roads and other hard surfaces must be managed to avoid erosion. r) Changes in natural gradients due to construction activities shall be avoided where possible or mitigated by levelling the slope to the original gradient. Where slopes have been created, anti-erosion mechanisms shall be implemented (e.g., such as knocking in stakes, installing gabions, geo textiles or similar). s) Where necessary, silt traps should be installed to minimise silt from entering the storm water, sewerage, and marine environment.		

6.13 WATER SUPPLY MANAGEMENT

Impact management outcome: Undertake responsible water usage to reduce pressure on local water supply resources and support sustainable water use.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Ensure water conservation is being practiced by: i. Minimising water use during cleaning of equipment; ii. Undertaking regular audits of water systems; and iii. Including a discussion on water usage and conservation during environmental awareness training.	Contractor/ Contractors EO/ ECO	Throughout Construction Phase

6.14 WATER, STORM WATER, WASTEWATER AND RUN-OFF MANAGEMENT

Impact management outcome: Minimise runoff of water, storm water, soil, and silt into the marine and surrounding environment to protect water quality and reduce nuisance or safety risks to adjacent users, businesses, and areas.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Storm water and run-off must be managed using best practice and measures indicated below to improve storm water management systems, to reduce the amount of litter, debris, topsoil, run-off, contaminants and/ or sewage entering the marine systems. A method statement for this management must be prepared in accordance with Section 3.2. b) Water that has been contaminated with suspended solids, such as soils and silt, may be released into watercourses or water bodies only once all suspended solids have been removed from the water by settling out these solids in settlement ponds. The release of settled water back into the environment must be subject to the Project Manager's approval and support by the ECO. c) Natural storm water runoff not contaminated during the development and clean water can be discharged directly to waterbodies, subject to the Project Manager's approval and support by the ECO; d) Runoff from the cement/ concrete batching areas must be strictly controlled, and contaminated water must be collected, stored and either treated or disposed of off-site, at a location approved by the project manager. Water impacted upon by construction related activities shall not be released directly into the environment. e) Runoff from roads must be managed to avoid erosion and pollution problems. Where necessary, silt traps should be installed to minimise silt from entering the storm water, sewerage and marine systems. f) Storm water shall be directed towards stabilised areas which can dissipate the energy of the water flow. No ponding shall be permitted. g) No handling of hazardous substances, storing of equipment, ablution or waste disposal are permitted in close proximity to water resources or storm water drains.	Contractor/ Contractors EO/ ECO	Throughout Construction Phase

6.15 WASTE MANAGEMENT

Impact management outcome: Implement waste hierarchy principles to ensure waste generation is reduced; reuse and recycling is promoted; all waste streams receive responsible treatment; safe disposal is assured; and pollution is prevented.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) A Solid & Liquid waste management plan shall be developed and implemented as per Section 3.2. b) A “reduce, reuse, recycle” approach must be followed to reduce amounts of waste that need to be disposed of at a landfill. c) Waste must be segregated into separate bins and clearly marked for each waste type. General waste shall be stored separately from hazardous waste. d) Hazardous waste shall be stored in a bunded weatherproof area. e) Staff must be trained in waste segregation. f) General waste that is not reused or recycled can only be disposed of at a registered landfill and must be removed regularly. g) Hazardous waste shall be disposed of at a hazardous waste disposal site and proof of disposal shall be kept on site. h) Should any asbestos waste material be discovered on site, rehabilitation of the site should be conducted in consultation with the National Department of Labour and in accordance with the Asbestos Regulations, as amended. i) Certificates/ receipts of safe disposal for general, hazardous and recycled waste must be maintained. j) Ensure daily collection, clean-ups and removal of refuse, litter and other pollutants from the area, especially from intertidal areas. k) Sufficient, covered waste collection bins (scavenger and weatherproof) must be provided. l) Waste containers and bins will be emptied on a regular basis and must not be allowed to become overfull. m) A suitably positioned and clearly demarcated waste collection site must be identified and provided. n) Overburden/spoil shall be disposed of at a registered landfill or at spoil areas authorised by the ECO. o) In the event that the volume of spoil generated for disposal outside of a registered landfill site is greater than the thresholds stipulated within GNR 921, (National Environmental Management: Waste Act (Act 59 of 2008) List of Waste Management Activities that have, or are likely to have a detrimental effect on the environment, of 29 November 2013), as amended, the ECO shall be notified that a Waste License will need to be applied for. No spoiling shall occur until the waste license has been obtained. p) All sewage shall be removed to the municipal wastewater treatment works; and proof of each disposal shall be retained and submitted to the ECO. q) Littering and intentional disposal or dumping of waste materials, concrete or mortar or any other substance into the terrestrial or marine environment is prohibited. r) No on-site burying, dumping or burning of any waste materials, vegetation, litter or refuse shall occur.	Developer/ Contractor/ Contractors EO/ ECO	Throughout Construction Phase

6.16 HAZARDOUS SUBSTANCE AND SPILL MANAGEMENT

Impact management outcome: Preserve the receiving environment, well-being of staff and local communities through appropriate hazardous substance storage, handling, disposal and pollution prevention.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) This must be implemented as per the method statements in Section 3.2. b) Prevention measures must be applied as far as reasonably possible to prevent the discharge or spillage of any hazardous substance or any pollutants into the environment or any water resource, whether intentional or accidental. c) All hazardous substances/ chemicals will be stored in suitable containers which are clearly marked to indicate contents, quantities and safety requirements. d) These must be stored in well-ventilated secondary (impermeable) containers/ storage areas which shall be locked at all times. Inventory will be controlled by means of an inventory checklist. e) All storage areas will be bunded and must have bunds capable of 110% of the volume of the container to contain leaks. f) Any water that collects in a bund must not be allowed to stand; must be removed within one day; and must be taken off site to a disposal site approved by the developer. g) An Alphabetical Hazardous Chemical Substance (HCS) control sheet will be drawn up and kept up to date on a continuous basis. h) All hazardous chemicals that will be used on site will have MSDS. i) All employees working with HCS will be trained in the safe use of the substance and according to the safety data sheet. Employees handling hazardous substances / materials must be aware of the potential impacts and follow appropriate safety measures. Appropriate personal protective equipment must be made available. j) Substances used shall be the least environmentally harmful chemical available for the undertaking of specific duties/requirements. k) Safety signs shall inter alia be depicted. These signs shall conform to the requirements of SANS 1186-1 and are to be prominently displayed in and around the storage area. Signage containing clearly displayed emergency contact numbers shall be provided. l) No unauthorised access into the hazardous substances storage areas shall be permitted. m) All vehicles and plant must be properly maintained to prevent leaking of oils, diesel, fuel or hydraulic fluids. n) Vehicles and plant shall not be parked in the intertidal zone. o) No leaking vehicles are permitted on site. p) The Contractor must ensure that diesel and other liquid fuel, oil and hydraulic fluid is stored in appropriate storage tanks or in bowzers.	Contractor / Contractors EO/ ECO	Throughout Construction Phase

Impact management outcome: Preserve the receiving environment, well-being of staff and local communities through appropriate hazardous substance storage, handling, disposal and pollution prevention.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
q) Fuel tanks, pumps and all equipment using oil, diesel, etc. must have adequate spill protection such as bunds and drip trays. r) The tanks/ bowsters must be situated on a smooth impermeable surface (concrete) with a permanent bund. The impermeable lining must extend to the crest of the bund and the volume inside the bund must be 130% of the total capacity of all the storage tanks/ bowsters (110% statutory requirement plus an allowance for rainfall). The floor of the bund must be sloped, draining to an oil separator. s) Where refuelling away from the dedicated refuelling station is required, a mobile refuelling unit must be used. Appropriate ground protection such as drip trays must be used. t) All hazardous substance storage areas shall be equipped with fire-fighting equipment and spill kits appropriate for the type and volume of the substance and the scale of the activity/s involving the use of hazardous substance. u) The responsible operator must have the required training to make use of the spill kit in emergency situations. v) Spillages that occur within the development footprint must be cleaned up immediately. w) In the event of a spill the items used must be replaced immediately. x) In the event of a spill, contaminated soil must be collected in containers and stored in a central location and disposed of according to the National Environmental Management: Waste Act 59 of 2008.		

6.17 FIRE MANAGEMENT

Impact management outcome: Prevent and control fires to the extent that public health; safety; property and environmental protection are assured.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Develop and implement management plan (as per method statement in 3.2). b) The Contractor shall assign the position of Fire Officer to one of its senior staff members who shall be competent and adequately trained to fulfil the position of Fire Officer. c) The Fire Officer shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedures to be followed. The Fire Officer shall be responsible for contacting emergency services for assistance. d) Annual review, updating and approval of the fire management response plan before onset of fire season. e) Smoking shall only be permitted in designated smoking areas where the fire hazard could be regarded as insignificant; and the disposal of cigarette butts into the surrounding environment are not be permitted. f) No on-site burning of any waste materials, vegetation, litter or refuse shall be permitted. g) Suitable fire-fighting equipment/ fire extinguishers shall be stored in close proximity of flammable chemicals/ products and where hot work will be performed and must be available at all times. h) Fire extinguishers shall be checked on a monthly basis to ensure they have not been used/exceeded their yearly service intervals and must be checked prior to the commencement of the fire season. i) Grass and other vegetation in the vicinity of infrastructure shall be cut at regular intervals to reduce fuel load and fire hazards j) No fires may be lit on site. k) Any fires that occur shall be reported to the EO, Contractor and Developer immediately. l) The relevant local FPA must be made aware of a fire as soon as it starts.	Contractor/ Contractors EO/ ECO/ Fire officer	Throughout Construction Phase

6.18 BATCHING PLANTS

Impact management outcome: Prevention of pollution of soil, surface water, marine environment and groundwater through properly managed batching plant operations.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Bagged cement must be stored in an appropriate facility and at least 10 m away from any water courses, water resources, gullies and drains. b) A washout facility must be provided for washing of concrete associated equipment. Excess concrete and wash water shall be disposed of at ECOs approved locality. c) Sand and aggregates containing cement must be kept damp to prevent the generation of dust. d) Any excess sand, stone and cement must be removed or reused from site on completion of construction period and disposed at a registered disposal facility. e) Concrete shall be mixed in appropriate structures that are impermeable (such as on boards and/or within a bunded area) to prevent the contamination of the surrounding environment, soil and groundwater. Plastic sheets and the bare ground shall not to be used for mixing purposes. No mixing of concrete and no hazardous substances allowed in the intertidal zone.	Contractor/ Contractors EO/ ECO/	Throughout Construction Phase

6.19 SANITATION

Impact management outcome: Ensure clean and well-maintained toilet/ sanitation facilities are available to all staff in an effort to minimise the risk of disease and impact on the environment.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Mobile chemical toilets are installed onsite if no other ablution facilities are available. b) The use of ablution facilities and or mobile toilets must be used at all times and no indiscriminate use of the veld / public spaces for the purposes of ablutions must be permitted under any circumstances. c) Where mobile chemical toilets are required, the following must be ensured: i. Toilets are secured to the ground to prevent them from toppling due to wind or any other cause; ii. No spillage occurs when the toilets are cleaned or emptied and the contents are managed in accordance with the EMP;; iii. Toilets have an external closing mechanism and are closed and secured from the outside when not in use to prevent toilet paper from being blown out; iv. Toilets are emptied before long weekends and workers holidays, and must be locked after working hours; v. Toilets are serviced regularly and the ECO must inspect toilets to ensure compliance to health standards; vi. A copy of the waste disposal certificates must be maintained.	Contractor/ Contractors EO/ Health and Safety Officer	Throughout Construction Phase

6.20 WORKSHOP, EQUIPMENT MAINTENANCE AND STORAGE

Impact management outcome: Prevention of environmental risks through proper workshop, equipment maintenance, and storage practices.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Develop and implement management plan (as per method statement in 3.2). b) Routine inspection and maintenance of equipment must be done c) Where possible and practical all maintenance of vehicles and equipment must take place in the workshop area. d) During servicing of vehicles or equipment, especially where emergency repairs are effected outside the workshop area, a suitable drip tray must be used to prevent spills onto the soil. e) Leaking equipment must be repaired immediately or be removed from site to facilitate repair. f) The workshop area must have a bunded concrete slab that is sloped to facilitate runoff into a collection sump or suitable oil/ water separator where maintenance work on vehicles and equipment can be performed;	Contractor/ Contractors EO	As and when required

6.21 CONSTRUCTION TRAFFIC MANAGEMENT

Impact management outcome: Minimise excessive/ additional road traffic to ensure public health and safety.		
Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Develop and implement management plan (as per method statement in Section 3.2). b) Movement of all vehicles and plant, including that of suppliers, shall be so routed and operated as to minimise disruption to regular users of the routes not on the Site and to not cause an undue concentration of traffic. c) All relevant laws must be complied with. d) Where road safety may be impacted on, the Contractor shall notify the relevant roads authority and arrange for the necessary road warning signage and appoint trained points men to control traffic around any hazards. e) Where access to properties needs to be closed, alternative access for the duration of the closure shall be provided. The Contractor shall notify affected parties 48 hours before closure. f) Flagmen shall be deployed at partial road closures and other traffic disruptions to ensure the safety of the public. g) All vehicles shall remain on designated routes. h) Any accidents or incidents shall be recorded, and the ECO notified immediately. Investigation into the causes must be done.	Contractor/ Contractors EO/ ECO/ Developer	Throughout Construction Phase (as and when required)

6.22 REHABILITATION

Impact management outcome: Reinstatement of impacted areas to an extent that commercial, recreational and environmental protection are assured and no environmental degradation occurs as a result of development.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Develop and implement management plan (as per method statement in 3.2) to rehabilitate construction and other areas disturbed during construction. b) Rehabilitate the disturbed area near the marine environment immediately following construction by removing all artificial materials not related to permanent fixtures. c) After construction has ceased, the site shall be cleared of equipment and any other materials emanating from the works.	Contractor/ Contractors EO	Post Construction Phase

7 OPERATIONAL ENVIRONMENTAL MANAGEMENT MEASURES

7.1 OVERVIEW

The following section outlines the management outcomes and actions that must be implemented during the operational phase to manage and mitigate potential impacts. As the development is expected to generate fewer impacts, the number of receptors, outcomes, and actions is also reduced. However, if any additions or modifications to the development are required, such as further construction or alterations, the construction-phase receptors and associated Management Outcomes and Actions as listed in Section 6 above should be applied in full.

The holder of the EA and the Contractor are reminded that their compliance with Sections 5, 6 and 7 will be subject to monitoring and auditing, which must be carried out in accordance with Sections 3.9 and 3.10, and using the information and guidance provided in Section 2 and Section 3.

7.2 MANAGEMENT OF SOCIO-ECONOMIC ASPECTS

Impact management outcome: Maximise positive and minimise negative socio-economic impacts associated with the development by prioritising local employment and procurement, supporting skills development, and promoting opportunities for local businesses and inclusive hiring.

Recommended/Best Practice Optimisation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Promote local procurement and prioritise the employment of local labour, where feasible. b) Where practical, encourage partnerships with local businesses, tourism operators and cultural or event initiatives. c) Where feasible, promote workforce development programmes. d) Promote local procurement and prioritise the employment of local labour. e) Where practical, support subcontracting opportunities for local SMMEs. f) Where possible, promote inclusive hiring practices. g) Where feasible, maximise local employment opportunities. h) Where practical, support opportunities for local SMMEs. i) Where possible, promote the participation of women, youth, and historically disadvantaged groups. j) Where feasible, prioritise recruitment of residents from surrounding communities. k) Where practical, prioritise lighting, safety, and inclusivity in the design of the park space.	Contractor/ Developer	Throughout Operational Phase Local Employment Policy to be considered prior to Operation

7.3 WATER, STORM WATER, WASTEWATER AND RUN-OFF MANAGEMENT

Impact management outcome: Minimise runoff of water, storm water, soil, and silt into the marine and surrounding environment to protect water quality and reduce nuisance or safety risks to adjacent users, businesses, and areas.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Storm water and run-off must be managed using best practice and measures indicated below to improve storm water management systems, to reduce the amount of litter, debris, topsoil, run-off, contaminants and/ or sewage entering the marine systems. a) All reasonable measures will be taken to limit erosion and sedimentation within the development footprint due to the presence of the development and associated infrastructure, including the use of stabilisation techniques, silt fences, anti-erosion measures, etc, especially in areas at risk of erosion/runoff. b) Monitor area for erosion regularly, especially post rainfall and repair any damage where erosion and/or sedimentation has occurred. c) Exposed areas shall be stabilised within one week of their exposure. d) Must further follow the requirements as outlined in Section 6.14, where and if applicable.	Developer	As and when required throughout Operational Phase

7.4 WASTE MANAGEMENT

Impact management outcome: Implement waste hierarchy principles to ensure waste generation is reduced; reuse and recycling is promoted; all waste streams receive responsible treatment; safe disposal is assured; and pollution is prevented.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) A Solid & Liquid waste management plan shall be developed and implemented as per Section 3.2. b) Waste management must follow the requirements of Section 6.15, applied only where relevant to the operational phase.	Developer	As and when required throughout Operational Phase

7.5 HAZARDOUS SUBSTANCE AND SPILL MANAGEMENT

Impact management outcome: Prevent spillages and pollution of hazardous substances to preserve the receiving environment, well-being of staff and local communities through implementing appropriate mitigation measures.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) This must be implemented as per the method statements in Section 3.2. b) Hazardous Substance and Spill Management must follow the requirements of Section 6.16, applied only where relevant to the operational phase.	Developer	Throughout Operational Phase

7.6 FIRE MANAGEMENT

Impact management outcome: Prevent and control fires to the extent that public health; safety; property and environmental protection are assured.

Essential Management Actions/Mitigation Measures	Person responsible for Implementation	Timeframe of Implementation
a) Fire Management must follow the requirements of Section 6, applied only where relevant to the operational phase.	Developer / Fire officer	Throughout Operational Phase

8 DECLARATION

The proponent or applicant or holder of EA affirms that they will abide and comply with the prescribed impact management outcomes and actions as stipulated in Section 5, Section 5.5 and Section 7 of this EMPr and have the understanding that the impact management outcomes and actions are legally binding.

Signature of Proponent/applicant/ holder of EA

Date:

The Contractor affirms that they will abide and comply with the prescribed impact management outcomes and actions as stipulated in Section 5, Section 5.5 and Section 7 of this EMPr and have the understanding that the impact management outcomes and actions are legally binding.

Signature of Contractor

Date:

9 APPENDICES

9.1 APPENDIX I CV OF EAP

CURRICULUM VITAE

CHERUSCHA SWART

DATE OF BIRTH: 3 November 1988

NATIONALITY: South African

ACADEMIC QUALIFICATIONS

- MSc (Cum Laude) Zoology, Stellenbosch University, 2015 – 2017
- BSc (Hons) Biodiversity and Ecology, Stellenbosch University, 2013
- BSc Biodiversity and Ecology, Stellenbosch University, 2010 – 2012

SCIENTIFIC REGISTRATIONS:

- EAPASA – Environmental Assessment Practitioner: Number 2021/3298
- SACNASP – Pr.Sci.Nat. Environmental Science: 155305
- IAIAsa – Member: Membership number 7398

OTHER TRAINING

- Environmental Impact Assessments Training Course, Cape Town, 2024 & 2025. Business Success Solutions in association with Janice Tooley Attorneys. Accredited with SACNASP and EAPASA.
- Practical Implementation of Environmental Auditing and Monitoring Training Course, Cape Town, 2024. Business Success Solutions in association with Umhlaba Environmental Consulting. Accredited with SACNASP and EAPASA.
- Environmental Legal Compliance, Auditing and Monitoring Training Course, Cape Town, 2023. Business Success Solutions in association with Janice Tooley Attorneys. Accredited with SACNASP and EAPASA.
- Environmental Impact Assessment Law Event Course, Cape Town, 2020. Business Success Solutions in association with Janice Tooley Attorneys. Accredited with SACNASP.
- First Aid Level 1.

COUNTRY EXPERIENCE: South Africa

LANGUAGE PROFICIENCY: English (Excellent), Afrikaans (Excellent)

POSTAL ADDRESS: 8 Steenberg House, Silverwood Close, Tokai 7945

PHONE: +27-21-701 3420

E-MAIL: cher@anchorenvironmental.co.za

EMPLOYMENT HISTORY:

2022–Present — Senior Consultant & Head Environmental Assessment Practitioner in Environmental Impact Assessment Department: Anchor Environmental
2019–2022 — Consultant and Environmental Assessment Practitioner: Anchor Environmental
2018 – 2019 — Junior Consultant and Taxonomist: Anchor Environmental
2014 – 2017 — Assistant Research Consultant: Stellenbosch University
2014 – 2015 — Research Intern: National Research Foundation

SUMMARY PROFILE

Cheruscha holds a Master of Science (MSc) in Zoology, as well as an Honours (BSc Hons) and Bachelor of Science (BSc) degree in Biodiversity and Ecology from Stellenbosch University. She is a Registered Environmental Assessment Practitioner (EAP) with 12 years of research and consulting experience. At Anchor Environmental Consultants, she serves as a Senior Consultant and Head Environmental Assessment Practitioner (EAP), leading multiple projects. Her expertise includes Environmental Impact Assessments (EIAs), applications for prospecting rights, management plan development, environmental compliance monitoring, baseline and monitoring surveys, and specialist impact assessments, all undertaken across marine, coastal, and terrestrial environments. In addition, she has specialist expertise in marine invertebrate taxonomy and rocky shore surveys. Her project portfolio spans a wide range of sectors, including land-based and offshore prospecting, offshore mining, agriculture, land- and sea-based aquaculture, solar desalination, residential and commercial developments, conservation surveys for protected areas, and long-term monitoring of bays and ports along the South African coast. Cheruscha is the author of three peer-reviewed scientific publications and numerous scientific reports, with additional projects and publications currently in preparation.

SELECT PROJECT EXPERIENCE

Period	Country	Clients	Project, Tasks
2026	South Africa	Greenvolts Pty (Ltd)	Terrestrial animal species compliance statement: A terrestrial animal species compliance statement was conducted for a solar PV development in Saldanha.
2026	South Africa	Trans Atlantic Diamonds	Environmental Assessment Practitioner Reapplication process: Basic Assessment Process and application for prospecting rights in the offshore sea concession area 11C, Western Cape
2026	South Africa	Denith Engineering (Pty) Ltd	Environmental Assessment Practitioner Applicability Checklist for the Proposed Crane Installation at the Royale Cape Yacht Club, Erf RE/10256, Cape Town
2025	South Africa	Gansbaai Marine (Pty) Ltd	Marine Field Scientist Marine Rocky Shore Survey to fulfil the requirements of Gansbaai Marine's Coastal Waters Discharge Permit, Western Cape.
2025	South Africa	Enviro-EAP	Independent Reviewer Peer review of the terrestrial animal species assessment for a proposed development in Riversdal, Western Cape
2025	South Africa	CK Rumboll & Partners	Terrestrial Biodiversity/ Animal Specialist; Principal Reviewer Terrestrial animal species compliance statement as part of an EIA for phase 2 of a low-cost housing development in Darling

Period	Country	Clients	Project, Tasks
2025	South Africa	Enviro-EAP	Independent Reviewer Peer review and amendments of terrestrial animal species assessment for the proposed development in Yzerfontein, Western Cape
2025	South Africa	Kovaks Investments 172 (Pty) Ltd	Terrestrial Biodiversity/ Animal Specialist; Principal Reviewer Terrestrial Biodiversity Assessment for the Proposed Residential Housing Development, near Rooipan Salt Pans, Yzerfontein, Western Cape.
2025	South Africa	Kovaks Investments 172 (Pty) Ltd	Terrestrial Biodiversity/ Animal Specialist; Principal Reviewer Terrestrial Animal Species Assessment for the Proposed Residential Housing Development, near Rooipan Salt Pans, Yzerfontein, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Impact Assessment for the Mixed-Use Development, Yzerfontein, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Impact Assessment for the Proposed Residential Development, St Helena Bay, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Compliance Statement for the Proposed Citrusdal Housing Development, Citrusdal, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Compliance Statement for a new dam, Clanwilliam District, Western Cape.
2025	South Africa	ATKV Sake (RF) Pty Ltd t/a ATKV Hartenbos	Terrestrial and Animal Specialist; Principal Reviewer Terrestrial Biodiversity, Plant and Animal Compliance Statement for the Proposed Dune Stabilisation at the ATKV, Hartenbos, Western Cape Province.
2025	South Africa	Overstrand Local Municipality	Specialist and Principal Reviewer Invasive Alien Plant Species Monitoring, Control and Eradication Plan for the Onrus Catchment, Western Cape Province.
2025	South Africa	Breede Valley Municipality (Western Cape)	Terrestrial and Animal Specialist; Principal Reviewer Animal Species Specialist Assessment for the Proposed Integrated Residential Development at Touwsrivier, Western Cape Province
2025	South Africa	Breede Valley Municipality	Terrestrial and Animal Specialist; Principal Reviewer

Period	Country	Clients	Project, Tasks
			Terrestrial Biodiversity Compliance Statement for the Proposed Integrated Residential Development at Touwsrivier, Western Cape Province
2025	South Africa	Breede Valley Municipality	Terrestrial and Animal Specialist; Principal Reviewer Site Sensitivity Verification (SSV) and Report for Terrestrial Biodiversity and Animal and Plant Species for the Proposed Integrated Residential Development at Touwsrivier, Western Cape Province
2025	South Africa	Private Client	Environmental Assessment Practitioner; Terrestrial and Animal Specialist Site Sensitivity Verification (SSV) and Report for the Proposed Solar-Power Desalination Plant Jacobsbaai & Saldanha Area, Western Cape.
2025	South Africa	V&A Waterfront	Environmental Assessment Practitioner; Project Manager Basic Assessment Process for a Mixed Use Development at the V&A Waterfront, Cape Town, Western Cape
2025	Namibia	Namwaste (Pty) Ltd	Animal Specialist Invertebrate Specialist Study for the Proposed Namwaste Management Facility, Arandis, Namibia
2025	South Africa	De Beers Marine (Pty) Ltd	External Environmental Auditor; Environmental Assessment Practitioner External Environmental Compliance Audit for prospecting right NC12189 PR in South African Sea Area 6C — Phase 2 Auditing the compliance of prospecting activities, during January 2022, with the conditions and management measures stipulated in the associated Environmental Authorisation and Environmental Management Programme.
2024	South Africa	De Beers Marine (Pty) Ltd	External Environmental Auditor External Environmental Compliance Audit for prospecting right NC12189 PR in South African Sea Area 6C — Phase 1 Auditing the compliance of prospecting activities, during the period 15 April 2021 to 31 December 2021, with the conditions and management measures stipulated in the associated Environmental Authorisation and Environmental Management Programme.
2024-2026	South Africa	Overstrand Local Municipality	Environmental Assessment Practitioner Estuarine Maintenance Management Plan (MMP) for the proposed dredging and future maintenance of the Onrus Estuary—Onrus Catchment to Coast (C2C) Programme

Period	Country	Clients	Project, Tasks
2024- 2026	South Africa	Sunwater East London	Environmental Assessment Practitioner; Project Manager Scoping & Environmental Impact Assessment (EIA) for the proposed Solar Powered Desalination Plant in the Port of East London for Transnet National Ports Authority
2024/ 2025	South Africa	Department of Forestry, Fisheries and the Environment: Oceans and Coasts	Project Manager; Stakeholder Engagement Specialist Development of management plans for the South-East Atlantic and South-West Indian Seamounts Marine Protected Areas
2024	South Africa	Prism Environmental Management Services on behalf of property owner	Marine, Terrestrial and Animal Specialist Coastal Impact Assessment for the Proposed Property Development on two Erven in Wilderness, Western Cape.
2024	South Africa	Port Nolloth Sea Farms Ranching (Pty) Ltd	Environmental Assessment Practitioner Amendment of the Environmental Authorisation for the Port Nolloth Sea Farms ranching abalone holding and processing facility, south of Kleinsee.
2023	South Africa	Gansbaai Marine (Pty) Ltd	Marine Field Scientist Marine Impact Assessment to fulfil the requirements of Gansbaai Marine's Coastal Waters Discharge Permit
2023	South Africa	St Helena Bay Water Quality Trust	Report Editor and Reviewer The State of St Helena Bay: annual environmental monitoring and reporting campaign
2019 – present (ongoing)	South Africa	Saldanha Bay Water Quality Forum Trust	Marine Field Scientist; Co-author; Report Editor The State of Saldanha Bay and Langebaan Lagoon: Annual Monitoring and reporting campaign
2023/24	South Africa	GIZ	Co-author; Environment Legislation Section Green infrastructure options for improved waterway and catchment management for the City of Cape Town.
2023	South Africa	Impact Water Solutions and GIZ	Co-author; Environment Assessment Practitioner GIZ Green Hydrogen Desalination ESIA Scoping Study to provide strategic information on the technoeconomic, legal, environmental, and social applicability of desalination plants as water source for green hydrogen projects in South Africa.
2023	South Africa	Doug Jeffrey Environmental Consultants	Marine and Coastal Specialist

Period	Country	Clients	Project, Tasks
			Marine Specialist Study for the Residential Development in Oude Kraal, Camps Bay: Site Sensitivity and Constraints Report
2023	South Africa	African Tuna	Specialist and Lead Author Feasibility study for the commercial harvesting of periwinkles and limpets on the west coast of South Africa
2023	Angola	SHELTER (on behalf of Eni Angola)	Specialist and Co-author Preparation of a Terrestrial and Coastal Biodiversity Action Plan (BAP) as part of the Angola Northern Gas Complex Onshore Plant Project
2022/2023	South Africa	Matzikama Kaolin	Environmental Assessment Practitioner; Project Manager; Stakeholder Engagement Specialist Scoping Assessment as part of an application for prospecting rights: Prospecting of kaolin in the Western Cape
2022/2023	South Africa	Xwena Kaolin	Environmental Assessment Practitioner; Project Manager; Stakeholder Engagement Specialist Scoping Assessment as part of an application for prospecting rights: Prospecting of kaolin and silica in the Western Cape
2022 – present (ongoing)	South Africa	I&J Danger Point	Environmental Assessment Practitioner; Stakeholder Engagement Specialist Abalone ranging right application & Risk Assessment
2022 – present (ongoing)	South Africa	Drylands Farms	Terrestrial and Animal Specialist; Environmental Assessment Practitioner Terrestrial Baseline Survey as part of prefeasibility for a proposed agricultural development on a mine in the Northern Cape of South Africa
2018 – present (ongoing)	South Africa	De Beers Marine Namibia	Taxonomist; Environmental Scientist; Co-author De Beers Marine Namibia Environmental Monitoring Programme in the Atlantic 1 Mining License Area: Annual Benthic Sampling Campaign
2021/2022	South Africa	SANEK Liquidators	Environmental Site Officer (ESO) Stonehurst mountain Estate Phase 4 Development — Compliance Monitoring
2021/2022	South Africa	SRK Consulting	Marine Specialist Marine Impact Assessment for the increase in manganese handling capacity at the Multi-Purpose Terminal, Port of Saldanha, Saldanha Bay, South Africa
2021/2022	South Africa	Trans Atlantic Diamonds	Environmental Assessment Practitioner Basic Assessment Process and application for prospecting rights in an offshore sea concession 10B in the Northern Cape

Period	Country	Clients	Project, Tasks
			Basic Assessment Process and application for prospecting rights in an offshore sea concession 7C in the Northern Cape Basic Assessment Process and application for prospecting rights in the offshore sea concession area 14C, Western Cape Basic Assessment Process and application for prospecting rights in the offshore sea concession area 11C, Western Cape Basic Assessment Process and application for prospecting rights in the inshore sea concession area 14A, Western Cape
2021	South Africa	Nomalungelo Faku	Specialist and Lead Author Feasibility study for a pearl farm in the greater Nelson Mandela metropolitan area
2021	South Africa	Cliff Path Action Group	Marine Specialist Marine Environmental Impact Assessment for the Proposed Pedestrian Path to Connect the two Parts of the Hermanus Cliff Path via Poole's Bay
2018 – 2021	South Africa	Mhlathuze Water	Lab Technician and Scientist Mhlathuze Water Environmental Monitoring Programme for the Richards Bay Offshore Outfalls Region
2019/2020	South Africa	Planet Capital and Cape Nordic Corporation	Environmental Assessment Practitioner Support; Stakeholder Engagement Specialist Basic Assessment Process for the Proposed Land-based Aquaculture Facility near Elands Bay on the West Coast of South Africa
2020	South Africa	Planet Capital and Cape Nordic Corporation	Animal Specialist; Field Scientist Proposed Land-based Aquaculture Facility near Elands Bay – Bat Specialist Impact Survey and Assessment
2020	South Africa	CSIR Coastal Systems Research Group	Taxonomist CSIR Coastal Systems Research Group: Identification of benthic invertebrate macrofauna.
2020	South Africa	Department of Environmental Affairs and Development Planning	Field Scientist; Stakeholder Engagement Specialist Berg Estuary Valuation Study: Value of The Berg Estuary and Importance of Management Interventions
2019	South Africa	Department of Agriculture, Forestry & Fisheries	Environmental Assessment Practitioner Support; Stakeholder Engagement Specialist Basic Assessment Process for the Proposed Sea-Based Aquaculture Development Zone in Algoa Bay, Eastern Cape

Period	Country	Clients	Project, Tasks
2019	South Africa	Doring Bay Abalone	Co-Author Draft Environmental & Risk Assessment for an Application for a Right to Engage in an Abalone Ranching Pilot Project
2019	South Africa	Mozal Alumium Smelter	Taxonomist; Co-Author Estuarine Specialist Report for the Mozal Matola River Pipeline, Mozambique: Estuarine Impact Assessment

PUBLICATION RECORD

SWART C AND ROBINSON TB (2019) Horizon scanning for alien predatory crabs: insights from South Africa. *African Journal of Marine Science* 41(2): 125 – 135, DOI: 10.2989/1814232X.2019.1588782

SWART C, VISSER V AND ROBINSON TB (2018) Patterns and traits associated with invasions by predatory marine crabs. *NeoBiota* 39: 79 – 102. <https://doi.org/10.3897/neobiota.39.22002>

ROBINSON TB AND **SWART C** (2015) Distribution and impact of the alien anemone *Sagartia ornata* in the West Coast National Park. *Koedoe* 57 (1): DOI: 10.4102/koedoe.v57i1.1246

SEDICK S, CLARK B, GIHWALA K, **SWART C** (In prep.) The description of a new species of *Nereis* (Annelida, Nereididae) from the shallow waters of southern Namibia.

GIHWALA K, BICCARD A, CLARK B, **SWART C**, MAKHOSONKE A, STEFFANI N, ROOS L (In prep.). Anthropogenic disturbance and subsequent recovery of benthic habitats and associated macrofaunal communities in southern Africa.]

THESIS

SWART C (2017) An assessment of invasive predatory marine crabs and the threat they pose along the South African coastline. MSc Thesis, Stellenbosch University, 154 pp.

CONFERENCES

2014 Poster Presentation: “Distribution and impact of the alien anemone *Sagartia ornata* in the West Coast National Park”. South African Marine Science Symposium, Stellenbosch University, Stellenbosch, 15 – 18 July 2014

2015 Poster Presentation: National Research Foundation Research Day, Feb 2014; Second Prize

2017 Oral Presentation: “Horizon scanning for intertidal predatory crab invaders: South Africa as a case study”. South African Marine Science Symposium, Nelson Mandela University, Port Elizabeth, 4 – 7 July 2017

**Environmental Assessment
Practitioners Association
of South Africa**



Registration No. 2021/3298

Herewith certifies that

CHERUSCHA SWART

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



9.2 APPENDIX 2 SENSITIVITY MAPS

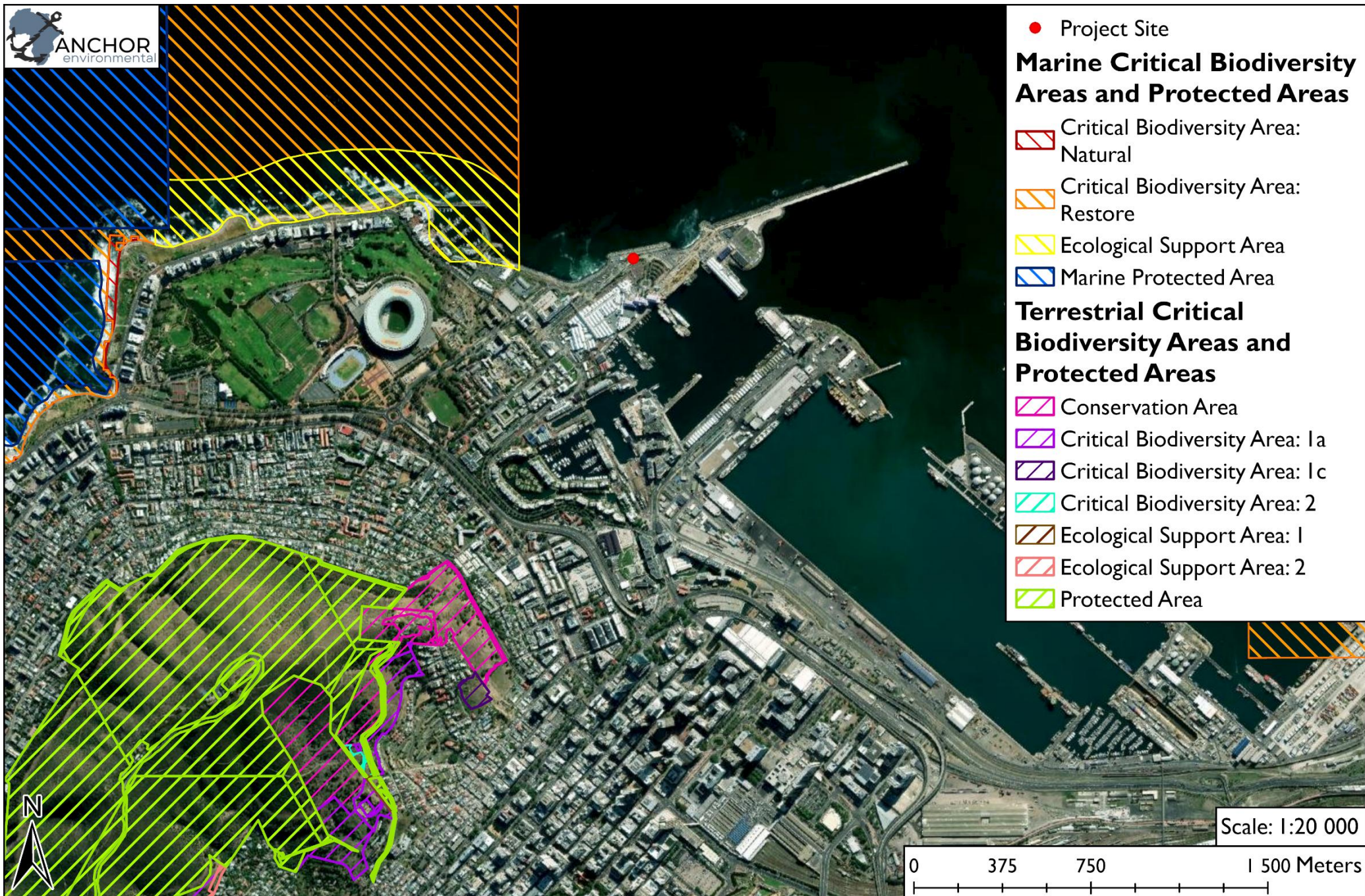


Figure 1. Marine, Terrestrial, and Aquatic Critical Biodiversity Areas (CBAs) in the area (Harris *et al.*, 2022; City of Cape Town, 2023).

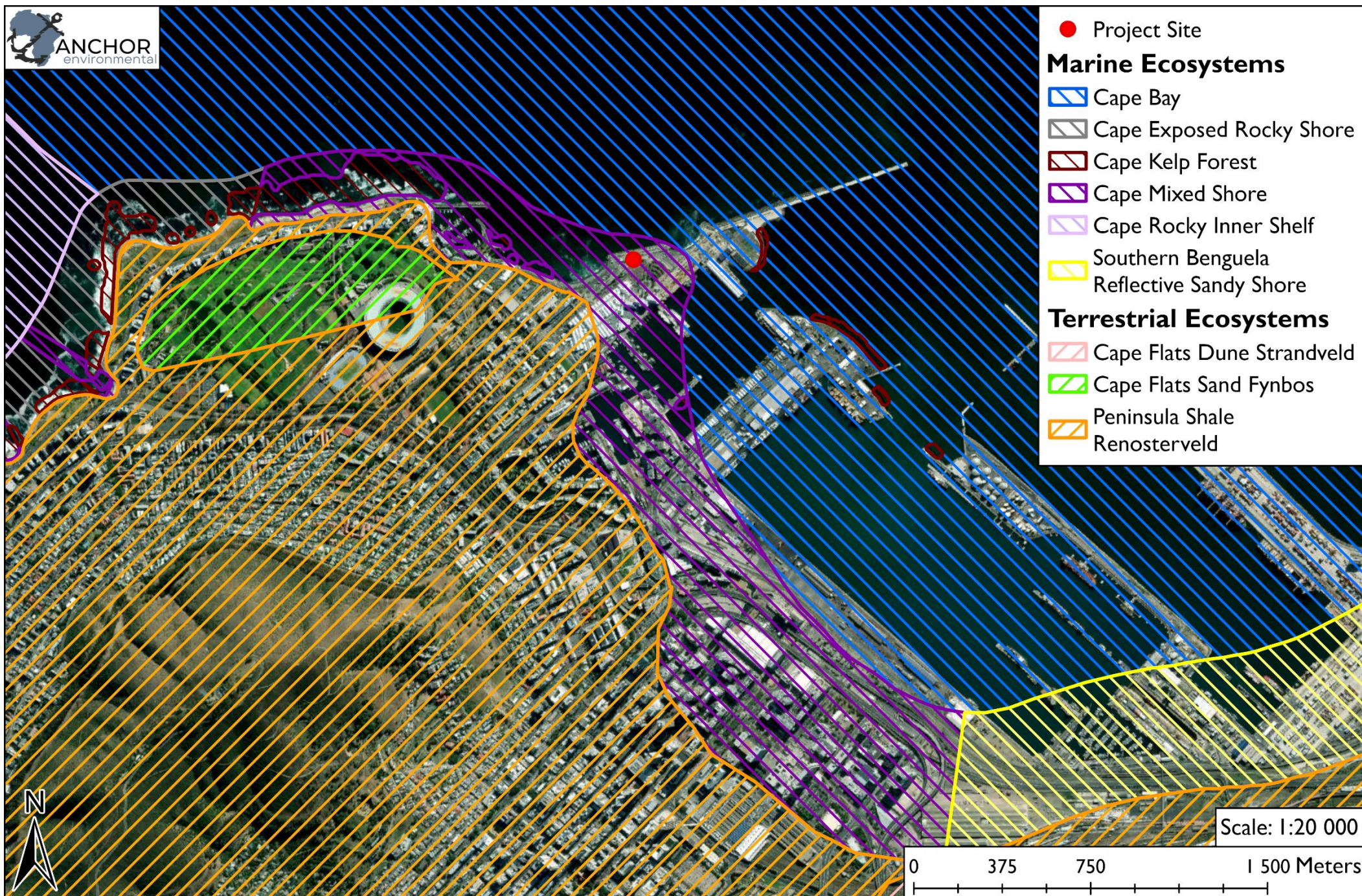


Figure 2. Marine and Terrestrial Ecosystem types within the area as per the 2018 NBA (Sink et al. 2019; Skowno et al. 2019).



Figure 3. Marine and Terrestrial Threat Status of the area as per the 2018 NBA (Sink et al., 2019; Skowno et al., 2019).



Figure 4. Delineated Key Biodiversity Areas within the area (South African KBA NCG, 2024).



Figure 5. Location of the proposed development in relation to freshwater and estuarine features, including National Freshwater Ecosystem Priority Area (NFEPA) rivers and wetlands (Nel *et al.*, 2011), the Estuarine Functional Zone (EFZ) (Van Niekerk *et al.*, 2019), and wetlands delineated in the National Wetlands Map Version 5 (Van Deventer *et al.*, 2018).

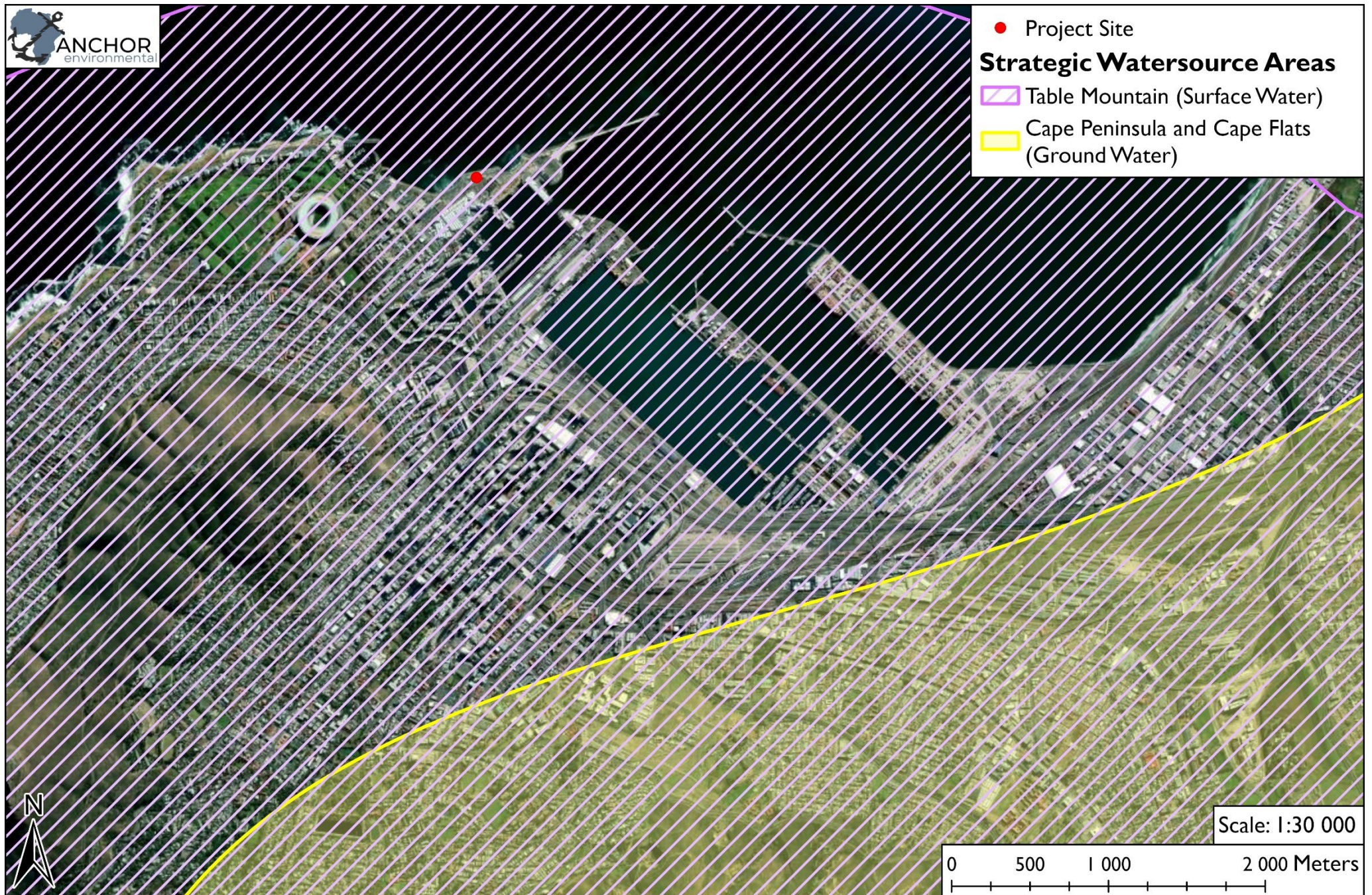
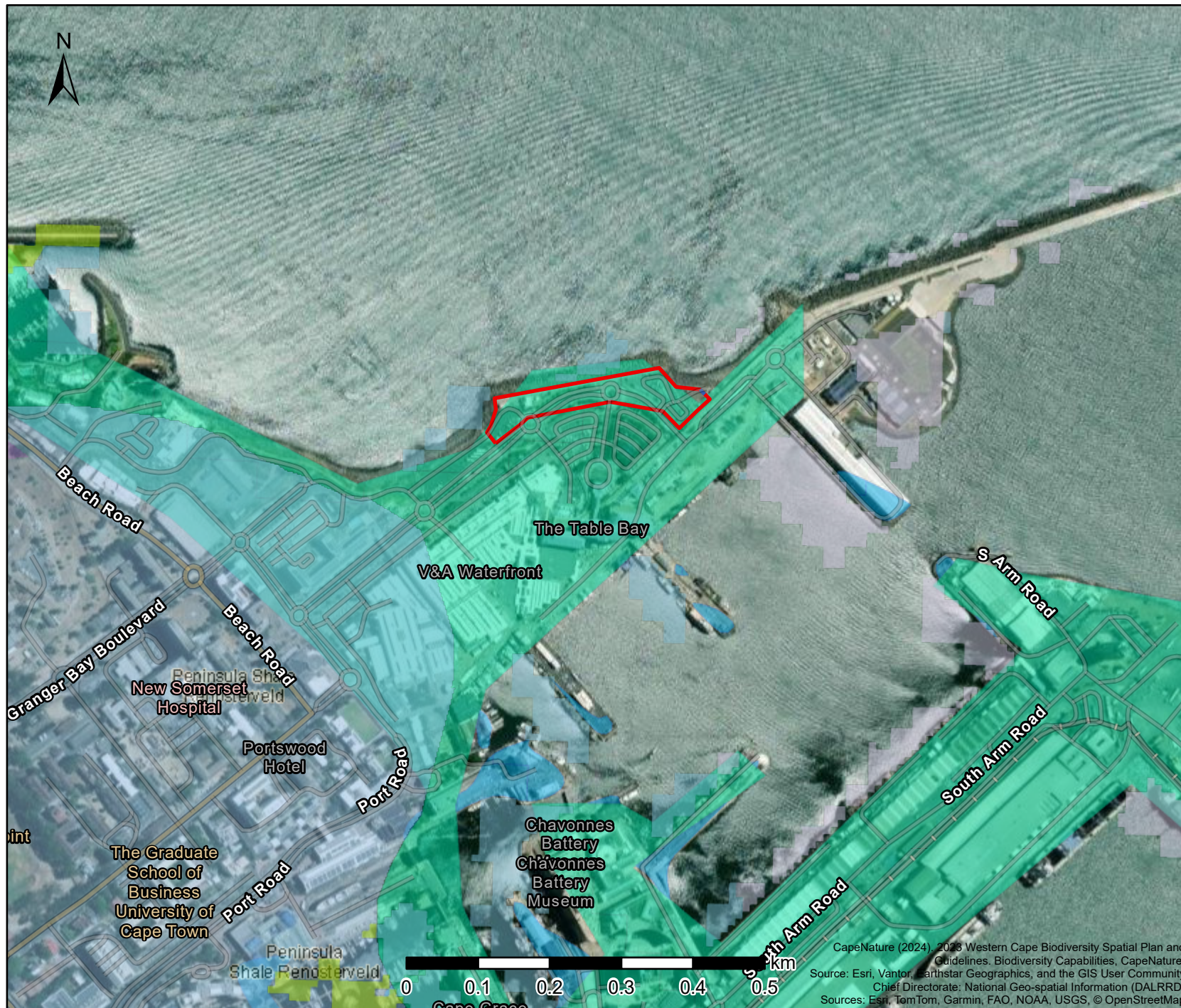


Figure 6. Strategic Water Source Areas National Freshwater Ecosystem Priority Areas in the area. The site falls within the Table Mountain Surface Water SWSA (Le Maitre *et al.*, 2018).

Biodiversity Overlay Map



Legend

Ecological Support Areas

ESA 1: Aquatic

ESA 1: Terrestrial

Critical Biodiversity Areas

CBA: Terrestrial

VEGMAP 2018

FFd 5 Cape Flats Sand Fynbos

FRs 10 Peninsula Shale
Renosterveld

Wetlands (NFEPA)

Estuaries

Natural

Map Center: Lon: 18°25'20.7"E
Lat: 33°54'9.5"S

Scale: 1:9,028

Date created: 2026/09/01



Western Cape
Government
FOR YOU

CapeNature (2024). 2023 Western Cape Biodiversity Spatial Plan and Guidelines. Biodiversity Capabilities, CapeNature.
Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community
Chief Directorate: National Geo-spatial Information (DALRRD)
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap

9.3 APPENDIX 3 COORDINATES FOR THE DEVELOPMENT AND ALL ASSOCIATED COMPONENTS

Site Midpoint (Centroid) Coordinates				
M.P.	Latitude (S)	33°	54'	4.702814"
	Longitude (E)	18°	25'	20.406481"
Site Perimeter Coordinates				
A	Latitude (S)	33°	54'	4.531434"
	Longitude (E)	18°	25'	15.081713"
B	Latitude (S)	33°	54'	6.068238"
	Longitude (E)	18°	25'	14.669153"
C	Latitude (S)	33°	54'	6.567931"
	Longitude (E)	18°	25'	15.147313"
D	Latitude (S)	33°	54'	4.696532"
	Longitude (E)	18°	25'	21.371783"
E	Latitude (S)	33°	54'	5.118031"
	Longitude (E)	18°	25'	24.223711"
F	Latitude (S)	33°	54'	5.888367"
	Longitude (E)	18°	25'	25.114694"
G	Latitude (S)	33°	54'	4.579307"
	Longitude (E)	18°	25'	26.771971"
H	Latitude (S)	33°	54'	4.142876"
	Longitude (E)	18°	25'	26.246146"
I	Latitude (S)	33°	54'	4.020089"
	Longitude (E)	18°	25'	24.945836"
J	Latitude (S)	33°	54'	3.163382"
	Longitude (E)	18°	25'	24.028795"

9.4 APPENDIX 4 METHOD STATEMENT METHODOLOGY GUIDELINE

Overview

This section serves as a guideline on how method statements should be drafted. Section 5, Section 5.5 and Section 7 outline the management actions and desired outcomes for the various aspects of the project (e.g., noise, fire, heritage management, etc) and should be used to guide the preparation and drafting of the method statements.

To ensure that everyone can understand the method statements, they must be written in plain English. Consequently, a well-considered and well-written method statement that offers precise and succinct work plans can save a great deal of time and money and possibly even avert incidents and accidents.

The method statement needs to be development- and site-specific. Method statements that replicate information from specifications, other documents, or the EMPr are not acceptable because they don't show the person in charge of document approval that the contractor understands exactly what's expected of them.

The ECO will conduct an audit of the method statements' implementation. As a result, the method statements must include enough information and specifics to reassure the ECO that the works will be carried out correctly and that any potential incidents or accidents will be controlled.

Purpose

The purpose of the method statement is to:

- Outline the safe manner in which the task / activity is to be undertaken;
- Provide induction material for all undertaking the task / activity to understand;
- Meet legal requirements – hazard identification and control;
- Provide a programme against work, material, time, staff and anticipated problems are to be managed; and,
- Act as a tool in quality assurance.

The Method Statement shall cover applicable details with regard to:

- procedures;
 - materials and equipment to be used;
 - getting the equipment to and from site;
 - how the equipment/ material will be moved while on site;
 - how and where material will be stored;
 - the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur;
 - Waste management system that will be implemented;
 - timing and location of activities;
 - compliance/ non-compliance with the EMPr;
 - In the case of for example the search and rescue of animals, a step-by-step explanation of how it will be done, equipment used, people to be consulted, contacted to assist, etc; and
-

- any other information deemed necessary by the ECO.

Scope

A method statement describes the scope of the intended task / activity in an easy-to-understand step – by – step manner. This is especially crucial to lessen the possibility of misunderstandings and ambiguity among the staff members who will be putting it into practice.

The method statement should clearly indicate:

- What — a brief concise description of the task / activity to be undertaken;
- Who — a brief concise description of the personnel involved with undertaking the task or activity;
- When — a brief concise description of the sequence of actions with due commencement and completion dates of the task / activity to be undertaken;
- Where — a brief concise description and map / drawing of the locality of the task / activity to be undertaken;
- Why — a brief concise description of the importance and requirement of the task / activity to be undertaken; and,
- How — a brief concise description of the methods to be implemented, materials and equipment to be used for the task / activity.

Minimum Requirements

The method statement should as a minimum address the following:

- Description
 - Provide a brief and concise description of the work to be undertaken;
 - Personnel Qualifications and Experience;
 - List all the details of qualifications and experience required for the completion of the task; and
 - Experience may cover previous work done in the area that may not require certificates or licences.
 - Personnel, Duties and Responsibilities
 - Give details of the duties and specific responsibilities of supervisors and other personnel. For example, describe such things as daily toolbox talks and guidance provided by the Environmental Officer;
 - Training required to complete work; and
 - Make sure that all workers and their supervisors are trained in the procedures needed to complete the job safely and in an environmentally responsible way, especially when undertaking tasks for the first time or where new or changed work methods are utilised.
-

- Programme
 - Provide a clear and concise programme indicating all phases and time frames associated with the task.
 - Sequence and method
 - Indicate all steps associated with task at hand. This shall be done in a manner which is easily understandable and leaves no uncertainties to staff that are required to implement the task in the field.
 - Possible Hazards
 - Include all possible hazards such as: Hazardous substances, explosives, dust, etc ; Hazards to others in area ; and Rubbish, electrical, fills.
 - Resources/Plant/Equipment
 - List resources, plant and equipment that you will use on the job, e.g. ladders, scaffold etc.
 - Environmental
 - Indicate environmental management responsibilities;
 - Provide aspects and impacts associated with the activity;
 - Provide environmental guidelines; and
 - Specify employee training and involvement.
 - Waste management and reduction;
 - Buildings, machinery, soil;
 - Residual materials and waste;
 - Atmospheric emissions, noise and odour pollution;
 - Wastewater;
 - Accidents and accident prevention; and
 - Transport.
 - Health and Safety
 - List all safety controls such as MSDS;
 - Warning Signs;
 - Personal protective equipment;
 - Storage of materials and equipment;
 - Fellow workers/public safety provisions; and Housekeeping
-

9.5 APPENDIX 5 ASPECTS, IMPACTS AND RISK ASSESSMENT REGISTER

To be completed prior to construction

10 ANNEXURES

10.1 ANNEXURE A: ENVIRONMENTAL AUTHORISATION

10.2 ANNEXURE B: APPROVED SITE LAYOUT

10.3 ANNEXURE C: APPROVED METHOD STATEMENTS

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PART OF

