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ENVIRONMENTAL MANAGEMENT PROGRAM

FORMALISED PEDESTRIAN PATH CONNECTING TO THE HERMANUS CLIFF PATH VIA POOLE'S BAY IN HERMANUS

JULY 2023

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Ecosense CC**

**Prepared for:
Cliff Path Action Group**

IMPORTANT NOTE REGARDING THE STRUCTURE OF THIS EMPr DOCUMENT:

This EMPr has been divided into a number of Sections, as indicated below:

Section 1	Introduction	Provides background information regarding the site, the proposed project and the EMPr.
Section 2	Implementation of the EMPr	Provides details regarding the implementation of the EMPr.
Section 3	Planning Phase Requirements	Provides environmental requirements for the pre-construction planning and design phase of the project.
Section 4	Construction (development) Phase Management Plan (CEMP) and CEMP appendices	Provides environmental management procedures to be implemented just prior to and during the construction phase of the project. This is incorporated into a Construction Phase Environmental Management Plan (CEMP) and which can be used as a stand-alone module/document to be incorporated into construction contract documentation.
Section 5	Post development (Operational) Phase Management Plan (OEMP) and OEMP Appendices	Provides environmental management requirements to be implemented during the post development (operational) phase of the project. Should be read with the Maintenance Management Plan (MMP).
Section 6	Maintenance Management Plan (MMP)	Since the operational phase of the development would consist solely of maintenance activities and would be located below the HWM of the sea, the specifications as set out in Section 6.4 for the (to be) adopted maintenance Management Plan, as a requirement of the Regulations must be implemented for the operational phase of this development
Section 7:	Decommissioning phase requirements	Provides environmental requirements for the decommissioning phase of the project (if applicable).
Section 8:	References	References other professional's documents used to source information and background to this EMPr.
	EMPr Appendices	Appendices general to the EMPr (excluding Appendices to the CEMP and OEMP documents)

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Appendix 2	<i>Environmental Authorisation (once issued)</i>
Appendix 3	<i>Curriculum Vitae of EAP</i>

EMPR CONTENT CROSS REFERENCE

The EIA Regulations prescribe the required content in an Environmental Management Programme (as per Appendix 4 of GN 982, as amended). These requirements and the sections of this document where it is contained are set out below:

Content of an Environmental Management Programme (EMPr)	Section Reference
1. An EMPr must comply with section 24N of the Act and include:	
(a) details of: (i) the EAP who prepared the EMPr; and (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;	<ul style="list-style-type: none"> • Section 1.4. • EMPr Appendix 3.
(b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	<ul style="list-style-type: none"> • Section 1.1. • Section 1.2.
(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 any areas that should be avoided, including buffers;	<ul style="list-style-type: none"> • EMPr Appendix 1 • CEMP Appendix 1 • MMP Appendix 3
(d) a description of the impact management objectives, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including:	
(i) planning and design;	<ul style="list-style-type: none"> • Section 3.
(ii) pre-construction activities;	<ul style="list-style-type: none"> • N/A
(iii) construction activities;	<ul style="list-style-type: none"> • Section 4 • Section 1.3, Table 1
(iv) rehabilitation of the environment after construction and where applicable post closure; and	<ul style="list-style-type: none"> • Section 6.4.
(v) where relevant, operation activities;	<ul style="list-style-type: none"> • Section 6.4. • Section 1.3, Table 2
(e) a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);	<ul style="list-style-type: none"> • Section 4.12 • Section 5.9
(f) a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (d) and (e) will be achieved, and must, where applicable, include actions to:	
(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;	<ul style="list-style-type: none"> • Section 4.11 • Section 6.4.
(ii) comply with any prescribed environmental management standards or practices;	<ul style="list-style-type: none"> • Table 3 • Section 4.11. • Section 6.4.
(iii) comply with any provisions of the Act regarding closure, where	<ul style="list-style-type: none"> • N/A

applicable; and	
(iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;	<ul style="list-style-type: none"> • N/A
(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	<ul style="list-style-type: none"> • Section 2.5. • Section 4.2.1.4 • Section 4.6. • Section 4.11. • Section 5.5.
(h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	<ul style="list-style-type: none"> • Section 4.2.2.1. • Sections 4.11.17. • Section 5.5.
(i) an indication of the persons who will be responsible for the implementation of the impact management actions;	<ul style="list-style-type: none"> • Section 4.2.1. • Section 4.11. • Section 5.2. • Section 5.5.
(j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;	<ul style="list-style-type: none"> • Section 4.2 • Section 4.11 • Section 6.4
(k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	<ul style="list-style-type: none"> • Section 2.5. • Section 4.2. • Section 4.6. • Section 5.3. • Section 5.5.
(l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;	<ul style="list-style-type: none"> • Section 2.5. • Section 4.2.2. • Section 4.6. • Section 4.9. • Section 5.3. • Section 5.5. • Section 5.6 • Section 5.7.
(m) an environmental awareness plan describing the manner in which:	
(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and	<ul style="list-style-type: none"> • Section 4.2.3. • CEMP Appendix 2
(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and	<ul style="list-style-type: none"> • Section 4.2.3. • CEMP Appendix 2
(n) any specific information that may be required by the competent authority.	<ul style="list-style-type: none"> • MMP Section 6

1. INTRODUCTION

1.1. BACKGROUND

Ecosense has been appointed by Cliff Path Action Group to compile an Environmental Management Programme (EMPr) dealing with environmental management of a formalised pedestrian path to connect to the existing Hermanus Cliff Path via Poole's Bay.

The path is to be built just below the high-watermark (HWM) in Poole's Bay, with an appearance similar to the existing Hermanus Cliff path appearance. The path would accommodate the landscape through elevated, flat and stepped sections, and the design would allow sea water to flow back and under the path. Elevated sections with balustrades (where required) would facilitate movement across these areas (tidal pool, Baleen cliffs, Bayview pool, Bayview scramble). Boardwalks are proposed for traversing the wetland below Erf 12257 before the tidal pool and another small wetland below Erf 1249 by the pebble beach.

Most of the path would be built with concrete, finished with a rough aggregate, to encourage staining and seaweed/mussel shell growth.

Figure 1 includes landmarks in the area for reference. A Site Layout Plan showing the various level, stepped and elevated sections, is included in EMPr Appendix 1.

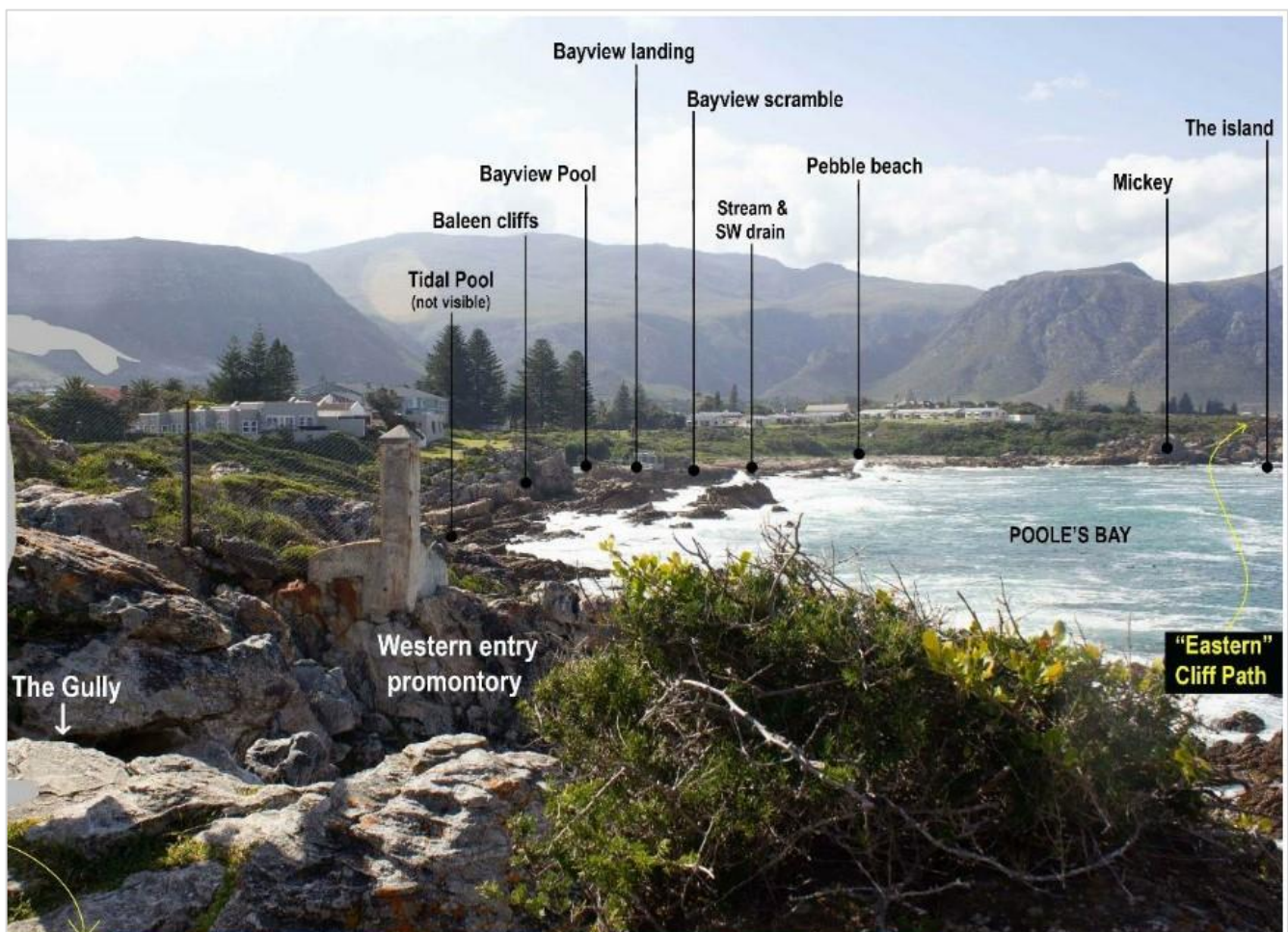


Figure 1: Most prominent landmarks along the proposed path

The EMPr is a requirement as part of the basic assessment process followed for application for Environmental Authorisation and meets the specific content requirements for EMPr's as described in Appendix 4 of the 2014 EIA Regulations (GN. No R982). As required, the document deals with applicable design, construction, operational and decommissioning phase aspects of the project, which will require management to maintain or improve the quality of the natural and man-made environment, as well as activities on site, which may have potentially negative impacts on the surrounding environment.

This EMPr includes a Maintenance Management Plan (MMP) for any potential future remedial or maintenance activities on site as it is located below the HWM on the seashore, which constitute listed activity 19A of GN 983, as amended, in terms of NEMA EIA Regulations, which is to be agreed to by the DEA&DP. The path also traverses two wetlands, activities within which would constitute listed activity 19 of GN 983, as amended.

The EMPr is intended for use by the Applicant and / or management agency (if applicable), the applicant 's principal agent/s and the appointed contractor/s during construction, during the post development (operational) phase and DEA&DP for all phases of the project.

1.2. THE AFFECTED ENVIRONMENT AND ANTICIPATED ENVIRONMENTAL IMPACTS

1.2.1. Topography and soils

The proposed site is located along the seashore, below the HWM in the area of Poole's Bay, along a stretch of coastline that is largely rocky with several areas best described as cliffs. There is also a single bay where the substrate consists largely of pebbles and the terrain is gentler.

The project involves minimal earthworks and the erosion risk associated with construction is considered very low.

1.2.2. High-watermark

High tide very seldomly extends to the HWM and was observed to be far lower during the field survey for most of the length of the path. The "normal" splash zone (i.e., outside of extreme storm events) was located approximately 5 m below the proposed pathway for most of the length of the path.

1.2.3. Water courses

Two small unmapped wetlands have been identified near the site. Wetland 1 was classified as a channelled valley bottom wetland (which becomes a stream when it reaches the beach), while Wetland 2 was classified as a hillslope seep (locations indicated in CEMP plan).

The use of concrete in the stream channel poses a risk of water quality impairment (uncured concrete in contact with freshwater results in an increase in pH (alkaline conditions). This is toxic for most aquatic organisms when at significant levels and the risk is greatest when wash-downs and slurries enter the water. The impacts of cement rich runoff/spills can be mitigated through use of pre-cast elements being brought to site (as opposed to on-site batching/pouring), containment of the working area and contaminated run-off. This is

addressed in the CEMP. The location of the stream in relation to the sea and the diluting factor during a relatively short construction time, however, will result in negligible impact.

The use of petrochemicals for small portable plant on site could also pose a risk to the stream and stormwater runoff into the sea and management is similarly addressed in the CEMP.

1.2.4. Marine Environment

The marine organisms occurring in this region reflect the prevailing physical conditions and are found to be generally distributed as such. The rocky shoreline provides a resting place for seabirds that frequent the coast, but most of these are widely distributed throughout South Africa. This also includes some seabirds that are of national importance such as the Swift tern (*Thalasseus bergii*), Kelp gull (*Larus dominicanus*), Hartlaub's gull (*Larus hartlaubii*) and the Cape Cormorant (*Phalacrocorax capensis*). Whales can frequently be seen from the shores in Hermanus from July to December.

Marine fauna and flora present in the nearshore environment around Poole's Bay is typical of the region. Anemones, urchins, gastropods and algae are a common sight in the subtidal and rock pools and the lower intertidal zone.

The mid intertidal zone is dominated by the alien Mediterranean mussel, *M. galloprovincialis* (C). This mussel is the most widespread and ecologically important invasive alien species along the South African coast, occupying over 2000 km of coastline (Robinson *et al.* 2005).

The high intertidal zone in most areas is occupied by several species of barnacles and limpets (D), while the splash zone is characterised by large numbers of the southern periwinkle, *Affrolittorina knysnaensis*. As this gastropod is highly tolerant to desiccation, it is commonly found above the intertidal zone.

1.2.5. Flora

The vegetation type that occurs naturally in the site area is Overberg Sandstone Fynbos, which is listed as Critically Endangered on the National list of Ecosystems that are threatened and in need of protection (GN 1002 of 2011) that was published in terms of the National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA).

The area where the connection path is located however falls below the HWM and there is minimal vegetation that would be impacted. The CEMP addresses containment of the work activity impact footprint to prevent/minimize damage to nearby vegetation.

1.2.6. Fauna

The construction project is not anticipated to have significant negative impact on faunal communities in the area of the site. If however, any fauna is found within the work area that is at risk of injury and cannot move off on their own, these will be rescued and relocated as per the provisions of CEMP.

Shore birds (Black Oyster Catcher and White fronted Plover) have been identified as sensitive features and the CEMP and SMMP indicates measures to mitigate impacts during the breeding season, should nests be discovered.

1.2.7. Heritage Resources

No significant negative impact on heritage resources has been identified on the site. Should any shipwreck or other resources be discovered, SAHRA needs to be notified.

1.2.8. Surrounding land uses

The site is surrounded as follows:

- **North:** Private properties and HWM of the sea
- **South:** The sea
- **East & West :** Coastal public property and the existing cliff path

1.3. OBJECTIVES OF THE EMPr

The EMPr aims to achieve the following broad outcomes:

- To provide a structure or framework within which the environmental management requirements will be implemented, audited and reported on, in order to ensure that potential negative impacts on the environment are minimised.
- To set out the mitigation measures and environmental specifications which are required to be implemented during the various phases of the development in order to minimise the extent of environmental impacts, to manage environmental impacts and where possible to improve the condition of the environment.
- To state standards and guidelines that are required to be achieved in terms of environmental legislation and authorization conditions.
- To provide a clear indication of the environmental management requirements of each of the role players involved.

EMPr aims to achieve the following more specific outcomes:

During the Planning and Design phase:

- reduce visual impact in development and post development phase,
- ensure structural integrity in post development phase,
- limit impacts to the wetlands to be traversed during development and post development and maintenance,
- ensure financial back-up for maintenance issues going forward.

During the Construction (development) phase

- Controlled Access and Construction Traffic
- Effective Site Demarcation and adherence to avoidance of No-Go Areas
- Effective management of fuel and plant, even if minimal and not permanently on site
- Appropriate Housekeeping and Waste Management
- Available Emergency Procedures
- Properly managed Concrete and Cement Works
- Properly managed Paints/Hazardous Substances

During the Post Development (operational) phase i.e. the physical presence of the footpath

- Controlled Access when required (e.g storm events or spring high tides)
- Effective Alien Invasive Plant Management

- Effective Waste Management
- Ensuring safety and awareness of path users

During Maintenance

- Continued Infrastructure maintenance
- Effective Site Demarcation and adherence to avoidance of No-Go Areas
- Effective management of fuel and plant
- Appropriate Housekeeping and Waste Management
- Utilisation of Local labour
- Available Emergency Procedures
- Properly managed Concrete and Cement Works
- Properly managed Paints/Hazardous Substances

In order to achieve the above outcomes, the impacts and risks identified through the basic assessment process must be managed through the management actions specified in Section 4.11 and 5.8. The impacts are set out in Table 1 and 2 below.

Table 1: Construction Phase Impact Rating

PLANNING, DESIGN AND DEVELOPMENT (CONSTRUCTION) PHASE	IMPACT	ALTERNATIVE	SIGNIFICANCE	
	1. Structure in the landscape	Alternative 1	Without mitigation	Very Low +
			With mitigation	Very Low +
		Alternative 2	Without mitigation	Very Low +
			With mitigation	Very Low +
	2. Reduced water quality (sedimentation)	Alternative 1	Without mitigation	Low -
			With mitigation	Very low -
		Alternative 2	Without mitigation	Low -
			With mitigation	Very Low -
	3. Alteration of wetland natural flow regime	Alternative 1	Not applicable	N.a.
		Alternative 2	Without mitigation	Very low -
			With mitigation	Very low -
	4. Erosion and sedimentation in wetlands	Alternative 1	Not applicable	N.a.
		Alternative 2	Without mitigation	Low -
			With mitigation	Very low -
	5. Water quality impairment in wetlands	Alternative 1	Not applicable	N.a.
		Alternative 2	Without mitigation	Low -
			With mitigation	Very low -
	6. Wetland water quality impairment	Alternative 1	Not applicable	N.a.
		Alternative 2	Without mitigation	Med -
			With mitigation	Low -
	7. Loss of wetland biota	Alternative 1	Not applicable	N.a.
		Alternative 2	Without mitigation	Low -
			With mitigation	Very low -
	8. Loss of indigenous coastal vegetation and habitat	Alternative 1	Without mitigation	Low -
			With mitigation	Very low -
		Alternative 2	Without mitigation	Low -
			With mitigation	Very Low -
	9. Disturbance / displacement of avifauna, small mammals and macrofaunal invertebrates	Alternative 1	Without mitigation	Low -
			With mitigation	Very low -

		Alternative 2	Without mitigation	Low -
			With mitigation	Very Low -
	10. Waste generation and pollution of marine environment	Alternative 1	Without mitigation	Med -
			With mitigation	Low -
		Alternative 2	Without mitigation	Med -
			With mitigation	Low -
		Beach Clean-ups can result in		Low +
	11. Construction employment opportunities	Alternative 1	Without mitigation	Low-Med +
			With mitigation	Med +
		Alternative 2	Without mitigation	Low-Med +
			With mitigation	Med +
	12. Temporary restriction of access to Poole's Bay shore	Alternative 1	Without mitigation	Low -
			With mitigation	Low -
		Alternative 2	Without mitigation	Low -
			With mitigation	Low -
	13. Loss of archaeological resources	Alternative 1	Without mitigation	Med -
			With mitigation	Low -
		Alternative 2	Without mitigation	Med -
			With mitigation	Low -
	14. Noise (refer also to impact 4)	Alternative 1	Without mitigation	Low -
			With mitigation	Low -
		Alternative 2	Without mitigation	Low -
			With mitigation	Low -
	15. Visual intrusion of construction activities	Alternative 1	Without mitigation	Low -
			With mitigation	Negligible
		Alternative 2	Without mitigation	Low -
			With mitigation	Negligible

Table 2: Operational Phase Impact Rating

POST DEVELOPMENT (OPERATIONAL) PHASE	IMPACT	ALTERNATIVE	SIGNIFICANCE	
	1. Pollution - Litter from path (Note that litter from the sea was also be considered but will not be as a result of the path. Impact of litter from the sea is Med- and after mitigation through beach clean-ups Med-Low-)	Alternative 1	Without mitigation	Low -
			With mitigation	Very low -
		Alternative 2	Without mitigation	Low -
			With mitigation	Very Low -
	2. Disturbance of animals and birds as a result of movement	Alternative 1	Without mitigation	Low -
			With mitigation	Very low -
		Alternative 2	Without mitigation	Low -
			With mitigation	Very Low -
	3. Habitat Fragmentation and animal movement barrier (mainly periwinkle or rock horax)	Alternative 1	Without mitigation	Very low -
			With mitigation	N.a.
		Alternative 2	Without mitigation	Very low -
			With mitigation	N.a.
	4. Disturbance / displacement of avifauna, small mammals and macrofaunal invertebrates	Alternative 1	Without mitigation	Very low -
			With mitigation	N.a.
		Alternative 2	Without mitigation	Very low -
			With mitigation	N.a.
	5. Disturbance of wetland habitat	Alternative 1	Not applicable	N.a.

		Alternative 2	Without mitigation	Med -
			With mitigation	Low -
	6. Alteration of wetland flow regime	Alternative 1	Not applicable	N.a.
		Alternative 2	Without mitigation	Very low -
			With mitigation	No mitigation req
	7. Improved access to coastal resources (incl reduced risk of injury)	Alternative 1	Without mitigation	Med +
			With mitigation	High +
		Alternative 2	Without mitigation	Med +
			With mitigation	High +
	8. Increased security and privacy for the local landowners	Alternative 1	Without mitigation	Low +
			With mitigation	Low +
		Alternative 2	Without mitigation	Low +
			With mitigation	Low +
	9. Employment creation	Alternative 1	Without mitigation	Low-Med +
			With mitigation	Med +
		Alternative 2	Without mitigation	Low-Med +
			With mitigation	Med +
	10. Visual impact of the development	Alternative 1	Without mitigation	Negligible
			With mitigation	Negligible
		Alternative 2	Without mitigation	Low neutral- +
			With mitigation	Negligible
	11. Visual impact of pedestrians using the newly erected cliff path	Alternative 1	Without mitigation	Low neutral-+
			With mitigation	Low neutral-+
		Alternative 2	Without mitigation	Low neutral-+
			With mitigation	Low neutral-+
	12. Noise from maintenance activities	Alternative 1	Without mitigation	Low -
			With mitigation	Low -
		Alternative 2	Without mitigation	Low -
			With mitigation	Low -

1.4. EMPr AUTHOR

Kozette Myburgh, who facilitated the Basic Assessment process for this development, holds a Masters (LLM) Degree in Environmental Law (University of Cape Town); MPhil in Community and Development (University of Stellenbosch); BA majoring in Anthropology and African Politics (UNISA). She has more than 15 years' experience in environmental impact assessment and management and is registered with EAPASA (registration no 2019/1346). See CV in EMPr Appendix 2.

1.5. INTERPRETATIONS

For the purposes of this EMPr the following general acronyms and definitions shall apply:

Applicant (Developer)	Cliff Path Action Group (NPO)
BAR	Basic Assessment Report

EA	Environmental Authorisation – issued by DEA&DP
CEMP	Construction phase Environmental Management Plan
DEA&DP	Department of Environmental Affairs and Development Planning
HWM	High-Water Mark (of the sea)
MMP	Maintenance Management Plan
OEMP	Operational Phase Environmental Management Plan
Environment	The aggregate of surrounding objects, conditions and influences that influence the life and habits of man or any other organism or collection of organisms.
Environmental Management Plan	Environmental Management Plans forming part of the overarching Environmental Management Program (EMPr), namely the Construction Phase Environmental Management Plan (CEMP), and the Operational Phase Environmental Management Plan (OEMP)
Structure	Means any man-made feature affixed to the ground or attached to something located on the ground, including but not limited to fences, walls, berms, levees, fill, storage tanks, shelters or buildings.

2. IMPLEMENTATION OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

This EMPr document describes mitigation measures in detail, identifying specific people or organisations to undertake specific tasks, in order to ensure that impacts on the environment are minimised during the various phases of the development.

As the organisational structure and role players are different for each of the four principal phases of the project, this will be detailed under the respective sections/management plans (sections 3,4,5 and 6) of this EMPr dealing with each of these.

2.1. LEGAL STATUS

By virtue of the fact that this document has been compiled as part of the application towards gaining an Environmental Authorisation for the project by DEA&DP, there exists a legal obligation for the specifications of this EMPr to be complied with, if and once the Environmental Authorisation has been issued. This EMPr includes all relevant documentation contained or referred to within it, along with any amendments or appendices to this document.

2.2. KEY LEGISLATION APPLICABLE TO THE DEVELOPMENT

The following is a list of key laws that are applicable to the project. All relevant approvals and permits, or any other management requirements in terms of this, or any other legislation applicable to the project, as well as any future amendments to such legislation, are to be complied with. It should be noted that this is not a comprehensive list of all legislation that may apply, only those deemed most relevant to this context.

Table 3: Applicable Environmental Legislation

ACT, ORDINANCE, BY-LAW	SECTION	DESCRIPTION	RELEVANCE TO THIS PROJECT
National Environmental Management Act (No 107 of 1998)	S 24 and 24D	List of activities requiring authorisation before commencing	Environmental approvals and conditions are made in terms of this Act (refer to the Environmental Authorisation). If any additional listed activities are planned, or substantive design changes are made, then permission to commence needs to be applied for.
	S 28 (1)	Duty of care responsibilities	Responsible for the duty of care of natural assets and to avoid pollution and environmental degradation.
	S 30	Control of incidents	In the event of a significant spill or leak of hazardous substances (e.g. petrol, diesel, etc.) used during the proposed activities, such an incident(s) must be reported to the relevant authorities, including the Directorate: Pollution and Chemicals Management
National Environmental	Chapter 4 Pt 3 and 5	Regulates waste management in order to protect health and	Calls for reduction, re-use, recycling and recovery of waste, sets out

ACT, ORDINANCE, BY-LAW	SECTION	DESCRIPTION	RELEVANCE TO THIS PROJECT
Management: Waste Act (No 59 of 2008)		the environment.	requirements for storage, collection and transportation of waste.
National Water Act (No 36 of 1998)	S 19	Pollution prevention	Prevent pollution of water sources e.g. via storm water
	S 21 /22	Definition of Water Uses in terms of the Act and sets out permissible water uses and licensing requirements	Altering the bed, banks, course or characteristics of a water course (such as the no-perennial stream crossed by the new path) may constitute a Water Use requiring authorisation by DWS.
National Environment Management: Biodiversity Act (No. 10 of 2004)	Alien & Invasive Species Regulations (<u>2014</u>), National List of Invasive Species (<u>2016</u>), National List of Prohibited Alien Species (<u>2016</u>), National List of Species that are Threatened or Protected, Activities that are Prohibited & Exemption from Restriction (<u>2016</u>)		Alien invasive vegetation as listed must be removed from the project area. Listed threatened plant/animal species shall be protected.
Environment Conservation Act (No 73 of 1989)	Noise Control Regulations for the Province of the Western Cape.		Legislation that governs noise limits
Occupational Health and Safety Act (No 85 of 1993)	All	Primarily aimed at ensuring the health and safety of persons at work, residents and visitors. Specifies the basic systems that need to be in place and measures that need to be taken.	Construction staff and site visitors needs to be protected from health and safety risks on site.
Hazardous Chemical Substances regulations (25 August 1995)	9A(1)	Storage and handling of hazardous chemical substances	Need to ensure the safety of people working with hazardous chemicals (specifically fuels), as well as safe storage, use and disposal of containers.
National Heritage Resources (Act No. 25 of 1999)	S 44(1)	Preservation and protection of heritage resources	Protection of possible heritage resources that may be found on site.

2.3. FINANCING OF ENVIRONMENTAL CONTROL

Financing of environmental control requirements outlined in this document is the responsibility of the Applicant during the construction phase and a managing agency (to be confirmed) during the operational phase, unless where another party has been identified as the responsible party e.g. the contractor in the CEMP. Details are provided under the respective environmental management plans comprising this EMPr.

2.4. REVIEW OF THE EMPr

This document should be seen as a "live" document, with the ability that it may be reviewed and updated with consent of the DEA&DP, should new information become available. This will ensure that it remains relevant to the requirements of the site and the environment.

The environmental management plans (CEMP and OEMP) contained in this EMPr may be reviewed and amended as detailed in each of those plans.

2.5. MONITORING AND AUDITING

The implementation of the environmental management plans (CEMP and OEMP) contained in this EMP must be monitored and externally audited as detailed in each of those plans, to ensure that the management specifications are correctly implemented and that there is proper record keeping and reporting to support this.

3. PLANNING AND DESIGN PHASE REQUIREMENTS

3.1. PROJECT PLANNING REQUIREMENTS

The following requirements must be actioned and considered during the planning phase:

- A Coastal Engineer must sign off on the final design.
- Engineering drawings of the final design must be submitted as part of the Seashore Lease Application.
- Engineering drawings of the final design must be submitted to the Municipality Building Department.
- An agreement must be made between the Municipality and the Applicant where the formalised path traverses Municipal land
- The final design must be submitted to SAHRA for confirmation on permit requirements. If structures older than 60 years will be affected, the required permits under the NHRA must be applied for.
- Final design of boardwalks must be submitted to BGCMA for confirmation on WUA requirements.
- A Five year projected maintenance budget shall be compiled upon finalisation of detailed design. This budget shall be confirmed and revised as necessary after completion of construction and every 3 years after the first maintenance period.
- Public liability insurance must be taken out by the Applicant and proof must be provided to the DEA&DP, Cape Nature, the Municipality and Department of Public Works (if requested by the Department) before construction may commence.
- Construction work must be undertaken as follows to be sensitive to local ecological issues:
 - Intrusive work which could cause loud noise and vibration - February to June
 - Non-intrusive work to be sensitive to whale breeding season, e.g. finishing - July- October
 - No construction during November-January to be sensitive to Black Oyster catcher and White-fronted plover possible breeding.
 - Monthly survey during November-January for nesting sites within 50m radius of pathway footprint.
 - Construction may not commence after January within this area if nests were found until after the birds have left the nesting sites.
 - If practically possible, undertake construction of the boardwalks first during the dry summer season. Once constructed, the boardwalks would allow access to the remaining parts of the path for construction personnel, materials and equipment with minimal impact on wetland habitat.
- Due to the location of the development being below the HWM, construction activities can only be undertaken when tidal conditions allow.
- Limited access to site means that construction work will need to be hand work and equipment (e.g. portable generators/pumps) and material will have to be carried to site and waste materials carried from the site.

- Minimal storage area is available on site – materials will need to be brought in mostly as needed and unused materials and equipment must be removed from site daily.
- Construction companies considered for the project shall be capable, BEE compliant and local (based in the Hermanus/Overstrand municipal region) as far as practically possible, with preference for local labour.
- The project must be commenced with within 3 years of the issue of the Environmental Authorisation by the DEA&DP.

3.2. PROJECT DESIGN REQUIREMENTS

The following requirements must be considered during the design phase:

- Concrete should be used as material of choice as this section of the coast is rather rough and most structures would not be able to withstand the conditions. Where practical and locally available, green concrete alternatives should be used.

Conceptual design

- Long sections of elevated pathway and continuous concrete platforms should be kept to a minimum. Columns should not exceed $\pm 2\text{m}$ in height above footings.
- Keep interventions as close to the ground as possible, to allow natural vegetation to soften the edges and re-establish within the new micro-climates introduced by the proposed structures.
- The proposed walkway should be designed to fit into the surrounding landforms, stepping down as the natural topography steps down.
- The route should avoid visually prominent and exposed areas as far as possible, and new structures must be sited to avoid visually sensitive, steep slopes (greater than 1:4) or elevated promontories, ridgelines, and crests.
- Proposed structures must be designed to blend with the natural setting so that the landscape appears to flow through the site, and structures should not appear to be imposed atop it.
- The scale of structures should be appropriate for their use, and low-key, sloping walkways without balustrades should be favoured over steps and elevated walkways wherever possible.

Colours materials and finishing:

- The colour palette for materiality and finishes must draw on the colouring of the natural environment.
- If natural material such as stone is used, the stone must be locally sourced and match the colouring (and, if possible, the geological origins) of the site and receiving environment.
- Materials and finishes may not consist of bright colours or highly reflective surfaces. The use of exposed metal must be kept to a bare minimum, and any potentially shiny or reflective surfaces must be avoided altogether, or covered with matte, non-reflective finishes.
- Where possible, use rocks and existing landscape features as steps instead of pouring new steps out of concrete.
- Concrete finishes should imitate the local examples (tidal pools, fisherman's bridges etc.) in construction method and mix, allowing the weathering process to blend the structures into the landscape over time. Black aggregate, for example, is not an appropriate material to be included in the cement mix.



- Timber balustrades should be used sparingly. Timber elements should not be stained or varnished darkly but be allowed to weather naturally as far as possible (maintenance allowing).
- Metal modular units (Rectagrid) are acceptable in terms of visual appropriateness, and the project team should consider the possibilities of reducing the size and bulk of the columns and footings where these structures are specified.
- Widening/tapering the bases instead of meeting the footings at right angles;
- Reducing the mass of the column into slimmer or rounded columns (but remain wary of creating a profusion/pattern of columns in the landscape);
- Curving the edges of the columns into an ovate shape to avoid rectilinear surfaces and edges, which are not unprecedented in the receiving environment, but should be softened to imitate the natural weathering of the surrounding sandstone
- Signage should remain visually unobtrusive, located against a backdrop to avoid silhouette effects on the skyline.

- Signs should be fixed to the proposed structures or embedded in the landscape where possible to avoid the proliferation of poles.
- Lighting must be kept to a minimum where necessary for safety and security
- All lighting shall be located and controlled so as to avoid direct illumination, glare or reflection onto any adjoining property or the landscape surrounding the proposed development.
- Provide precisely directed illumination to reduce light "spillage" beyond the immediate surrounds of the light source.
- Low level 'bollard' type lights or limited downlighting on steps and pathways may be appropriate to illuminate key portions of the route for safety and security reasons.
- No post top lighting, flood lights, peripheral/boundary security lights or uncovered luminaires of any kind should be allowed.
- Lighting should preferably be movement activated.

Other aspects

- Access Control mechanisms / infrastructure must be designed to prevent people from entering the area from the two entry points during dangerous conditions (e.g storm events or spring high tides)
- The wetland areas boardwalks design must allow light permeability (30mm between slats) and sufficient height for plants to grow (approximately 600mm). Posts are to be placed 3.5m apart.
- Signage along the path must indicate the following:
 - Interpretative signage, encouraging environmental/conservation awareness
 - Users to remain on the path to avoid trespassing on private property above the HWM or trampling of wetlands at boardwalks.
 - dogs are to be kept on a leash as is required for the remainder of the Hermanus Cliff Path
 - Safety/indemnity notices to make path users aware of safety risks due to terrain and location within the HWM of the sea.
 - No littering

3.3. DEVIATIONS FROM THE APPROVED PROJECT PLANS/CHANGE IN OWNERSHIP

Any significant changes to, or deviations from, the project description set out in the Environmental Authorisation which is based on the environmental Basic Assessment Report (*Ecosense 2022*) submitted, must receive written approval from DEA&DP before such changes may be effected. The Applicant will be responsible for making such application in good time.

DEA&DP shall also be notified within 30 days thereof, of any changes of ownership and/or project applicant / developer. Conditions of authorization and the contents of this EMPr must be made known to the new developer and are binding on the new developer.

4. CONSTRUCTION PHASE MANAGEMENT PLAN (CEMP)

This document is applicable to all Contractors undertaking construction work on the project and must be included in their tender and contract documentation.

4.1. INTERPRETATIONS

For the purposes of this CEMP the following acronyms and definitions shall apply:

CEMP	Construction Phase Environmental Management Plan
DEA&DP	Department of Environmental Affairs and Development Planning
DWS	Department of Water and Sanitation
EA	Environmental Authorisation – issued by DEA&DP
HWM	High-Water Mark (of the sea)
MSDS	Material Safety Data Sheet
SAHRA	South African Heritage Resource Agency - the statutory body responsible for heritage resource management

Applicant (Developer)	Cliff Path Action Group (NPO)
Bund	Enclosure under and around a storage facility to contain any spillage
Batch Plant	Site for the mixing and production of concrete or plaster, and associated equipment and materials
Contractor	<p>The principal persons / company undertaking the construction of the development:</p> <ul style="list-style-type: none"> • The main contractor as engaged by the Applicant; • Nominated sub-contractors • Selected sub-contractors; and • Any other contractor from time to time engaged by the Applicant directly in connection with the construction part of the works.
Environment	The aggregate of surrounding objects, conditions and influences that influence the life and habits of man or any other organism or collection of organisms.
Environmental Management Program	The overarching document that contains the individual environmental management plans for this project, including this Construction Phase Environmental Management Plan (CEMP).
Environmental	The individual or company appointed by the Applicant to ensure the

Control Officer	implementation of the CEMP and suitable environmental management practices on site for the duration of the construction phase of the project.
Licensed Landfill Site	Dumpsite for waste that has been licensed in terms of the National Environmental Management: Waste Act 59 of 2008 or previously under the Environment Conservation Act No 73 of 1989
"No-go" Areas	Areas identified as being environmentally sensitive in some manner and delineated on plan, and on the site with pegs or fencing and which are out of bounds to unauthorised persons. Authorisation must be obtained from the ECO prior to entry.
Principal Agent	Person representing the Applicant or his implementing agent on site and who is responsible for the technical and contractual implementation of the works to be undertaken. This is usually the Engineer, but may be any other person, such as a project manager or architect, authorized by the Applicant to fulfil this role.
Site	The boundary and extent of development works and infrastructure, including any areas off the main site on which works are to be carried out in order to allow the development to proceed successfully.
Structure	Means any man-made feature affixed to the ground or attached to something located on the ground, including but not limited to fences, walls, berms, levees, fill, storage tanks, shelters or buildings.
Stormwater	Water resulting from natural precipitation and/or accumulation and includes rainwater, groundwater and spring water, but excludes water in a water or wastewater reticulation system.
Works	The construction operations and all related and incidental works, such as site works, earthworks, installation of services, construction of buildings, rehabilitation etc., carrying to completion of the development.

4.2. IMPLEMENTATION OF THE CEMP

This CEMP document describes mitigation measures in detail, identifying specific people or organisations to undertake specific tasks, in order to ensure that impacts on the environment are minimised during the construction phase of this project. The CEMP is applicable to all construction works comprising the development of this project, including works outside of the site boundaries that form part of the project works. It is an open-ended document implying that information gained during construction activities and/or monitoring of procedures on site could lead to changes in the CEMP.

The Applicant shall appoint an ECO who will monitor and facilitate compliance with the CEMP and other conditions of approval as they relate to environmental matters.

All identified responsible parties are expected to co-operate closely to minimise or avoid unnecessary environmental impacts.

Non-compliance penalties are described in this CEMP and the CEMP is thus **to be included into the official contract documentation of each of the principal contractors appointed to the project**. The Applicant and Contractor are obliged to inform the ECO immediately of events that have/will cause serious environmental damage or of any breaches of the Environmental Authorisation. The ECO in turn will on behalf of the Applicant immediately inform DEA&DP (within 24 hours) and the Principal Agent of such events and the measures taken to address them.

4.2.1. Responsibilities and Organizational Structure

The key role-players during the construction phase of the development, for the purposes of environmental management on site include, but are not limited to: the Applicant, the Principal Agents for construction work, the Principal Contractor/s (direct appointments by the Applicant), the ECO and representatives of the relevant Authority/ies.

Lines of communication and reporting between the various parties are illustrated in **Figure 2** that follows. Details of the responsibilities of each of the key role-players have been provided in the section that follows.

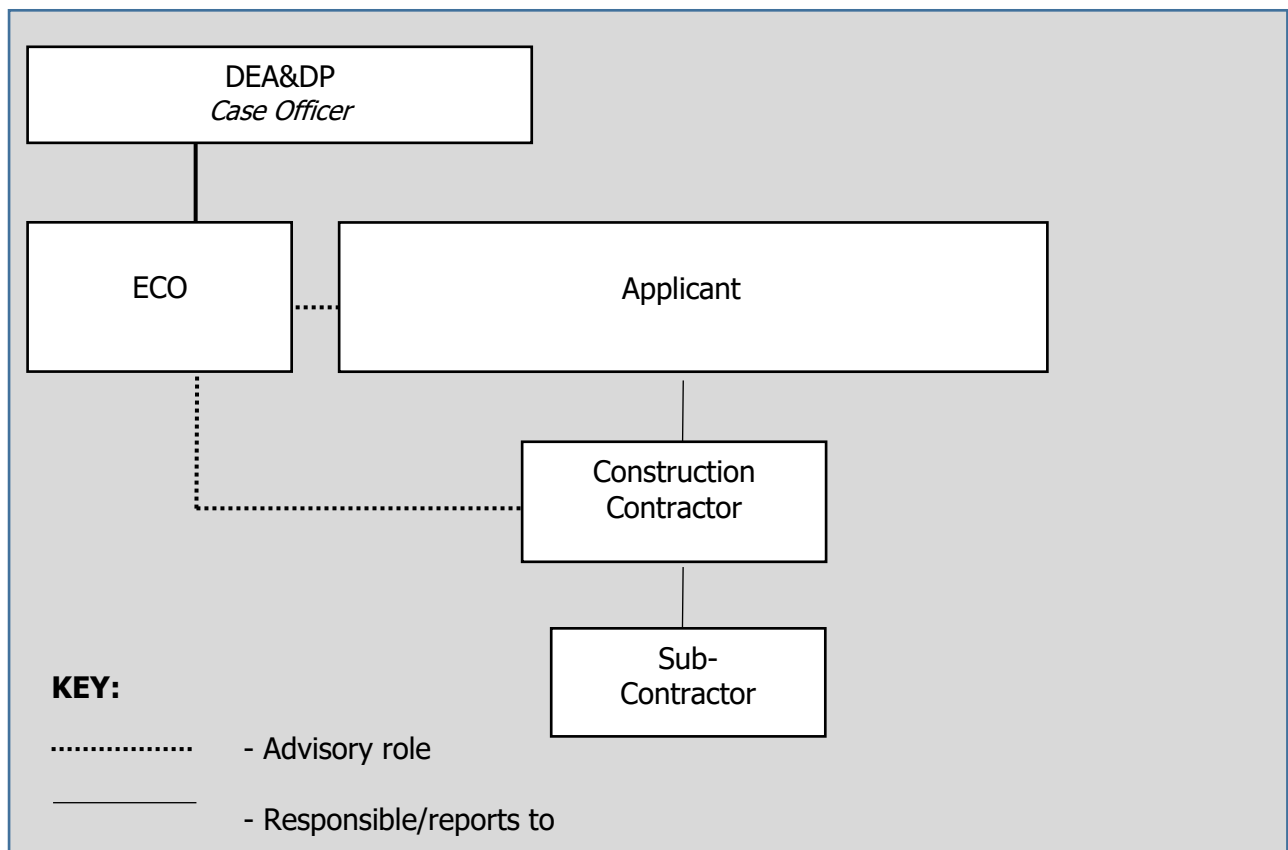


Figure 2: CONSTRUCTION PHASE ORGANISATIONAL STRUCTURE FOR ENVIRONMENTAL MANAGEMENT

4.2.1. 1 The Applicant

The Applicant is ultimately responsible for compliance with all conditions of approval of the development or any aspect thereof by any authority as it relates to his activities on site.

With respect to the construction phase of the Development, the Applicant is to:

- ensure that all relevant approvals and permits have been obtained prior to the start of construction activities on site;
- ensure that the requirements as set out in this CEMP and the Environmental Authorisation issued by DEA&DP and any other conditions of approvals by the relevant Authorities are adhered to and implemented by the Developer and any person on their behalf incl. agents, employees, contractors etc.;
- appoint a suitably qualified (minimum diploma in Natural Sciences) or experienced (minimum 3 years) Environmental Control Officer approved by DEA&DP prior to the start of construction activities on site, and for the duration of the construction phase;
- ensure that DEA&DP is given at least one week's written notice prior to the construction start including name and contact details of proposed ECO (for their approval);
- provide all principal contractors working on the project with a copy of this CEMP as part of tender contract documentation to allow the contractors to cost for its requirements within their respective construction contracts.

4.2.1. 2 The Principal Agent

For the purposes of this document "The Principal Agent" refers to the engineer or any other person such as the project manager, architect etc., authorised by the Applicant, to be responsible for the technical and contractual implementation of the works/part of the works to be undertaken.

The responsibilities of the Principal Agent are to:

- ensure that the requirements as set out in this CEMP and by the relevant Authorities are adhered to and implemented (on the behalf of the Applicant);
- assist the ECO in ensuring that the conditions of the CEMP are being adhered to and promptly issuing instructions requested by the ECO, to the Contractor. All site instructions pertaining to environmental matters issued by the Principal Agent are to be copied to the ECO;
- assist the ECO in making decisions and finding solutions to environmental problems that may arise during the construction phase;
- reviewing and approving construction method statements with input from the ECO;
- ordering the removal of person(s) and/or equipment not complying with the specifications or issuing a stop works order (as required by the ECO or otherwise);
- issuing of penalties for transgressions of environmental site specifications;
- providing input into the review of the CEMP.

4.2.1. 3 The Contractor

For the purposes of this document "The Contractor" refers to any directly appointed (by the Applicant) company or individual undertaking the implementation of the works.

The Contractor is to:

- ensure implementation of all applicable Environmental Management Specifications, including all additional requirements related with approved method statements, during all works on site, failing

which penalties, as outlined in the environmental management specifications may be imposed by the Principal Agent;

- ensure that all of its sub-contractors, employees, suppliers or agents etc. are fully aware of the environmental management requirements detailed in the Environmental Management Specifications;
- liaise closely with the Principal Agent and the ECO and ensure that the works on site are conducted in an environmentally sensitive manner;
- inform the Principal Agent as well as the ECO should environmental issues on site go wrong, e.g. dumping, pollution etc.;
- carry out instructions issued by the Principal Agent, on request of the ECO, required to fulfil his/her compliance with the CEMP.

4.2.1. 4 Environmental Control Officer

The ECO's duties, *inter alia*, must be to facilitate compliance with the CEMP through monitoring and proactive and open communication channels with the project/site management and, when necessary, enforcing the environmental requirements.

The ECO's responsibilities include the following:

- monitoring and verifying that the CEMP and Environmental Authorisation/s issued by DEA&DP is adhered to by inspecting the Site and surrounding areas regularly (minimum fortnightly) during period of active construction with regard to compliance with the CEMP and taking action if the specifications are not followed;
- to environmentally educate and raise the awareness of the Contractor and his staff as to the environmental requirements relating to the Site and to facilitate the spread of the correct attitude during works on Site.
- reviewing and approving construction method statements together with the Principal Agent (if and when required);
- assisting the Contractor in finding environmentally responsible solutions to problems;
- Keeping a register of complaints and report these first to the Principal Agent for action / follow-up;
- recommending the issuing of penalties for transgressions of environmental site specifications to the Principal Agent;
- completing a monthly summary report detailing levels of compliance to be forwarded to the project team and case officer at DEA&DP;
- keeping a photographic record of progress on Site from an environmental perspective;
- undertaking a continual internal review of the CEMP and making recommendations to the Principal Agent.

The ECO has the authority to recommend to the Applicant and DEA&DP that works be stopped, if in his/her opinion serious harm to, or impact on, the environment is imminent, is likely to occur or has occurred and such actual or potential harm or impact is in contravention of this CEMP, and which is, or may be, caused by construction, or related works. This would only take place in urgent / emergency cases, or when there is conflict with the Principal Agent. This is to be reported on and minuted at the project team site meetings.

Upon serious failure by the Contractor or Contractor's employee(s) to show adequate consideration to the environmental aspects of this contract, the ECO may recommend to the Principal Agent and the project management team to have the Contractor's representative or any employee(s) removed from the site or have work suspended until the matter is remedied. No extension of time will be considered in the case of such suspensions and all costs will be borne by the Contractor.

The ECO will be responsible for the compilation of a final closure checklist for the project, completed when all works related to the project as undertaken by the Applicant have been completed and the site has been cleared of all construction related debris, materials and/or equipment not forming part of the permanent works. This, together with a final written report will be submitted to DEA&DP in order to achieve "environmental closure" of the project.

4.2.2. Monitoring and Reporting

4.2.2.1. ECO Inspections and Reporting

The ECO shall inspect the site minimum fortnightly during period of active construction and will maintain on file, site inspection reports that record environmental compliance with the CEMP for record keeping purposes. In addition, the ECO shall take digital photographs during every inspection showing work progress and environmental concerns and keep these on record.

4.2.2.2. Site Memo Entries

Site memos, stipulating recommended actions may be required to improve compliance with the CEMP by the Contractor and will be issued by the ECO to the Principal Agent and the Contractor.

Comments made by the ECO in the Site Memos are advisory and all Site Instructions required for work that has cost implications beyond the agreed scope of contract may only be issued by the Principal Agent. Site Memo's will also be used for the issuing of stop work orders for the purposes of immediately halting any particular activity(ies) of the Contractor deemed to pose immediate and serious risk of unnecessary damage to the environment.

4.2.2.3. Site Meetings

The ECO may attend project site meetings with the principal agent and principal contractor/s during times of active construction on site, to facilitate the transfer of information and to update all parties on the environmental compliance of the project as a whole and record any additional requirements.

Where required, the ECO may call for a site meeting with particular members of the project team to discuss a specific issue on the site. Feedback from such meetings will be given at the project site meetings.

4.2.2.4. Reporting

All significant environmental notes and compliance issues will be summarised in a report with photographs at least monthly by the ECO and submitted to project team and, if requested to do so, the Case Officer at DEA&DP.

4.2.3. Environmental Education Programme

The ECO shall arrange for a presentation to all permanent site staff of the principal contractors to familiarise them with the environmental aspects of the CEMP within 2 weeks of establishment on site. This presentation must take cognisance of the level of education, designation and language preferences of the staff. General site staff would commonly receive a basic environmental awareness presentation / lecture highlighting general environmental "do's and don'ts" and how they relate to the site. Management on site e.g. site agents and foremen, who require more detailed knowledge about the environmental sensitivities on site and the contents and application of the CEMP document

itself will benefit from a separate presentation dealing with these issues. The ECO may call upon the services of a specialist environmental education translator should this be required.

No more than 20 people shall attend each course. The cost shall be the Applicant's responsibility and the venue and logistics for this / these course(s) for the Contractor's responsibility. The ECO shall keep a register of all personnel attending the Environmental Education Program.

The contractor shall further to these present important environmental requirements (per **Appendix 1 of this CEMP**) as part of the compulsory Health and Safety induction meetings presented to all new site staff and sub-contractors that have not attended the ECO's training session.

The ECO reserves the right to present additional dedicated environmental inductions for the duration of the contract for any employees including sub-contractor staff, should such additional lectures be deemed necessary by the ECO i.e. in terms of poor compliance by a certain team, problem aspects or failure of the principal contractor to adequately present lectures.

4.2.4. Method Statements

The Contractor may be required to provide Method Statements prior to work commencing on aspects of the project deemed or identified to be of greater risk to the environment and/or which may not be covered in sufficient detail in the CEMP, when called upon to do so by the Principal Agent or ECO.

A Method Statement describes the scope of the intended work in a step-by-step description in order for the ECO and the Principal Agent to understand the Contractor's intentions. This shall include the timing, location and method and proposed mitigation for the activity contemplated. This will enable them to assist in devising any additional mitigation measures, which would minimise environmental impact during these tasks.

All Method Statements are to be to the satisfaction of the ECO, Principal Agent and where practical and deemed necessary, shall be endorsed as being acceptable by the environmental representative of the Relevant Authority. Signatures on the finalised method statement of the relevant parties shall confirm this. Changes to, and adaptations of, Method Statements can be implemented with the prior consent (and signature) of all parties.

Approved Method Statements shall be readily available on the Site and shall be communicated to all relevant personnel and sub-contractors. The Contractor shall carry out the works in accordance with the approved Method Statement.

4.3. DISPUTE RESOLUTION

Any disputes or disagreements between the Contractor and the Principal Agent shall be resolved as per the relevant dispute resolution clauses contained within the construction contract documentation.

Where any disputes or disagreements arise between the Principal Agent and the ECO, specifically with regard to environmental management on Site and which cannot be resolved, then the matter will be referred to the case officer at DEA&DP for clarification and their decision is binding on all parties.

4.4. CONTRACTUAL CONFLICTS

In the event of any conflict occurring between the environmental management provisions of the CEMP and the project specifications contained within other project documentation, this shall immediately be brought to the attention of the ECO and Principal Agent and resolved in writing for the record.

4.5. ECO APPOINTMENT SUSPENSION

The ECO shall immediately advise the DEA&DP of suspension of the ECO's services for any reason during the course of the construction contract. The Applicant shall provide the DEA&DP with details of an alternative ECO if applicable.

4.6. AUTHORITY INSPECTIONS

Officials from DEA&DP e.g. environmental management inspectors, and other government officials e.g. Department of Labour inspectors, Heritage Western Cape officials etc. shall be given access to the property for the purpose of assessing and/or monitoring compliance with the conditions contained in the Environmental Authorisation, issued permits or legislation, at all reasonable times.

A copy of the Environmental Authorisation must be kept by the Principal Contractor on the construction site at all times and must be produced to any authorised official of DEA&DP who requests to see it and must be made available for inspection by any employee or agent of the Applicant who undertakes work at the property.

4.7. COMMUNITY RELATIONS

The Principal Contractor shall be responsible for responding to third party or public queries and/or complaints relating to construction operations. The Applicant shall be responsible for dissemination of information to the community and the media.

The Contractor shall notify the ECO and the Principal Agent of any complaints lodged. The Contractor shall be responsible for maintaining a Complaints Register to record complaints received and action taken. This register will be made available to the Applicant, ECO, the Principal Agent and the relevant authority.

4.8. PENALTIES

A schedule of penalties for CEMP non-compliance (not necessarily an exclusive list) is included in the CEMP management specifications.

Where the Contractor inflicts damage upon the environment or fails to comply with any of the environmental specifications contained within this CEMP, he may be liable to pay a penalty for breach of the conditions of the environmental specifications which form part of the works contract.

- The Contractor is deemed NOT to have complied with this Specification if:
 - within the boundaries of the site, site extensions and haul / access roads there is evidence of contravention of the Specification;
 - environmental damage ensues due to negligence;
 - the Contractor fails to comply with corrective or other instructions issued by the Principal Agent/ESM within a specific time;
 - the Contractor fails to respond adequately to complaints from the public.

Penalties shall be issued per incident for the Contractor's responsibility at the discretion of the Principal Agent in consultation with the ESM. The amount of the penalty shall be determined by the Principal Agent in consultation with the ESM. Where there are ranges, the penalty amount shall depend on the severity and extent of the damage done to the environment. The Principal Agent shall inform the Contractor of the contravention and the amount of the penalty, and will deduct the amount from monies due under the Contract.

Payment of any penalties in terms of the contract shall not absolve the offender from being liable from prosecution in terms of any law e.g. NEMA 24F.

All monies collected through penalties shall be held by the Applicant and be accounted for. A summary page is to be included with the monthly payment certificates as a record of penalties issued to date. Penalty funds shall be allocated to the Cliff Path Action Group, ring-fenced for maintenance of cliff path, and payment must be confirmed prior to environmental closure being granted for the project.

4.9. REVIEW OF THE CEMP

The project team is to constantly assess the practicality and effectiveness of the CEMP and report any problems and suggested amendments to the ECO. Any substantial changes, updates or upgrades of the CEMP must be approved by the ECO and be sent by the ECO to the DEA&DP case officer for approval.

4.10. NOTIFICATION OF CONSTRUCTION START

One week's notice, in writing, must be given to DEA&DP, before commencement of the *initial* construction activity on the site (thus entrenching the EA within its validity period). This must include confirmation of the appointment of an ECO for the project and their contact details. This must be undertaken by the Applicant or on his behalf by the appointed environmental consultant.

4.11. MANAGEMENT SPECIFICATIONS


The management specifications applicable to the construction phase of the development follow in the Site Construction Environmental Management plan that follows in CEMP Appendix 1 (to be printed in A1 format).


4.12. IMPACT MANAGEMENT OUTCOMES


The mitigation measures as detailed in the annotated CEMP (Site Environmental Management Plan / SEMP) that follows in CEMP Appendix 1 are to ensure that impacts on the environment are minimised during the Construction phase. The outcome of successful implementation and monitoring of these specifications would result in reduced or insignificant impact on the various aspects identified in Table 1 above.


CEMP Appendix: 1


Site Environmental Management Plan


1.  **Access and Construction Traffic**
- Construction work must be carried out by hand or with small portable plant and all machinery and materials will need to be carried onto and off site by hand or wheelbarrow.
 - Construction work is limited to work during accessible tide levels.
 - Access to this site is limited to the existing cliff path (by foot) on either end of the new path section, as accessed via Main Road and Protea Road parking areas. Access via private properties would need to be specifically negotiated between the contractors and the respective property owners.
 - Construction vehicles are not to restrict the access of other road users in the area (public roads and public parking places) e.g. during off loading or due to obstructive parking.
 - Always maintain traffic safety and station flagmen when required. All parking, delivery and access points and routes must be approved by the Principal Agent and the ECO.
 - Appropriately secure transported materials to ensure safe passage between destinations. This includes cleaning running boards of loose debris before vehicles leave site and covering trucks carrying sand with shade cloth/canvas covers to avoid loss en-route.
 - Any lost materials/sand/debris on the surrounding public road network or cliff path because of the contractors' activities shall be cleared immediately. These shall be swept up and removed and not left on the side of the road or path.

2.  **Birds and whales**
- Construction area should be checked for nesting sites within 50m radius during November - January for nesting birds. Construction activities may not commence after January within this area if nests were found until after the birds have left the nesting sites.
 - July-December is whale breeding season. No construction activities that will cause vibrations that could disturb whales may be undertaken during this time.

3.  **Site Demarcation/No-Go Areas**
- All activities must take place below the HWM and the onsite vegetation line must be used as reference for purpose of demarcation.
 - Private properties are considered no-go areas** (unless access has been specifically negotiated and formalized in writing between the contractor and the owner).
 - Contractor to demarcate the landward boundary of the No-Go areas within which work will take place on the day with wire mesh fencing fitted with shade cloth (which must be removed at the end of each day when construction takes place)
 - No staff, materials, equipment, damage or dumping of materials or waste is allowed outside of the agreed work site boundaries (5 meters wide seaward of the structures and approved temporary stockpile areas for deliveries, unless otherwise agreed per an approved Method Statement) except where used to specifically rehabilitate/repair an area off-site.
 - Areas adjacent the boardwalk within the wetland is considered a no-go area.** ECO to demarcate the HWM at each wetland with danger tape or other suitable, non-invasive method (e.g. coloured stakes);
 - If timber boardwalks cannot be constructed first, ensure that any timber hoarding placed to allow construction personnel, materials and equipment access across the wetland areas, are removed on a daily basis;
 - When excavating to insert the upright poles that support the timber boardwalk within the wetland areas, remove topsoil separately and temporarily store topsoil in ECO-designated stockpile area off site;
 - Following casting and setting of footings replace the topsoil and compact to natural soil compaction levels; and
 - Rehabilitate any part of the wetland area that may have been damaged as a result of construction activities to the satisfaction of the ECO. Depending on the extent of damage the method of rehabilitation
 - The wetland areas as well as the ocean must be protected against chemical pollution e.g. from cement, paints or petrochemicals as well as litter may need input from a freshwater specialist. This will be at the discretion of the ECO.
 - Access to the No-Go area may only be authorised by the ECO following the approval by the ECO of a Method Statement detailing the activity that will be undertaken in the No-Go area including how the area will be accessed;
 - A suitable location must be identified for the temporary storage of materials and equipment when needed on site within a 3m wide corridor seawards within the wetland area and at least 20m from the wetland edge on either side along the path footprint
 - Ensure that the base of the timber boardwalk is at least 600 mm above the natural ground level;
 - Ensure that the planks making up the base of the boardwalk have 30 mm gaps between each plank. Any areas within the construction work area footprint that have been degraded from its condition prior to construction activities and because of the construction activities must be restored to its prior condition.





4.  **Contractor's Camp**
- Site camp is to be established at an appropriate site (e.g. in industrial area) and materials must be brought in daily.
 - The materials receiving area must be cleared daily of any unused materials and no long-term stockpiling is allowed.
 - The contractor shall obtain approval from the landowner/municipality for any area used for temporary stockpiling/deliveries or establishing a site storage container.
 - Parking and delivery of materials will need to be carefully managed, to avoid impact on private land or damage or obstruction of public land.

5.  **Toilets**
- No toilets may be placed on/below the High-Water Mark of the sea.
 - Ablution facilities are required by law to be available at a ratio of one toilet per 15 workers. Chemical site toilets at the appropriate number must be provided
 - Trailer type Chemical toilets are recommended and is to be removed during periods when no construction is taking place.
 - Toilets must have doors and locks and must be placed on level ground and secured.


6.  **Plant and Fuel Handling**
- No bulk fuel storage (more than 50l) shall take place on the site. Jerry cans of fuel on site shall be stored in leak-proof drip trays, well away from combustible materials and at least 20 meters away from the stream and wetland areas as indicated on plan.
 - Maintain all equipment in a good condition in order to minimize the risk of leakage and possible contamination of the soil, stormwater or adjacent public roads by fuels, oils and hydraulic fluids.
 - Mop up or treat (bio-remediate) any spills immediately.
 - Provide drip trays (placed strategically to avoid incidental spillage of oils and fuels onto the ground) for any plant/equipment e.g. generators and concrete mixers that leak during refueling or operation.
 - If equipment requires re-fueling ensure that any re-fueling takes place at a location designated by



- the ECO that may not be within the No-Go area and may not be within 20m of the wetlands.
7.  **Housekeeping and Waste Management**
- The Contractor must provide for the ECO's approval a Waste Management Plan Register indicating the anticipated construction waste types, sorting and storage and disposal/recycling methods.
 - Provide sufficient bins/bags on site in which to store the solid waste. Storage facilities shall not be allowed to become overfull. Bins/bags/waste stockpiles must be covered with lids which is baboon proof/shade cloth to prevent redistribution of the waste in high wind conditions where this is a risk due to the type of waste stored.
 - The site must be kept neat and tidy. No littering on site - litter shall be collected daily into bins or more frequently as required to prevent it from blowing onto adjacent properties/areas.
 - Waste must be disposed of at licensed waste disposal sites. Recyclable/re-usable waste shall be stored/bagged separately for recycling. No waste may be disposed of on site by burning or burying. Remove staff food waste from site minimum daily.
 - The Contractor is responsible for maintaining records to demonstrate that waste has been lawfully disposed of by the Contractor – this shall be kept on the Contractor's site file and checked by the ECO. Records shall detail who removed the waste (Contractor directly or a third party service provider), date removed from site, type, quantity and destination/treatment of waste e.g. recycling/landfill, and where obtainable, receipts/proof of delivery to a licensed landfill or waste management service provider.
 - Stockpile all building rubble in central locations on site and remove this daily. Keep clean building rubble separate from 'soft' waste to minimize dumping costs and allow for recycling e.g. at an off-site crusher facility.
 - Hazardous demolition or construction waste e.g. fuel/oil contaminated waste etc., requires special handling and disposal per legislation. Store in a sealed drum and remove off the site to a hazardous waste disposal site or have collected by an accredited hazardous waste disposal service provider. Waste manifests and the related safe disposal receipt copies shall be submitted to the ECO for all hazardous wastes disposed of by the Contractor.
8.  **Emergency Procedures**
- Fire** - Advise the relevant authority of a fire as soon as one starts and do not wait until it can no longer be controlled. All site staff to be made aware of the procedure to be followed in the event of a fire.
 - Spills** - Mop up all fuel/oil/chemical/sewage spills and keep all contaminated soil and mop up materials in a sealed drum for removal to a hazardous waste disposal site periodically/at end of contract. Alternatively, treat in-situ with a bio-remedial product. Report all spills and treatment to the ECO.
9.  **Concrete and Cement Works**
- Give preference to pre-cast concrete elements as opposed to on-site batching/casting wherever practically possible.
 - As far as is practically possible, undertake construction during the dry summer season, to allow the concrete footings to set rapidly with minimal wet cement contamination of the wetlands.
 - Where cement is mixed in a cement mixer ensure that the cement mixer operates at all times within a bunded area with an impermeable base;
 - Where cement is mixed by hand, ensure that the cement is mixed at all times in impermeable containers or in a bunded area with an impermeable base;
 - Create/provide an impermeable plastic/plastic-lined sump if required to hold any cement contaminated water.
 - Dispose of concrete and cement-related mortars in an environmental sensitive manner as they can be toxic to aquatic life. Washout may not be discharged into the wetlands;
 - All wet and dry cement deposits outside the contained areas are to be cleaned at the end of each day and disposed of as rubble;
 - Store unused cement in a secure weatherproof location at the offsite site camp.
 - Collect empty cement bags from the working areas at the end of every day and store in a windproof container and remove from site for disposal daily.
10.  **Paints/Hazardous Substances**
- No paint products, chemical additives, or solvents such as thinners and turpentine or any other hazardous substances may be disposed of on site.
 - Store all hazardous substances in sealed, well labelled containers when on site and remove from site at the end of every working day. Liquid substances containers shall be placed on a drip tray/bunded area to safely contain any accidental spillages.
11.  **Material Handling, Use and Storage**
- Store materials neatly on site/at the parking area/permitted location (not outside of the approved work area and away from vegetation).
 - Locate temporary stockpiles of erodible materials such as sand in sheltered positions and where required cover with plastic/shade cloth/bidum when not in use to prevent wind/rain erosion (and costly loss of material).
 - Stockpiles, trenches and slopes must be stabilized/shored/ laid back to ensure that they are stable.
12.  **Noise/nuisance**
- Working hours must be limited to those specified in the National Building Regulations/SANS 10400-F:2010 i.e. between 06h00 and 18h00 on weekdays and 06h00 and 17h00 on Saturdays. No work shall take place on public holidays and on Sundays. Working hours shall not be exceeded by the Contractor without first obtaining the express permission of the Project Manager and the municipality.
 - Should the occupants of any of the adjacent residences complain about excessive noise/nuisance caused by the construction activities, the Contractor shall log the complaint and investigate the cause and implement any required mitigation measures to remedy the situation as is possible, practical and reasonable.
 - No drilling or other activities with excessive noise (above 85DB) may take place in the months of July-December to be sensitive to the whale breeding season.
13.  **Stormwater Controls**
- Works are not to impede sea or stormwater drainage causing damming.
 - No foreign substances e.g. cement contaminated water, silt, sand/aggregate/soil, paints, detergents and oils are to enter the surrounding environment.
 - Any spills on site are to be cleaned up immediately before these could mobilize in rain/runoff water.
14.  **Control of Dust and/or Wind-blown Sand**
- Avoid handling and transport of erodible materials under high wind conditions when a visible dust plume is present and is affecting neighbours/the public.
 - Temporary stockpiles that may give rise to dust must be covered with bidum/shade cloth/plastic etc. where required and they will be effective, shade cloth screens shall be erected to contain dust e.g. adjacent to sensitive neighbours or around a drilling operation.
15.  **Fire Control**
- No smoking is allowed near combustible materials e.g. stored fuel/paint/solvents. All cigarette butts must be completely extinguished and then placed in the waste bins provided on the site (and not disposed of anywhere else).
 - No open fires will be allowed on site.
16.  **Water wastage**
- The contractor shall avoid wasteful practices on site
17.  **Archaeology / Heritage**
- Should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during construction activities, all works must be stopped immediately, and SAHRA must be notified without delay.
 - Should any structures or shipwreck remains older than 60 years be uncovered during construction works, SAHRA must be notified immediately so that further advice can be given regarding complying with heritage legislation.
18.  **Site Clean Up and Rehabilitation**
- All temporary structures, equipment, excess materials, waste and facilities used for construction purposes are to be removed from site upon completion of construction, to the satisfaction of the Project Manager and the ECO.
 - Where required, the contractor must employ a suitably qualified person to repair/rehabilitate any area, service or structure damaged by construction activities.

- The ECO must issue a report to DEA&DP to confirm that all closure requirements have been met upon project closure.
19.  **Signage**
- Erect signage indicating that users and their pets should remain on the cliff path and may not enter the wetland areas;
 - Erect signage indicating that littering is an offence.
20.  **Monitoring and inspection procedures**
- The Principal Contractor/s (direct client appointments) will be responsible for the implementation of this CEMP on the site during the construction phase by the Contractor's staff as well as his subcontractors.
 - Daily site inspections will be undertaken by the Principal Contractor's foreman to ensure that the requirements of this CEMP are implemented.
 - Minimum fortnightly site inspections are to be undertaken by the ECO, to monitor compliance with the CEMP and advise on remedial actions where required. The ECO will issue a monthly environmental management summary report to the project team.
 - The ECO will provide an initial environmental awareness training session for the Principal Contractor's permanent site management staff outlining the requirements of the CEMP and the sensitivities of the local environment. These in turn shall be included in the contractors SHE inductions with site labour staff and subcontractors.
 - The CEMP is to be included in all tender/contract documentation (including sub contracts) for the construction project.
 - The ECO may request additional method statements to address any further mitigation measures not currently covered in this CEMP.
21.  **Non –Compliance**
- Should the conditions in this CEMP not be upheld, the ECO and Project Manager may take whatever reasonable steps to enforce such conditions, including recommending the issue of penalties or a stop works order for the Project Manager to impose for breach of this approved CEMP (which is part of the construction contract).
 - Significant contraventions must be reported by the ECO to the DEA&DP (Compliance Management) for further action.
22.  **Penalties Schedule**
- The Principal Contractor is responsible for the payment of any penalties for SEMP contraventions as a result of his staff's activities or those of his subcontractors.
 - All collected penalties shall be accounted for and shall either be retained from the contract fees or paid directly by the contractor, as a donation to the Cliff Path Action Group NGO for the construction of the Hermanus cliff path.
 - Penalty amounts shall be guided by the following table. Amounts are per incident, unless otherwise indicated. Where there are ranges, the penalty amount depends on the severity of the contravention and will be established by the ECO and Principal Agent

a	Failure to have an oil leak from machinery/vehicle repaired.	R500 – R 2000
b	Inadequate litter control/waste management on site	R100 – R 1000 p/ day
c	Per incident - contractor worker/s not making use of the ablution facilities or littering on site	R100
d	Per incident - making a fire on site	R200 – R5000
e	Causing injury to or undertaking unauthorized capture of animals on site (apart from search, rescue and relocation)	R 100 – R 5000
f	Releasing a pollutant into the environment e.g., by cement or petrochemicals through negligence	R200 – R10 000
g	Undue contamination of soil or water with cement products	R200 - R1000
h	Failure to implement adequate dust control leading to complaints	R100 – R 1000 p/day
i	Inadequate erosion control (wind/water) or negative erosion related impact on neighbouring areas	R100 – R 2000 per day
j	Failure to mop up/treat a fuel/chemical spill	R200 – R5000
k	Causing undue noise/ nuisance/traffic/parking disruption to residents/users of the surrounding area	R500 per hour
l	Damage to an area/feature outside of the designated working area e.g. vegetation, private property	R200 – R10 000
m	Damage to feature or environment where repair is required by external contractors	Cost of repair
n	Failure to clean a spill/load loss on a public road/path	R100 – R 2000 p/day

23.  **Contact Numbers**
- ✓**Environmental Control Officer (ECO)** – monitoring and reporting of significant environmental impacts/incidences. Updating the CEMP if required and seeking approval of such changes from the DEA&DP.


(Insert details)

✓**Project Manager** – responsible party to be contacted by DEA&DP in terms of non-compliance issues during the construction phase; responsible for enforcement of CEMP requirements by all appointed contractors through site instructions, penalties etc.

(Insert details)

✓**DEA&DP Case Officer** – approval of significant departures from CEMP requirements / to be advised of significant environmental impacts/incidences.

(Insert details)



Ecosense
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CEMP Appendix: 2

Basic Environmental Education Content



Ecosense

Environmental Awareness Induction Training

Please add the following environmental awareness points as part of your SHE induction presentations to new staff at the site:

Basic Environmental Awareness:

1. Why follow environmental site rules?

- Constitution of South Africa = "We have a right to a clean and healthy environment". Preserve environment for future generations.
- Rules form part of Construction phase Environmental Management Plan – legally binding thus fines, disciplinary action and even removal of staff from site for non-compliance.

2. No – Go Areas

- Stay out of restricted areas unless you have specific authorisation to work there e.g. vegetation next to the work area and neighbouring properties. Fines for non-compliance!

3. Hazardous substances

- Hazardous substances to be used handled and stored safely in accordance with instructions of the Material Safety Data Sheet.
- No oils, fuels or chemicals or polluted wash water or mop up products containing these to be thrown out on site. Must be placed into sealed containers for removal from site.

4. Fire

- No fires and burning of wastes are allowed on site.
- No smoking near vegetated areas.

5. Waste Control

- Clean work areas daily. Waste must be disposed of in the bins provided on site.
- Plastics and litter that can blow around shall **immediately** be put into bags/bins.
- All food waste shall be secured against scavenging animals and removed from site daily.
- Rubble to be removed from site minimum weekly.
- Do not mix clean rubble with rubbish!
- Explain recycling programme.

6. Concrete

- All concrete mixing at dedicated plastic lined batching sites or in mortar trays. Concrete spills must be cleaned up immediately. **No cement or cement contaminated water may enter the environment.**

7. Public

- Be considerate of public nearby – limit nuisance, traffic disruptions, inconsiderate parking.

8. Animals

- Severe penalties for anyone caught trapping, removing an animal from site.
- Report wild animals e.g. nesting birds, snakes or trapped or injured animals to site management for rescue.
- Do not feed any wild animal. Keep food resources e.g. staff lunch packs, food refuse out of reach of wild animals
- Know first aid procedure in case of a snake bite.

9. Material storage/stockpiles

- Maintain stockpile covers and screens.
- No stockpiling outside of site/in no-go areas.

10. Machinery

- Drip trays placed under portable plant e.g. pumps, generators.
- Report all leaking machinery and oil/fuel spills immediately. Spills to be treated and machinery to be fixed or remove from site.

11. Toilets

- Use designated facilities for ablutions only.
- Report blocked or leaking construction toilets.
- Keep toilets clean. Only use toilet paper!

12. Water wastage

- Do not waste water!

13. Archaeology

- Any suspected archaeological finds to be reported to site manager immediately and worked stopped in the area until further notice.

5. OPERATIONAL PHASE MANAGEMENT PLAN (OEMP)

5.1. INTERPRETATIONS

For the purposes of this OEMP the following acronyms and definitions shall apply:

Applicant Developer /	Cliff Path Action Group
DEA&DP	Department of Environmental Affairs and Development Planning
EA	Environmental Authorisation – issued by DEA&DP
HWM	High-Water Mark (of the sea)
OEMP	Operational Phase Environmental Management Plan
Environment	The aggregate of surrounding objects, conditions and influences that influence the life and habits of man or any other organism or collection of organisms.
Environmental Management Plan	Environmental Management Plans forming part of the overarching Environmental Management Programme (EMPr), namely the Construction Phase Environmental Management Plan (CEMP), the Operational Phase Environmental Management Plan (OEMP) and the Decommissioning Environmental Management Plan (DEMP).
Site	The Pool's Bay connection path
Management Agency	Entity responsible for undertaking maintenance activities on site.
Locally Indigenous	Plant and animal species that are naturally occurring in areas of similar habitat type.
Structure	Means any man-made feature affixed to the ground or attached to something located on the ground, including but not limited to fences/walls, berms, levees, fill, storage tanks, shelters or buildings.
Stormwater	Water resulting from natural precipitation and/or accumulation and includes rainwater, groundwater and spring water, but excludes water in a water or wastewater reticulation system.

5.2. RESPONSIBILITIES AND ORGANISATIONAL STRUCTURE

This OEMP document describes mitigation measures in detail, identifying specific people or organisations to undertake specific tasks, in order to ensure that impacts on the environment are minimised during the operation of the development.

The organisational structure for the site is depicted in **Figure 3** below.

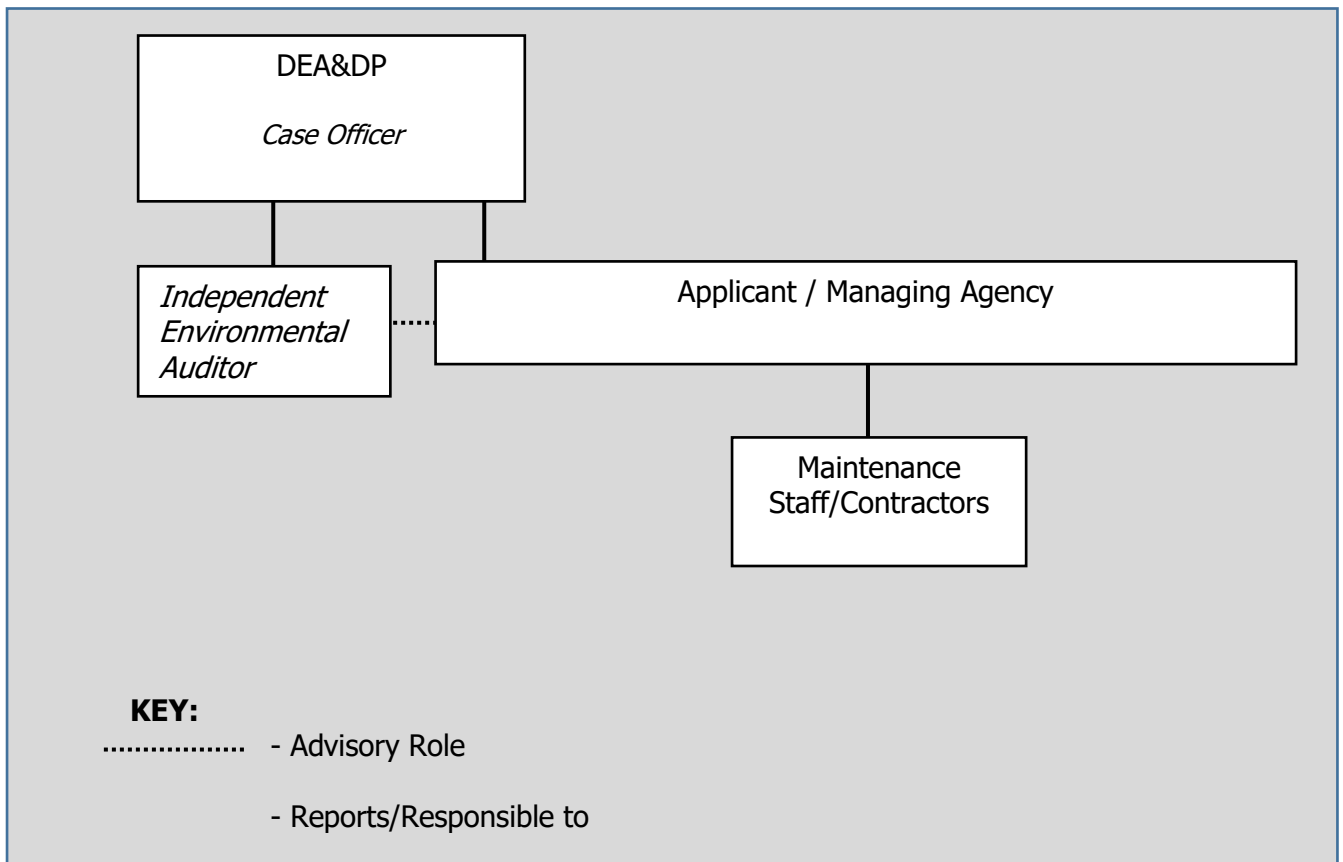


Figure 3: POST DEVELOPMENT (OPERATIONAL) PHASE ENVIRONMENTAL MANAGEMENT ORGANISATIONAL STRUCTURE

The requirements of this OEMP will come into effect once the construction phase of the project has been completed and the ECO has issued a closure report for the construction phase.

The responsible parties are expected to co-operate closely to minimise or avoid unnecessary environmental impacts.

In the context of this document the specific responsibilities of each of the role players are as follows:

5.2.1. Management Agency

- Maintain the pathway in a safe and serviceable condition.
- Ensure compliance by all parties under their control with requirements of the OEMP as well as with conditions imposed by DEA&DP, or any other authority with respect to ongoing environmental management of the development, such as the monitoring and enforcement of the OEMP.
- Finance the environmental management requirements as outlined in the OEMP using funds as raised.

5.2.2. DEA&DP

- Liaise with the Management Agency regarding any situations or issues of concern to DEA&DP pertaining to environmental management at the development.

- Approve proposed changes to the OEMP resulting from the review or as a result of an external environmental audit or OEMP review.

5.3. LEGAL STATUS/ENFORCEMENT

By virtue of the fact that the Environmental Authorisation issued by DEA&DP for this development is based on the premise that this OEMP will be implemented to mitigate potential negative environmental impacts during the operational phase, there exists a legal obligation for the specifications of this OEMP to be complied with. This OEMP includes all relevant documentation contained or referred to within it, along with any amendments or appendices to this document.

It must be noted that the DEA&DP may request to inspect the development at any time and also to request documented proof of compliance with all Environmental Authorisation requirements that pertain to the operational phase of the development. Failure to comply with the conditions constitutes a prosecutable offense.

5.4. FINANCING OF ENVIRONMENTAL CONTROL

Financing of environmental control requirements outlined in this document, as they relate to the operational management of the pathway infrastructure, is the responsibility of the Management Agency.

The Management Agency is to determine and allocate the required funding to ensure that all the environmental requirements relevant to the property can be implemented as required by the OEMP. Key budget items shall be tabled with adequate fund allocation and must be demonstrated to the external auditor during external audits.

5.5. MONITORING

The Management Agency Site Manager will carry the responsibility of monitoring the implementation of the OEMP on site by all relevant parties. The Management Agency may wish to appoint an environmental consultant for periodic environmental monitoring/auditing and consultancy with regard to the implementation of the OEMP.

5.6. REVIEW OF THE OEMP

The relevance of the OEMP specifications to the site conditions and environmental legislative context shall be evaluated on an ongoing basis by the implementers of the OEMP. Any requested OEMP amendments must be submitted to DEA&DP for their consideration and (written) approval. Proposed OEMP amendments will be in the form of an appendix, to be attached to the original document. Once approved by DEA&DP, the Management Agency is to make the approved changes to the OEMP documentation, and management practices on site. Any individual or organization in possession of the document, are to be provided with a copy of any such appendices produced. These appendices are to provide a clear reference to which sections/specifications within the document have been updated.

5.7. AUDITING AND REVIEW OF THE OEMP

If called upon to do so by DEA&DP, external audits of the implementation of the OEMP are to be undertaken by a suitably qualified and experienced independent environmental auditor contracted by the Management Agency, per the terms of reference required by DEA&DP.

5.8. MANAGEMENT SPECIFICATIONS

Since the operational phase of the development would consist solely of maintenance activities and would be located below the HWM of the sea, the specifications as set out in Section 6.4 for the Maintenance Management Plan, as a requirement of the Regulations must be implemented for the operational phase of this development.

The only other important management specification is that Access Control mechanisms / infrastructure must be implemented to prevent people from entering the area from the two entry points during dangerous conditions (e.g storm events or spring high tides)

5.9. IMPACT MANAGEMENT OUTCOMES

The mitigation measures as detailed in the MMP that follows are to ensure that impacts on the environment are minimised during the Operational phase and /or as a result of maintenance to infrastructure (the operational phase of the development is intrinsically linked to maintenance). The outcome of successful implementation and monitoring of these specifications would result in reduced or insignificant impact on the various aspects identified in Table 2 above.

6. MAINTENANCE MANAGEMENT PLAN

This Maintenance Management Plan (MMP) is submitted with the signed declaration (see below) for agreement to a Maintenance Management Plan in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended).

6.1. PERSONAL DETAILS

DEA&DP REGION 1 (City of Cape Town Metropolitan and West Coast District)	DEA&DP REGION 2 (Cape Winelands District, Overberg District)	DEA&DP REGION 3 (Eden & Central Karoo Districts)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Name of person/authority who will undertake responsibility for the activity:	Cliff Path Action Group		
Contact person (if other):	Jobre Stassen		
Postal address:	24 Monmouth Avenue, Claremont		
Telephone:	()	Postal code:	7708
Fax:	()	Cell:	0828964527
Email:	jobre@iafrica.com		
Name of person who has prepared the MMP:	Kozette Myburgh from Ecosense CC		
Contact Person (if other):	Kozette Myburgh		
Postal address:	58 Wedderwill, Sir Lowry's Pass		
Telephone:	(021 161 0258)	Postal code:	7133
Fax:	(086) 547 4221	Cell:	082 783 9860
E-mail:	kozette@ecosense.co.za		
Name of landowner(s) on whose behalf the plan has been developed:*	Republic of South Africa (CapeNature under a Seashore lease)		
Contact person(s):	Rowena Crowe		

Postal address:	CapeNature Private Bag x29 Gatesville		
Telephone:	(021) 483 0126	Postal code:	7766
Fax:	(086) 528 9773	Cell:	
E-mail:	rcrowe@capenature.co.za		
Municipality for proposed project:	Overstrand Municipality		
Farm name(s), erf(s) and portion number(s) etc*:	Coastal Public Property		
Magisterial District or Town:	Hermanus		
Name(s) of watercourse(s) in question:	Seashore / Unnamed stream / wetland		
*In instances where there is more than one landowner, please attach a list of landowners with their full names, contact details, farm name, farm number, portion number, Erf number, coordinates and signed declaration confirming approval for development and responsibility of the MMP			

6.2. AUTHORITY ENGAGEMENT

The following authorities have been consulted to provide input based on the proposed maintenance activities:

Authority	Required involvement
Catchment Management Agency (BGCMA)	Comment on BAR and EMPr, Issuing Water Use Authorisation
CapeNature	Comment on BAR and EMPr
SANParks	Not required
District Municipality	Comment on BAR and EMPr
Local Municipality	Comment on EIR and EMPr
Irrigation Board / Water Users Association	Not required
Heritage Western Cape	Not required refer to SAHRA
Department of Agriculture, Forestry and Fisheries	Not required
Department of Environmental Affairs & Development Planning	Comment on BAR and EMPr
Other (please list):	
Department of Environmental Affairs (Coastal Strategies)	Comment on BAR and EMPr

6.3. PUBLIC PARTICIPATION

This MMP is an outcome of the Basic Assessment Process undertaken for the proposed development. The Public Participation Process was carried out in compliance with the regulations set out in Chapter 6 of Government Notice No. R. 326 of the National Environmental Management Act (NEMA) (Act No.107 of 1998). Steps were taken to allow ample opportunity for members of the public and key stakeholders to be involved and participate in the environmental process.

Those authorities indicated above were all provided with a copy of the Basic Assessment Report and given 30 days in which to provide comment. The content of the MMP was circulated with the BAR and in line with the DEA&DP's Information document, the following is confirmed:

(i) Given written notice to the owner or person in control of that land if the person undertaking the maintenance activity is not the owner or person in control of the land.	<i>For any development below the HWM, Cape Nature issues a Seashore lease in terms of the Seashore Act on behalf of the Republic of South Africa, which is the landowner</i>
(ii) Given written notice to adjacent landowners (up to 500m upstream and downstream from furthest upstream and downstream maintenance site and opposite side of the banks) of the development of the MMP.	<i>Evidence of letters to stakeholders along Pooles Bay included in the Comments and Responses Report of the BAR The project would have no influence 500m upstream as it is located on the seashore</i>
(iii) Stakeholder meeting held for adjacent landowners, in which MMP is presented. This must include an opportunity for adjacent landowners to provide comment.	<i>An open day was held in December 2020 as well as focus group meetings with adjacent landowners (or representatives) during 2019. Since this MMP is included in the BAR and subject to comprehensive public participation, a specific stakeholder meeting is not deemed necessary. Comment on maintenance issues have been received and addressed.</i>
(iv) Given written notice to any organ of state having jurisdiction in respect of any aspect of the activity(ies) proposed within the development of the MMP.	<i>Evidence of letters to Organs of State included in the Public Participation Appendix of the BAR</i>
(v) Provided written notice and confirmation to the relevant Water Users Association (WUA) or Irrigation Board (IB) of the development of the MMP, if applicable.	<i>Evidence of letters (as applicable) included in the Public Participation Appendix of the BAR, although the work on the property will not be applicable to a Water User Association or affect irrigation board infrastructure.</i>

6.4. MANAGEMENT SPECIFICATIONS

This MMP is applicable to the ongoing maintenance of the infrastructure on the site, all of which would be located below the HWM of the sea, thus on the seashore. Two wetland areas would be traversed, to which this MMP is also applicable. A preliminary Method Statement for the likely components requiring maintenance is attached under MMP Appendix 4.

Typical Maintenance Actions would include:

- Repair of damaged structures (e.g. gabions, flat concrete sections, rock steps, bridge structure columns, balustrades, decking on boardwalks, signage poles)
- Replacement of faded signage

6.4.1. Infrastructure maintenance

The path infrastructure shall be kept in a stable, sound and serviceable condition in order to maintain safety of users and minimise risk of loss of infrastructure during storm/high tides.

When maintenance or repairs to any structure on the path is being done, their original footprint and capacity must be retained in a like-for-like scenario.

The CEMP management specifications contained within this EMPr (See MMP Appendix 3) shall be applicable to any construction work required as part of maintenance work. An ECO shall be appointed for maintenance construction work only if the work scope is longer than 2 weeks.

The five-year maintenance budget for the project shall be reviewed and updated every five years.

6.4.2. Alien Invasive Plant Management

The area within 2-meter width of the new path shall be kept free of alien invasive plants as listed in the Alien Invasive Species Regulations (2016 and any subsequent amendments) of the National Environmental Management: Biodiversity Act (of 2004). These shall be pulled out by hand as seedlings and the plants removed from the area for disposal.

6.4.3. No-go areas

Maintenance workers and staff shall not access private properties at any time and signage shall be installed and maintained to discourage public access into private properties from the pathway and trampling of vegetation.

Two wetland areas landward of the HWM on Erf 12257 and Erf 1248/1249 are also no-go areas and shall not be entered.

6.4.4. Safety

Safety/indemnity signage must be installed and maintained to make path users aware of safety risks due to terrain and location within the HWM of the sea.

Access Control mechanisms / infrastructure must be maintained to function effectively when required (e.g storm events or spring high tides)

6.4.5. Local labour

Wherever possible, local labour shall be used for maintenance work.

6.4.6. Interpretative signage

Interpretative signage, encouraging environmental/conservation awareness is encouraged.

6.4.7. Aesthetics

Signage and infrastructure shall be aesthetically pleasing (and thus maintained in good condition). Litter shall be controlled – through periodic litter clean ups and/or provision of litter bins.

6.5. DECLARATION

THE PERSON THAT WILL BE UNDERTAKING THE MAINTENANCE

- I Jobre Stassen, in my **personal capacity** or **duly authorised** (please circle the applicable option) by Cliff Path Action Group (name of legal entity) thereto hereby declare that I/we:
- Request an agreement to the application and regard the information contained herein to be true and correct for this Maintenance and Management Plan,
- Am fully aware of my responsibilities in terms of the National Environmental Management Act of 1998 ("NEMA") (Act No. 107 of 1998) and that, notwithstanding an agreement to this Maintenance Management Plan, I/we shall comply with any other statutory requirement applicable, which may include, but not limited to the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983), the National Water Act, 1998 (Act 36 of 1998) and the Environmental Impact Assessment Regulations, 2014 ("EIA Regulations") in terms of NEMA;
- Am fully aware that the proposed maintenance constitutes a listed activity in terms of the NEMA EIA Regulations, 2014, and that an environmental assessment for environmental authorisation may be required for any other listed activities not included as part of this MMP;
- Acknowledge that any activity undertaken that does not form part of the agreed and adopted Maintenance Management Plan, will be subject to the Section 24(F) of NEMA and that appropriate enforcement and compliance requirements will follow;
- Shall undertake only those tasks described in the Maintenance and Management Plan, failing which environmental authorisation will be required, where applicable;
- Shall provide the competent authorities with access to all information at my disposal that is relevant to this request;
- Shall be responsible for any costs incurred in complying with environmental legislation;
- Hereby indemnify the government of the Republic, the competent authority and all its officers, agents and employees, from any liability arising out of, inter alia, any loss or damage to property or person as a consequence of undertaking this maintenance management plan; and
- Am aware that a false declaration is an offence in terms of regulation 48(1)(a) GN No. R. 982 of 4 December 2014, as amended.

J Stassen

Signature of the applicant:

4 August 2022

Date:

Cliff Path Action Group

Name of institution/company:

6.6. MMP appendices

The MMP Appendices follow.

MMP Appendix 1	Reporting for intent to undertake maintenance activities – Form A
MMP Appendix 2	Reporting for completion of maintenance activities – Form B
MMP Appendix 3	Site Maintenance Management Plan (SMMP)
MMP Appendix 4	Method Statement for maintenance activities

MMP APPENDIX 1: REPORTING FOR INTENT TO UNDERTAKE

REPORTING FOR INTENT TO UNDERTAKE MAINTENANCE ACTIVITIES – FORM A				
Section A: Landowner Details				
Name	Surname	Farm No.	Erf No.	Today's Date
Section B: Details of proposed maintenance activity				
WUA/GA reference number and DEA&DP reference number for MMP.	Activity Type:	Reference code (<i>make reference to MMP</i>)	Footprint area (m ²)	Volume of material (m ³)
Equipment to be used:	Description of method for planned activity:			Date when work will commence:
Date of last flood event for site:	Note any further damage and comments regarding the state of the site			
Section C: Photographs of activity location before maintenance				
Before A Coordinates: S E				
Before B Coordinates: S E Date of photos taken:				


MMP APPENDIX 2:


REPORTING FOR COMPLETION OF MAINTENANCE ACTIVITIES – FORM B


REPORTING FOR COMPLETION OF MAINTENANCE ACTIVITIES – FORM B				
Section A: Landowner Details				
Name	Surname	Farm No.	Erf No.	Today's Date
Section B: Details of proposed maintenance activity				
WUA/GA reference number and DEA&DP reference number for MMP.	Activity Type:	Reference code (<i>make reference to MMP</i>)	Footprint area (m ²)	Volume of material (m ³)
Equipment that was used:	Description of method for completed activity and if commence date changed			Date activity completed
Date of last flood event for site:	Note any challenges or difficulties experienced in following the MMP method statement			
Section C: Photographs of activity location after maintenance				
After A Coordinates: S E				
After B Coordinates: S E Date of photos taken:				


MMP APPENDIX 3:


SMMP


1.  **Access and Maintenance Traffic**
 - i. Maintenance work must be carried out by hand or with small portable plant and all materials and machinery will need to be carried onto and off site by hand or by wheelbarrow.
 - ii. Maintenance work is limited to work during accessible tide levels.
 - iii. Access to this site is limited to the existing cliff path (by foot) on either end of the new path section, as accessed via Main Road and Protea Road parking areas. Access via private properties would need to be specifically negotiated between the contractors and the respective property owners.
 - iv. Construction vehicles are not to restrict the access of other road users in the area (public roads and public parking places) e.g. during off loading or due to obstructive parking.
 - v. Maintain traffic safety at all times and station flagmen when required. All parking, delivery and access points and routes must be approved by the Principal Agent and the ECO.
 - vi. Appropriately secure transported materials to ensure safe passage between destinations. This includes cleaning running boards of loose debris before vehicles leave site and covering trucks carrying sand with shade cloth/canvas covers to avoid loss en-route.
 - vii. Any lost materials/sand/debris on the surrounding public road network or cliff path as a result of the contractors' activities must be cleared immediately. These must be swept up and removed and not left on the side of the road or path.

2.  **Birds and whales**
 - i. Maintenance area should be checked for nesting sites within 50m radius during November - January for nesting birds. Maintenance activities may not commence after January within this area if nests were found until after the birds have left the nesting sites.
 - ii. July-December is whale breeding season. No maintenance activities that will cause vibrations that could disturb whales may be undertaken during this time.

3.  **Site Demarcation/No-Go Areas**
 - i. All activities must take place below the HWM and the onsite vegetation line must be used as reference for purpose of demarcation.
 - ii. **Private properties are considered no-go areas** (unless access has been specifically negotiated and formalized in writing between the contractor and the owner).
 - iii. Contractor to demarcate the landward boundary of the No-Go areas within which work will take place on the day with wire mesh fencing fitted with shade cloth (which must be removed at the end of each day when maintenance takes place)
 - iv. No staff, materials, equipment, damage or dumping of materials or waste is allowed outside of the agreed work site boundaries (5 meters wide seaward of the structures and approved temporary stockpile areas for deliveries, unless otherwise agreed per an approved Method Statement) except where used to specifically rehabilitate/repair an area off-site.
 - v. **Areas adjacent the boardwalk within the wetland is considered a no-go area.** ECO to demarcate the HWM at each wetland with danger tape or other suitable, non-invasive method (e.g. coloured stakes);
 - vi. If timber boardwalks cannot be constructed first, ensure that any timber hoarding placed to allow maintenance personnel, materials and equipment access across the wetland areas, are removed on a daily basis;
 - vii. When excavating to insert the upright poles that support the timber boardwalk within the wetland areas, remove topsoil separately and temporarily store topsoil in ECO-designated stockpile area off site;
 - viii. Following casting and setting of footings replace the topsoil and compact to natural soil compaction levels; and
 - ix. Rehabilitate any part of the wetland area that may have been damaged as a result of maintenance activities to the satisfaction of the ECO. Depending on the extent of damage the method of rehabilitation
 - x. The wetland areas as well as the ocean must be protected against chemical pollution e.g. from cement, paints or petrochemicals as well as litter may need input from a freshwater specialist. This will be at the discretion of the ECO.
 - xi. Access to the No-Go area may only be authorised by the ECO following the approval by the ECO of a Method Statement detailing the activity that will be undertaken in the No-Go area including how the area will be accessed;
 - xii. A suitable location must be identified for the temporary storage of materials and equipment when needed on site within a 3m wide corridor seawards within the wetland area and at least 20m from the wetland edge on either side along the path footprint
 - xiii. Ensure that the base of the timber boardwalk is at least 600 mm above the natural ground level;
 - xiv. Ensure that the planks making up the base of the boardwalk have 30 mm gaps between each plank.
 - xv. Any areas within the maintenance work area footprint that have been degraded from its condition prior to maintenance activities and because of the maintenance activities must be restored to its prior condition.

4.  **Contractor's Camp**
 - i. Site camp is to be established at an appropriate site (e.g. in industrial area) and materials must be brought in daily.
 - ii. The materials receiving area must be cleared daily of any unused materials and no long-term stockpiling is allowed.
 - iii. The contractor must obtain approval from the landowner/municipality for any area used for temporary stockpiling/deliveries or establishing a site storage container.
 - iv. Parking and delivery of materials will need to be carefully managed, to avoid impact on private land or damage or obstruction of public land.

5.  **Toilets**
 - i. No toilets may be placed on/below the High-Water Mark of the sea.
 - ii. Ablution facilities are required by law to be available at a ratio of one toilet per 15 workers. Chemical site toilets at the appropriate number must be provided
 - iii. Trailer type Chemical toilets must be used and removed daily to the offsite contractors camp
 - iv. Toilets must have doors and locks and must be placed on level ground and secured.

6.  **Plant and Fuel Handling**
 - v. No bulk fuel storage (more than 50l) may take place on the site. Jerry cans of fuel on site must be stored in leak-proof drip trays, well away from combustible materials and at least 20 meters away from the stream and wetland areas as indicated on plan.
 - vi. Maintain all equipment in a good condition in order to minimize the risk of leakage and possible contamination of the soil, stormwater or adjacent public roads by fuels, oils and hydraulic fluids.
 - vii. Mop up or treat (bio-remediate) any spills immediately.
 - viii. Provide drip trays (placed strategically to avoid incidental spillage of oils and fuels onto the ground) for any plant/equipment e.g. generators and concrete mixers that leak during refueling or operation.
 - ix. If equipment requires re-fueling ensure that any re-fueling takes place at a location designated by the ECO that may not be within the No-Go area and may not be within 20m of the wetlands;



Housekeeping and Waste Management

- i. The Contractor must provide for the ECO's approval a Waste Management Plan Register indicating the anticipated maintenance waste types, sorting and storage and disposal/recycling methods.
- ii. Provide sufficient bins/bags on site in which to store the solid waste. Storage facilities must not be allowed to become overfull. Bins/bags/waste stockpiles must be covered with lids which is baboon proof/shade cloth to prevent redistribution of the waste in high wind conditions where this is a risk due to the type of waste stored.
- iii. The site must be kept neat and tidy. No littering on site - litter must be collected daily into bins or more frequently as required to prevent it from blowing onto adjacent properties/areas.
- iv. Waste must be disposed of at licensed waste disposal sites. Recyclable/re-usable waste must be stored/bagged separately for recycling. No waste may be disposed of on site by burning or burying. Remove staff food waste from site minimum daily.
- v. The Contractor is responsible for maintaining records to demonstrate that waste has been lawfully disposed of by the Contractor – this must be kept on the Contractor's site file and checked by the ECO. Records must detail who removed the waste (Contractor directly or a third party service provider), date removed from site, type, quantity and destination/treatment of waste e.g. recycling/landfill, and where obtainable, receipts/proof of delivery to a licensed landfill or waste management service provider.
- vi. Stockpile all building rubble in central locations on site and remove this daily. Keep clean building rubble separate from 'soft' waste to minimize dumping costs and allow for recycling e.g. at an off-site crusher facility.
- vii. Hazardous demolition or construction waste e.g. fuel/oil contaminated waste etc., requires special handling and disposal per legislation. Store in a sealed drum and remove off the site to a hazardous waste disposal site or have collected by an accredited hazardous waste disposal service provider. Waste manifests and the related safe disposal receipt copies must be submitted to the ECO for all hazardous wastes disposed of by the Contractor.

Emergency Procedures

- i. **Fire** - Advise the relevant authority of a fire as soon as one starts and do not wait until it can no longer be controlled. All site staff to be made aware of the procedure to be followed in the event of a fire.
- ii. **Spills** - Mop up all fuel/oil/chemical/sewage spills and keep all contaminated soil and mop up materials in a sealed drum for removal to a hazardous waste disposal site periodically/at end of contract. Alternatively, treat in-situ with a bio-remedial product. Report all spills and treatment to the ECO.

Concrete and Cement Works

- i. Give preference to pre-cast concrete elements as opposed to on-site batching/casting wherever practically possible.
- ii. As far as is practically possible, undertake maintenance activities during the dry summer season, to allow the concrete footings to set rapidly with minimal wet cement contamination of the wetlands.
- iii. Where cement is mixed in a cement mixer ensure that the cement mixer operates at all times within a bunded area with an impermeable base;
- iv. Where cement is mixed by hand, ensure that the cement is mixed at all times in impermeable containers or in a bunded area with an impermeable base;
- v. Create/provide an impermeable plastic/plastic-lined sump if required to hold any cement contaminated water.
- vi. Dispose of concrete and cement-related mortars in an environmental sensitive manner as they can be toxic to aquatic life. Washout may not be discharged into the wetlands;
- vii. All wet and dry cement deposits outside the contained areas are to be cleaned at the end of each day and disposed of as rubble;
- viii. Store unused cement in a secure weatherproof location at the offsite site camp.
- ix. Collect empty cement bags from the working areas at the end of every day and store in a windproof container and remove from site for disposal daily.

Paints/Hazardous Substances

- i. No paint products, chemical additives or solvents such as thinners and turpentine or any other

hazardous substances may be disposed of on site.

- ii. Store all hazardous substances in sealed, well labelled containers when on site and remove from site at the end of every working day. Liquid substances containers must be placed on a drip tray/bunded area to safely contain any accidental spillages.

Material Handling, Use and Storage

- i. Store materials neatly on site/at the parking area/permitted location (not outside of the approved work area and away from vegetation).
- ii. Locate temporary stockpiles of erodible materials such as sand in sheltered positions and where required cover with plastic/shade cloth/bidum when not in use to prevent wind/rain erosion (and costly loss of material).
- iii. Stockpiles, trenches and slopes must be stabilized/shored/ laid back to ensure that they are stable.

Noise/nuisance

- i. Working hours must be limited to those specified in the National Building Regulations/SANS 10400-F:2010 i.e. between 06h00 and 18h00 on weekdays and 06h00 and 17h00 on Saturdays. No work must take place on public holidays and on Sundays. Working hours must not be exceeded by the Contractor without first obtaining the express permission of the Project Manager and the municipality.
- ii. Should the occupants of any of the adjacent residences complain about excessive noise/nuisance caused by the maintenance activities, the Contractor must log the complaint and investigate the cause and implement any required mitigation measures to remedy the situation as is possible, practical and reasonable.
- iii. No drilling or other activities with excessive noise (above 85DB) may take place in the months of July-December to be sensitive to the whale breeding season.

Stormwater Controls

- iv. Works are not to impede sea or stormwater drainage causing damming.
- v. No foreign substances e.g. cement contaminated waste, silt, sand/aggregate/soil, paints, detergents and oils are to enter the surrounding environment.
- vi. Any spills on site are to be cleaned up immediately before these could mobilize in rain/runoff water.

Control of Dust and/or Wind-blown Sand

- i. Avoid handling and transport of erodible materials under high wind conditions when a visible dust plume is present and is affecting neighbours/the public.
- ii. Temporary stockpiles that may give rise to dust must be covered with bidum/shade cloth/plastic etc. where required and they will be effective, shade cloth screens must be erected to contain dust e.g. adjacent to sensitive neighbours or around a drilling operation.

Fire Control

- i. No smoking is allowed near combustible materials e.g. stored fuel/paint/solvents. All cigarette butts must be completely extinguished and then placed in the waste bins provided on the site (and not disposed of anywhere else).
- ii. No open fires will be allowed on site.

Water wastage

- i. The contractor must avoid wasteful practices on site

Archaeology / Heritage

- i. Should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during maintenance activities, all works must be stopped immediately, and SAHRA must be notified without delay.
- ii. Should any structures or shipwreck remains older than 60 years be uncovered during maintenance activities, SAHRA must be notified immediately so that further advice can be given regarding complying with heritage legislation.

Site Clean Up and Rehabilitation

- i. All temporary structures, equipment, excess materials, waste and facilities used for maintenance purposes are to be removed from site upon completion of maintenance, to the satisfaction of the Project Manager and the ECO.

- ii. Where required, the contractor must employ a suitably qualified person to repair/rehabilitate any area, service or structure damaged by maintenance activities.
- iii. The ECO must issue a report to DEA&DP to confirm that all closure requirements have been met upon project closure.

Signage and Access control

- i. Maintain signage indicating that users and their pets should remain on the cliff path and may not enter the wetland areas;
- ii. Maintain signage indicating that littering is an offence.
- iii. **Maintain access control infrastructure to prevent access during dangerous sea conditions**

Monitoring and inspection procedures

- i. The Principal Contractor/s (direct client appointments) will be responsible for the implementation of this MMP on the site during the maintenance phase by the Contractor's staff as well as his subcontractors.
- ii. Daily site inspections will be undertaken by the Principal Contractor's foreman to ensure that the requirements of this MMP are implemented.
- iii. Minimum fortnightly site inspections are to be undertaken by the ECO, to monitor compliance with the MMP and advise on remedial actions where required. The ECO will issue a monthly environmental management summary report to the project team.
- iv. The ECO will provide an initial environmental awareness training session for the Principal Contractor's permanent site management staff outlining the requirements of the MMP and the sensitivities of the local environment. These in turn must be included in the contractors SHE inductions with site labour staff and subcontractors.
- v. The MMP is to be included in all tender/contract documentation (including subcontracts) for the maintenance project.
- vi. The ECO may request additional method statements to address any further mitigation measures not currently covered in this MMP.

Non –Compliance

- i. Should the conditions in this MMP not be upheld, the ECO and Project Manager may take whatever reasonable steps to enforce such conditions, including recommending the issue of penalties or a stop works order for the Project Manager to impose for breach of this approved MMP (which is part of the maintenance contract).
- ii. Significant contraventions must be reported by the ECO to the DEA&DP (Compliance Management) for further action.

Penalties Schedule

- i. The Principal Contractor is responsible for the payment of any penalties for MMP contraventions as a result of his staff's activities or those of his subcontractors.
- ii. All collected penalties must be accounted for and must either be retained from the contract fees or paid directly by the contractor, as a donation to the Cliff Path Action Group NGO for the maintenance of the Hermanus cliff path.
- iii. Penalty amounts must be guided by the following table. Amounts are per incident, unless otherwise indicated. Where there are ranges, the penalty amount depends on the severity of the contravention and will established by the ECO and Principal Agent

a	Failure to have an oil leak from machinery/vehicle repaired.	R500 – R 2000
b	Inadequate litter control/waste management on site	R100 – R 1000 p/ day
c	Per incident - contractor worker/s not making use of the ablation facilities or littering on site	R100
d	Per incident - making a fire on site	R200 – R5000
e	Causing injury to or undertaking unauthorized capture of animals on site (apart from search, rescue and relocation)	R 100 – R 5000
f	Releasing a pollutant into the environment e.g., by cement or petrochemicals through negligence	R200 – R10 000
g	Undue contamination of soil or water with cement products	R200 - R1000
h	Failure to implement adequate dust control leading to complaints	R100 – R 1000 p/day
i	Inadequate erosion control (wind/water) or negative erosion related impact on neighbouring areas	R100 – R 2000 per day
j	Failure to mop up/treat a fuel/chemical spill	R200 – R5000
k	Causing undue noise/ nuisance/traffic/parking disruption to residents/users of the surrounding area	R500 per hour
l	Damage to an area/feature outside of the designated working area e.g. vegetation, private property	R200 – R10 000
m	Damage to feature or environment where repair is required by external contractors	Cost of repair
n	Failure to clean a spill/load loss on a public road/path	R100 – R 2000 p/day

Contact Numbers

✓**Environmental Control Officer (ECO)** – monitoring and reporting of significant environmental impacts/incidences. Updating the MMP if required and seeking approval of such changes from the DEA&DP.

(Insert details)

✓**Project Manager** – responsible party to be contacted by DEA&DP in terms of non-compliance issues during maintenance; responsible for enforcement of MMP requirements by all appointed contractors through site instructions, penalties etc.

(Insert details)

✓**DEA&DP Case Officer** – approval of significant departures from MMP requirements / to be advised of significant environmental impacts/incidences.

(Insert details)



Based in Cape Town and Knysna

58 The Glades	21 Fraser Street
Wedderwill	Hunters Home
Sir Lowry's Pass	Knysna
7133	6750
South Africa	South Africa

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MMP APPENDIX 4:

METHOD STATEMENT FOR MAINTENANCE ACTIVITIES

ENVIRONMENTAL METHOD STATEMENT

Poole's Bay Path maintenance activities

This Method Statement describes the scope of the intended work in a step-by-step description in order for the Competent Authority / ECO / Principal Agent to understand the Contractor's intentions and is to be read with Section 19 of the Site Maintenance Management Plan, as included with the Environmental Management Programme in terms of the NEMA EIA Regulations.

Changes to the way the works are to be carried out must be reflected by amendments to this original approved Method Statement; amendments require the signature of the Engineer, denoting that the changed methodology or works are necessary for the successful completion of the works, and by the ECO as being environmentally acceptable. The Contractor will also be required to sign the amended Method Statement thereby committing him/herself to the amended Method Statement.

Any amendment to this Method Statement MUST contain sufficient information and detail to enable the Competent Authority / ECO to apply his/her mind to the potential impacts of the works on the environment. The Contractor will also need to thoroughly understand what is required of him/her in order to undertake the works.

WHAT work is to be undertaken?

Repair of damaged concrete.
Upkeep of GRP (Glass-reinforced plastic is a composite material made of glass fibres and a polymer matrix, which has successfully been used since 2012 at Kleinmond Harbour under similar conditions) elevated structures, boardwalks, and walking surfaces.
Upkeep and repair of stainless-steel plates, bolts, and nuts as required.
Upkeep of gabion baskets.
Upkeep and repair of signage.

WHERE are the works to be undertaken?

Concrete works – mixing off site or within path footprint.
GRP works – as appropriate, remanufacturing of components of site as required, fixing where required on site.
Fixing of gabion baskets on site and where required
Signage – damaged / illegible signage to be removed from site and replaced with new signage, which will be compiled off site.
The extent of each of the above, as required can only be confirmed after inspection of the whole length of the path.

WHEN are the works to start; what is the anticipated finish date?

As required and in accordance with the SMMP requirements. Works to be finished within two weeks or as soon as practically possible once initiated.

July-December is whale breeding season. No maintenance activities that will cause vibrations that could disturb whales will be undertaken during this time.

HOW are the works to be undertaken?

Concrete Maintenance:

- a) Inspect the concrete pathway for any cracks, spalls, or surface defects.
- b) Clean the pathway surface using pressurized water or appropriate environmentally sensitive cleaning agents.
- c) Repair any damaged areas using suitable concrete repair materials.
- d) Ensure proper curing and finishing of repaired sections.
- e) Apply a protective sealant or coating to enhance the durability and resistance of the concrete surface against weathering and erosion.

GRP Structures Maintenance:

- a) Inspect the GRP elevated structures, boardwalks, and walking surfaces for signs of damage.
- b) Remove any debris or vegetation from the walking surfaces.
- c) Replace any damaged member with new GRP member.
- d) Ensure proper drainage of the wetland areas beneath the boardwalks if maintenance to these structures is required.

Stainless-Steel Components:

- a) Inspect stainless-steel components on handrails, supports, and connectors for signs of corrosion, loose or missing bolts and nuts, and structural integrity.
- b) Tighten loose bolts and nuts replace any damaged or missing fasteners.
- c) Clean the steel components with a suitable cleaning agent and remove any rust or debris.
- d) Apply anti-corrosion coatings or paint to protect the steel structures from saltwater exposure.
- e) Lubricate moving parts and hinges to ensure smooth operation.

Gabions:

- a) Check all gabion baskets for sagging or broken wiring.
- b) Re-position stones in baskets if required and fix broken wires.

Signage:

- c) Check all signage for legibility, damage, or missing components.
- d) Replace any faded or damaged signs with new ones.
- e) Ensure that signage is properly positioned and visible to users.
- f) Clean the sign surfaces as necessary.

DECLARATIONS

1) ENVIRONMENTAL CONTROL OFFICER

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

NAME: _____

DATE: _____

SIGNED: _____

To be signed upon implementation, by the appointed party.

2) PERSON UNDERTAKING THE WORKS

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

NAME: _____

DATE: _____

SIGNED: _____

To be signed upon implementation, by the appointed party.

3) APPROVING AUTHORITY

The works described in this Method Statement are approved.

NAME: _____

DESIGNATION: _____

DATE: _____

SIGNED: _____

For purposes of adhering to condition 9 of the Environmental Authorisation, which states¹:

The Maintenance Management Plan ("MMP") which forms part of the EMP_r must be amended to include the necessary method statements for the proposed maintenance works. The amended MMP must be submitted to this Department for approval within 3 (three) months of the date of this decision².

¹ Appeal Decision, confirming the EA was received on 13 April 2023. Ref no 14/3/1/E2/15/0607/23

7. DECOMMISSIONING PHASE REQUIREMENTS

The proposed project would not have operational phase activities to be decommissioned or closed. Should the path need to be demolished, required actions would need to take place within the scope of the Construction Environmental Management Plan.

8. SOURCES & REFERENCES

- a) *Basic Assessment Report for a Proposed pedestrian path to connect the existing Hermanus Cliff Path via Poole's Bay, Hermanus, Ecosense cc 2020, 2021, 2022.*

9. EMPr APPENDICES

General EMPr Appendices follow:

EMPr Appendix 1	<i>Site Layout Plan</i>
EMPr Appendix 2	<i>Environmental Authorisation issued by DEA&DP</i>
EMPr Appendix 3	<i>Curricula Vitae of EAP(s) who compiled the EMPr</i>

EMPr Appendix: 2

Site Layout Plan

Formalised Pedestrian Path through Poole's Bay, Hermanus
Environmental Management Programme July 2023



EMPr Appendix: 2

Environmental Authorisation issued by the Competent Authority



EIA REFERENCE: 16/3/3/1/E2/15/1029/22
NEAS REFERENCE: WCP/EIA/0001097/2022
DATE OF ISSUE: 17 NOVEMBER 2022

The Applicant
Cliff Path Action Group
24 Monmouth Ave
CLAREMONT
7708

Attention: Ms. J. Stassen

Cell: 0828964527

E-mail: jobre@iafrica.com

Dear Madam

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): THE PROPOSED DEVELOPMENT OF A FORMALISED PEDESTRIAN PATHWAY CONNECTING TO THE EXISTING HERMANUS CLIFF PATH VIA POOLE'S BAY, HERMANUS.

1. With reference to the above application, the Department hereby notifies you of its decision to **grant the Environmental Authorisation** ("EA") together with the reasons for the decision.
2. In terms of Regulation 4 of the Environmental Impact Assessment Regulations, 2014, (as amended), you are instructed to ensure, within 14 days of the date of the Environmental Authorisation, that all registered Interested and Affected Parties ("I&APs") are provided with access to and reasons for the decision, and that all registered I&APs are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the National Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

Copies to: Ms. K. Myburgh (Ecosense CC)
Ms. P. Aplon (Overstrand Municipality)
Ms. R. Crowe (Cape Nature)

E-mail: kozette@ecosense.co.za
E-mail: paplon@overstrand.gov.za
E-mail: rcrowe@capenature.co.za



EIA REFERENCE: 16/3/3/1/E2/15/1029/22
NEAS REFERENCE: WCP/EIA/0001097/2022
DATE OF ISSUE: 17 November 2022

ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): THE PROPOSED DEVELOPMENT OF A FORMALISED PEDESTRIAN PATHWAY CONNECTING TO THE EXISTING HERMANUS CLIFF PATH VIA POOLE'S BAY, HERMANUS.

With reference to your application for the abovementioned, find below the outcome with respect to this application.

DECISION

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014, the Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in section B below with respect to the preferred alternative as described in the Basic Assessment Report ("BAR"), received on 4 August 2022.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in section E below.

A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION

Cliff Path Action Group
24 Monmouth Ave
CLAREMONT
7708

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The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as "**the holder**".

B. LISTED ACTIVITIES AUTHORISED

Listed Activities	Project Description
<p>EIA Regulations Listing Notice 1 of 2014: Activity Number: 12 The development of—</p> <ul style="list-style-type: none"> (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; <p>where such development occurs—</p> <ul style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; <p>excluding—</p> <ul style="list-style-type: none"> (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; — (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or Activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared. 	<p>The proposed pathway will have a development footprint of more than 100m² within 32m of a watercourse.</p>
<p>EIA Regulations Listing Notice 1 of 2014: Activity Number: 15 The development of structures in the coastal public property where the development footprint is bigger than 50 square metres, excluding—</p> <ul style="list-style-type: none"> (i) the development of structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (ii) the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (iii) the development of temporary structures within the beach zone where such structures will be removed within 6 weeks 	<p>The proposed pathway will have a development footprint of more than 50m² in the coastal public property.</p>

<p>of the commencement of development and where coral or indigenous vegetation will not be cleared; or</p> <p>(iv) activities listed in activity 14 in Listing Notice 2 of 2014, in which case that activity applies.</p>	
<p>EIA Regulations Listing Notice 1 of 2014:</p> <p>Activity Number: 17</p> <p>Development—</p> <p>(i) in the sea;</p> <p>(ii) in an estuary;</p> <p>(iii) within the littoral active zone;</p> <p>(iv) in front of a development setback; or</p> <p>(v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater;</p> <p>in respect of—</p> <p>(a) fixed or floating jetties and slipways;</p> <p>(b) tidal pools;</p> <p>(c) embankments;</p> <p>(d) rock revetments or stabilising structures including stabilising walls; or</p> <p>(e) infrastructure or structures with a development footprint of 50 square metres or more —</p> <p>but excluding—</p> <p>(aa) the development of infrastructure and structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(bb) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) the development of temporary infrastructure or structures where such structures will be removed within 6 weeks of the commencement of development and where coral or indigenous vegetation will not be cleared; or</p> <p>(dd) where such development occurs within an urban area.</p>	<p>The proposed pathway will be located below the high-water mark of the sea and will have a development footprint of more than 50m².</p>
<p>EIA Regulations Listing Notice 1 of 2014:</p> <p>Activity Number: 18</p> <p>The planting of vegetation or placing of any material on dunes or exposed sand surfaces of more than 10 square metres, within the littoral active zone, for the purpose of preventing the free movement of sand, erosion or accretion, excluding where —</p> <p>(i) the planting of vegetation or placement of material relates to restoration and maintenance of indigenous coastal vegetation undertaken in accordance with a maintenance management plan; or</p> <p>(ii) such planting of vegetation or placing of material will occur behind a development setback.</p>	<p>The proposed pathway will entail the placement of concrete of more than 10 square metres within the littoral active zone.</p>

<p>EIA Regulations Listing Notice 1 of 2014: Activity Number: 19 <i>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</i></p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</i></p> <ul style="list-style-type: none"> <i>(a) will occur behind a development setback;</i> <i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i> <i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i> <i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</i> 	<p>The proposed pathway will result in the removal/excavation or moving of soil, sand, pebbles or rock of more than 10 cubic metres from a watercourse.</p>
<p>EIA Regulations Listing Notice 1 of 2014: Activity Number: 19A <i>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shellgrit, pebbles or rock of more than 5 cubic metres from—</i></p> <ul style="list-style-type: none"> <i>(i) the seashore;</i> <i>(ii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater; or</i> <i>(iii) the sea; —</i> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</i></p> <ul style="list-style-type: none"> <i>(f) will occur behind a development setback;</i> <i>(g) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i> <i>(h) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i> <i>(i) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i> <p><i>where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</i></p>	<p>The proposed development will result in the removal or moving of soil, sand, pebbles or rock of more than 5 cubic metres below the high-water mark of the sea.</p>
<p>EIA Regulations Listing Notice 1 of 2014: Activity Number: 52 <i>The expansion of structures in the coastal public property where the development footprint will be increased by more than 50 square metres, excluding such expansions within existing ports or</i></p>	<p>The proposed expansion of the existing pathway will have a development footprint of more than 50m² in the coastal public property.</p>

<p>harbours where there will be no increase in the development footprint of the port or harbour and excluding activities listed in activity 23 in Listing Notice 3 of 2014, in which case that activity applies.</p>	
<p>EIA Regulations Listing Notice 3 of 2014: Activity Number: 12 <i>The clearance of an area of 300 square metres or more of Indigenous vegetation except where such clearance of Indigenous vegetation is required for maintenance Purposes undertaken in accordance with a maintenance management plan.</i></p> <p>i. Western Cape</p> <ul style="list-style-type: none"> i. <i>Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</i> ii. <i>Within critical biodiversity areas identified in bioregional plans;</i> iii. <i>Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on even in urban areas;</i> iv. <i>On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</i> v. <i>On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.</i> 	<p>The proposed development will result in the clearance of more than 300m² of indigenous vegetation within 100m of the high-water mark of the sea.</p>

The abovementioned list is hereinafter referred to as “**the listed activities**”.

The holder is herein authorised to undertake the following alternative as it relates to the listed activities:

The proposed development will entail the development of a concrete pedestrian pathway via Poole's Bay, Hermanus, with a length of approximately 850m and an average width of 1.2m. It will connect to two existing portions of the Hermanus Cliff Path. The proposed pathway will be located below the high-water mark of the sea. A section of the pathway will traverse two wetlands where boardwalks are proposed as a means of crossing the wetlands.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken along Poole's Bay, Hermanus, at the following co-ordinates:

Co-ordinates of the proposed pathway:

Starting point

Latitude (S)	34°	24'	55.79"
Longitude (E)	19°	14'	59.33"

Middle point

Latitude (S)	34°	24'	48.15"
Longitude (E)	19°	15'	6.26"

End point

Latitude (S)	34°	24'	46.03"
Longitude (E)	19°	15'	19.22"

Refer to Annexure 1: Locality Plan and Annexure 2: Site Plan

The above is hereinafter referred to as "**the site**".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Ms. K. Myburgh
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58 Wedderwill
SIR LOWRYS PASS
7133

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Email: kozette@ecosense.co.za

E. CONDITIONS OF AUTHORISATION

Scope of authorisation

1. The holder is authorised to undertake the listed activities specified in Section B above in accordance with and restricted to the preferred alternative described in the BAR received on 4 August 2022 on the site as described in Section C above.
2. The holder must commence with, and conclude, the listed activities within the stipulated validity period which this Environmental Authorisation is granted for, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority.

This Environmental Authorisation is granted for-

- (a) A period of five (5) years, from the date of issue, during which period the holder must commence with the authorised listed activities.
- (b) A period of ten (10) years, from the date the holder commenced with the authorised listed activities, during which period the authorised listed activities, must be concluded.

3. The holder shall be responsible for ensuring compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
4. Any changes to, or deviations from the scope of the alternative described in section B above must be accepted or approved, in writing, by the Competent Authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the Competent Authority may request information in order to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.

Written notice to the Competent Authority

5. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities.
 - 5.1. The notice must make clear reference to the site details and EIA Reference number given above.
 - 5.2. The notice must also include proof of compliance with the following conditions described herein:
Conditions: 6, 7, 11 and 18.

Notification and administration of appeal

6. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
 - 6.1. notify all registered Interested and Affected Parties ("I&APs") of –
 - 6.1.1. the outcome of the application;
 - 6.1.2. the reasons for the decision as included in Annexure 3;
 - 6.1.3. the date of the decision; and
 - 6.1.4. the date when the decision was issued.
 - 6.2. draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, 2014 detailed in Section F below;
 - 6.3. draw the attention of all registered I&APs to the manner in which they may access the decision;
 - 6.4. provide the registered I&APs with:
 - 6.4.1. the name of the holder (entity) of this Environmental Authorisation,
 - 6.4.2. name of the responsible person for this Environmental Authorisation,
 - 6.4.3. postal address of the holder,
 - 6.4.4. telephonic and fax details of the holder,
 - 6.4.5. e-mail address, if any, of the holder,
 - 6.4.6. the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the 2014 National Appeals Regulations.

7. The listed activities, including site preparation, may not commence within **20 (twenty)** calendar days from the date of issue of this Environmental Authorisation. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental Authorisation is suspended until the appeal is decided.

Management of activity

8. The draft or Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved insofar as it relates to the construction phase of the development and must be implemented.
9. The Maintenance Management Plan ("MMP") which forms part of the EMPr must be amended to include the necessary method statements for the proposed maintenance works. The amended MMP must be submitted to this Department for approval within 3 (three) months of the date of this decision.
10. The EMPr, including the MMP must be included in all contract documentation for all phases of implementation.

Monitoring

11. The holder must appoint a suitably experienced environmental control officer ("ECO"), or site agent where appropriate, before commencement of the proposed development to ensure compliance with the provisions of the EMPr and the conditions contained herein. The ECO must conduct site visits and submit ECO Reports on a monthly basis to the competent authority.
12. A copy of the Environmental Authorisation, EMPr, MMP, audit reports and compliance monitoring reports must be kept at the site of the authorised activities, and must be made available to anyone on request, including a publicly accessible website.
13. Access to the site referred to in Section C above must be granted, and the environmental reports mentioned above must be produced, to any authorised official representing the Competent Authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein.

Auditing

14. In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation, the EMPr and submit Environmental Audit Reports to the Competent Authority. The Environmental Audit Report must be prepared by an independent person, that is not the ECO referred to in Condition 11 above and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014.

The Audit Reports must be compiled and subsequently submitted to the Department in the following manner:

14.1. The holder must undertake an environmental audit and submit an Environmental Audit Report to the Competent Authority within 3 (three) months of commencement of construction.

14.2. A final Environmental Audit Report must be submitted within 3 (three) months of completion of the proposed development.

The holder must, within 7 days of the submission of each of the above-mentioned reports to the Competent Authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and on a publicly accessible website.

Specific Conditions

15. Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape.

Heritage remains include: meteorites, archaeological and/or palaeontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.

16. A qualified archaeologist and/or paleontologist must be contracted where necessary (at the expense of the holder) to remove any heritage remains. Heritage remains can only be disturbed by a suitably qualified heritage specialist working under directive from the relevant heritage resources authority.
17. All noise and sounds generated during the proposed development must comply with the relevant SANS codes and standards and the relevant noise regulations.
18. The development areas must be clearly demarcated prior to the commencement of the proposed development. All areas outside the demarcated areas must be regarded as "no-go" areas.
19. Construction activities may only take place during the period from February to June to avoid bird and whale breeding seasons.

F. GENERAL MATTERS

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.
2. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.
3. If the holder does not commence with the listed activities within the period referred to in Condition 2, this Environmental Authorisation shall lapse for those activities, and a new application for Environmental Authorisation must be submitted to the Competent Authority. If the holder wishes to

extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the Competent Authority prior to the expiry date of the Environmental Authorisation.

4. The holder must submit an application for amendment of the Environmental Authorisation to the Competent Authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is proposed, an application for Amendment in terms of Part 1 of the EIA Regulations, 2014 must be submitted.

Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the Competent Authority must only be notified of such changes.

5. The manner and frequency for updating the EMPr is as follows:
Amendments to the EMPr, must be done in accordance with Regulations 35 to 37 of the EIA Regulations 2014 or any relevant legislation that may be applicable at the time.
6. It is recommended that the EMPr, as it relates to the operational phase of the development, be implemented.

G. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations 2014.

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date the notification of the decision was sent to the holder by the Competent Authority –
 - 1.1. Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 to the Appeal Administrator; and
 - 1.2. Submit a copy of the appeal to any registered I&APs, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.
2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date the holder of the decision sent notification of the decision to the registered I&APs–
 - 2.1. Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 to the Appeal Administrator; and
 - 2.2. Submit a copy of the appeal to the holder of the decision, any registered I&AP, any Organ of State with interest in the matter and the decision-maker i.e. the Competent Authority that issued the decision.
3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered I&AP and the Organ of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.
4. The appeal and the responding statement must be submitted to the address listed below:

By post: Western Cape Ministry of Local Government, Environmental Affairs and
Development Planning

Private Bag X9186
CAPE TOWN
8000

By facsimile: (021) 483 4174; or

By hand: Attention: Mr Marius Venter (Tel: 021 483 3721)
Room 809, 8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

Note: For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to DEADP.Appeals@westerncape.gov.za.

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from Appeal Authority at: Tel. (021) 483 3721, e-mail DEADP.Appeals@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

H. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this Environmental Authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DATE OF DECISION: 17 NOVEMBER 2022

Copies to: Ms. K. Myburgh (Ecosense CC)
Ms. P. Aplon (Overstrand Municipality)
Ms. R. Crowe (Cape Nature)

E-mail: kozette@ecosense.co.za
E-mail: paplon@overstrand.gov.za
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ANNEXURE 1: LOCALITY MAP

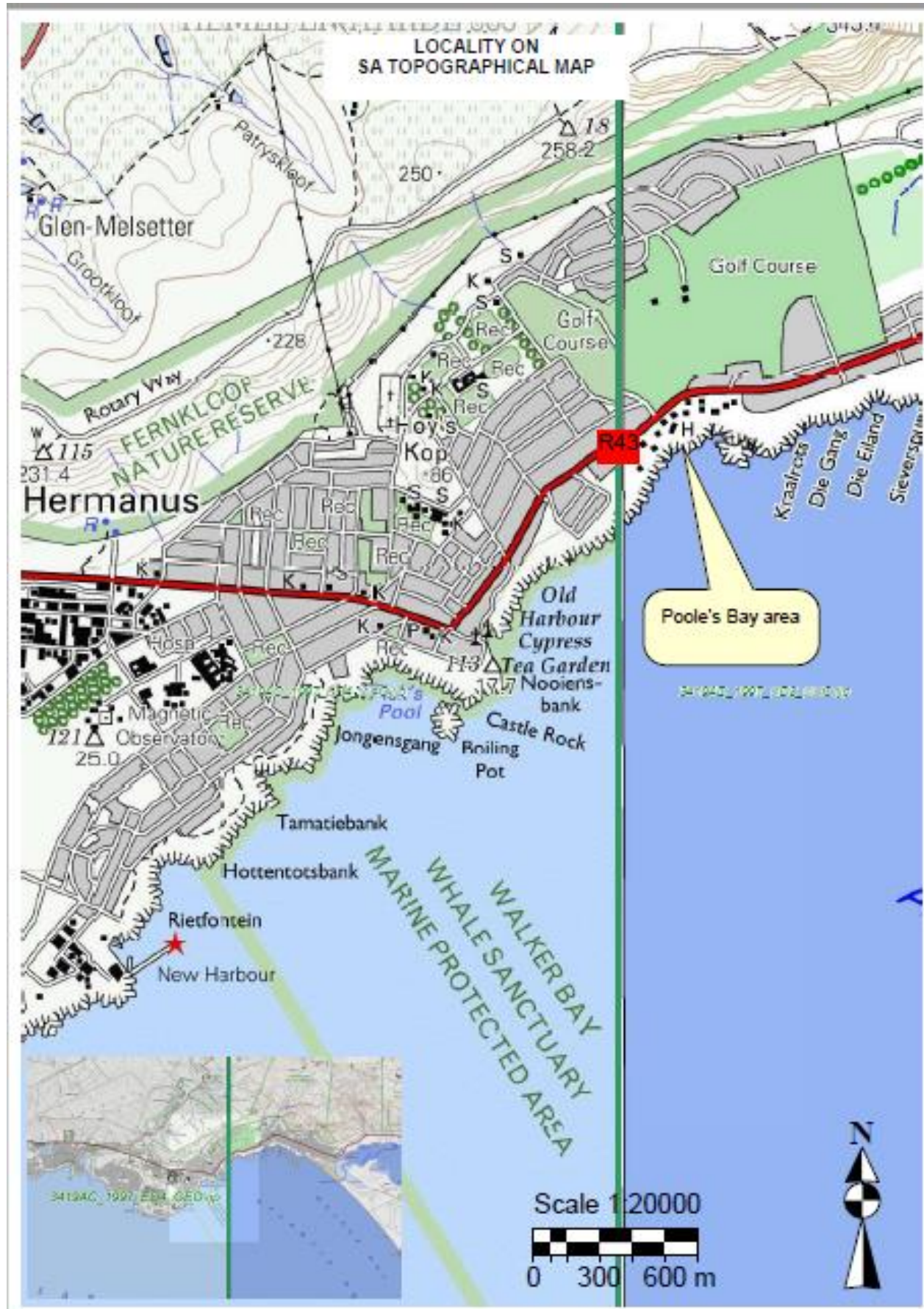


Figure 1: Location of proposed pathway.

ANNEXURE 2: SITE PLAN

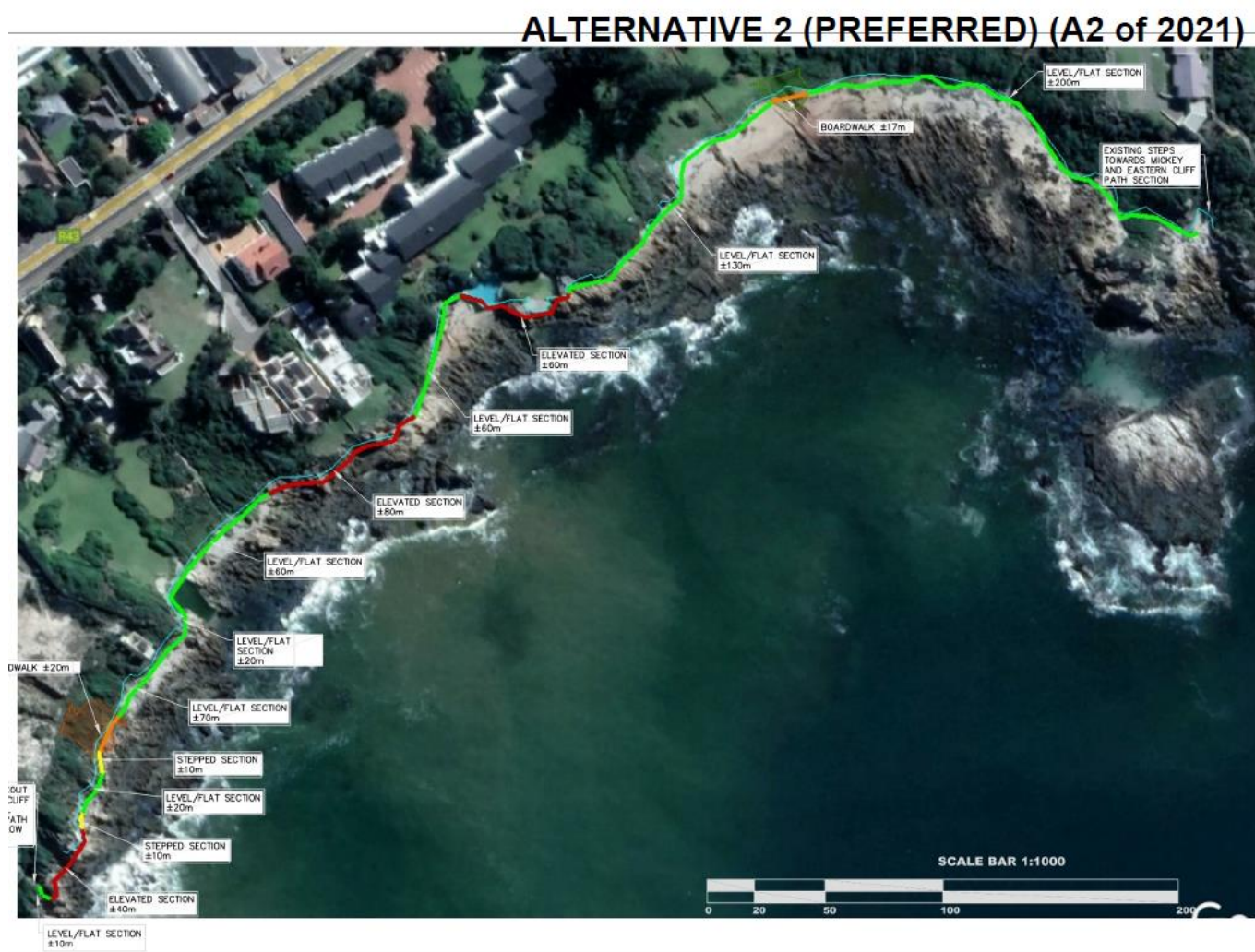


Figure 2: Proposed site plan

ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, inter alia, the following:

- a) The information contained in the Application Form received by the Department on 16 May 2022 and the EMPr submitted together with the Basic Assessment Report on 4 August 2022.
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation and Alternatives (dated March 2013);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- d) The comments received from I&APs and responses to these, included in the Basic Assessment Report received on 4 August 2022; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

No site visits were conducted. The Competent Authority had sufficient information before it to make an informed decision without conducting a site visit.

All information presented to the Competent Authority was taken into account in the consideration of the application for Environmental Authorisation. A summary of the issues that were the most significant for the decision is set out below.

1. Public Participation

The public participation process included:

- identification of and engagement with I&APs;
- fixing a notice board at the site where the listed activities are to be undertaken;
- the placing of a newspaper advertisement in "*The village news*" on 2 December 2020;
- giving written notice to the owners and occupiers of land adjacent to the site where the listed activities are to be undertaken, the municipality and ward councilor, and the various Organs of State having jurisdiction in respect of any aspect of the listed activities;
- making the pre-application draft BAR available to I&APs for comment from 1 December 2020 to 19 February 2021; and
- making the post application draft BAR available to I&AP's for comment from 3 June to 5 July 2022.

The Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements and that the comments raised and responses thereto were included in the comments and response report.

Specific alternatives, management and mitigation measures have been considered in this Environmental Authorisation and EMPr to adequately address the concerns raised.

2. Alternatives

Four layout and design alternatives were investigated. Two alternatives were investigated in the first pre-application Draft Basic Assessment Report compiled in 2019. When a new pre-application process was subsequently embarked upon, followed by the formal application process, the alternatives were revised.

The alternatives investigated in the first pre-application BAR during 2019 entailed the following:

First Alternative - Layout and design (A1 of 2019)

This layout and design alternative entailed the construction of a concrete pedestrian footpath just below the high-water mark ("HWM") of the sea in Poole's Bay. It followed the topography of the coast and erf boundaries as far as possible, which may in some cases be above the HWM of the sea in Poole's Bay. The alignment included crossing over Erf 6088, where at the time, the HWM was believed to force the path over a section of this property. The design would have consisted of spanning sections, dowelled sections and steppingstone sections.

Second Alternative - Layout and design (A2 of 2019)

This layout and design alternative entailed the construction of a concrete pedestrian footpath just below the HWM of the sea in Poole's Bay, which would follow the HWM completely, thus avoiding crossing any of the 13 properties along Poole's Bay of which the boundaries are up to the HWM. The alignment would require the path to be constructed around Mickey rock on the eastern end. Although this was possible from an engineering point of view, it was a less safe option and would therefore be the more expensive option to design it in such a way to provide optimal safety. The design would have consisted of spanning sections, dowelled sections and steppingstone sections.

Subsequently, two revised design alternatives were considered in a new pre-application process and the formal application process that followed it. These alternatives entail the following:

Design Alternative 1 (2020)

This alternative will entail battered and solid built balustrade sections buttressed to the sides of rocks. The solid balustrade sections would have stainless steel grab rails for safety. Steps would be created in some areas, and crossings would be bridged by heavy duty sugar gum beam crossings, connected to the concrete with stainless steel threaded bar. In areas where the terrain is relatively flat, no structures will be required.

This alternative was not preferred because of high visual impacts and cost implications.

Design Alternative 2 (2021) (preferred alternative, herewith authorised)

This alternative will entail the development of a concrete pedestrian pathway via Poole's Bay, Hermanus, with a length of approximately 850m and an average width of 1.2m. It will connect to two existing portions of the Hermanus Cliff Path. The proposed pathway will be located below the HWM of the sea. A section of the pathway will traverse two wetlands where boardwalks are proposed as a means of crossing the wetlands.

This alternative was preferred as it would be the least intrusive option, would be more affordable and the depression wetland will be retained. Most of the pathway will be made of concrete, finished with a rough aggregate to encourage staining and seaweed/mussel shell growth. This is in accordance with the visual specialist's design guidelines.

The "No-Go" Alternative

The option of not proceeding with the proposed development ("No-Go" alternative) is not preferred, as it would not allow for a formalized, safer pathway along the coast.

3. Impact Assessment and Mitigation measures

3.1. Activity need and desirability

The Hermanus Cliff Path extends through a part of the Fernkloof Nature Reserve in Hermanus and is a major tourist attraction in the area. It runs along 13 km of coastline but takes an approximate 1 km detour along the R43 (Main Road) in the middle of the path at Poole's Bay. This is due to the fact that there is no formalised pathway in the Poole's Bay area as property boundaries extend to the HWM of

the sea. The need for the proposed development is to connect to the Hermanus Cliff Path through the construction of a pathway along the coastline at Poole's Bay, creating a continuous formal path. This pathway is also needed to allow for safer access along sections that are rocky, as the pathway is currently informal and not clearly marked. The construction of a formal pathway would also encourage people to stay on the path and limit trespassing onto adjacent private property.

3.2. Biophysical impacts

The vegetation that occurs on the proposed site has been identified as Overberg Sandstone Fynbos, which is classified as a Critically Endangered ecosystem in terms of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) ("NEM:BA") List of Threatened Ecosystems in Need of Protection of December 2011. Since most of the proposed development will be located below the HWM of the sea, very limited amounts of indigenous vegetation are found along the proposed pathway. The potential impacts on the loss of vegetation are regarded to be of low negative significance.

According to the Freshwater Impact Assessment (dated March 2022, compiled by Enviroswift), two wetlands are located on the proposed site. Wetland 1 is degraded to the extent that a large change in ecosystem processes and loss of natural habitat and biota has occurred. This is largely due to the urban land-use in the vicinity of the wetland. Wetland 2 is in a near natural state, with very little evidence of anthropogenic disturbance other than the informal Cliff Path. To minimise the potential freshwater impacts associated with the pathway traversing the wetlands, a raised timber boardwalk is proposed for these sections. The specialist further indicates that the proposed development is considered acceptable from a freshwater ecological perspective should the mitigation measures be implemented. As such, the impacts on the watercourses as a result of the proposed development have been identified as being of very low to low negative significance after mitigation.

3.3. Visual Impacts

According to the Visual Statement (dated 11 April 2022, compiled by Filia Visual), the proposed development will result in limited changes in the visual character of the area and an overall low level of intrusion on landscapes and scenic resources are expected. The specialist further indicates that the proposed pathway will more likely enhance the scenic, cultural and heritage value of the coastal strip by enabling better access to the historic route and enhancing the cultural history of the coastline and the scenic resources. The specialist concluded that the visual impact would be minimal and that the proposed development will have an overall positive impact.

3.4. Marine Environmental Impact Assessment

According to the Marine Environmental Impact Assessment (October 2021, compiled by Anchor Environmental Consultants Pty (Ltd)), the proposed site was not found to be ecologically sensitive or of high conservation concern. The proposed site is located outside the Fernkloof Nature Reserve and any Protected or Critical Biodiversity Area. The proposed site is degraded or physically transformed along much of its length and largely devoid of natural vegetation alongside the path. Only four species of conservation concern were recorded within the study area, although none are expected to be severely impacted. These include one coastal bird species (Cape cormorant), two coastal plant species (Christmas Berry and the White Milkwood) and one animal species (Cape Clawless Otter). The specialist further indicates that no marine species of conservation concern were recorded or are known to occur along the proposed pathway. Furthermore, the proposed development is not likely to significantly alter,

fragment or destroy any natural habitat or vegetation on the proposed site. The impacts on the marine environment as a result of the proposed development have been identified to range from very low to medium negative significance after mitigation.

3.5. Avian Survey

According to the Avian Survey (dated March 2022, compiled by Birds and Bats Unlimited environmental consultants), an island (approximately 2ha in extent) occurs just offshore at the eastern end of the proposed pathway. The island was the only area where Red Data species were recorded (the Cape Cormorant and Oyster catchers) with no signs of breeding being present. No signs of breeding were also observed along the proposed pathway. No significant disturbance to the avifauna as a result of the proposed development is therefore expected.

The development will result in both negative and positive impacts.

Negative Impacts:

- Potential impacts on watercourses and the marine environment.

Positive impacts:

- Provision of a formalised safer access for pedestrians;
- Connecting to the existing Hermanus Cliff Path would attract more tourists to the area; and
- The proposed development would provide recreational space for the public.

4. National Environmental Management Act Principles

The National Environmental Management Principles (set out in section 2 of the NEMA, which apply to the actions of all organs of state, serve as guidelines by reference to which any organ of state must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between organs of state through conflict resolution procedures; and
- the selection of the best practicable environmental option.

5. Conclusion

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, the Competent Authority is satisfied that the proposed listed activities will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

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EMPr Appendix: 2

Curriculum Vitae

Curriculum Vitae

Kozette Myburgh

Profile

Experienced environmental planner, auditor and manager. Excellent technical writing skills, training and consulting services.

Relevant experience

Ecosense CC (2007-current); Bluepebble CC (2021-current) Integrated environmental management through conducting environmental authorisation processes including basic assessments, Scoping /EIRs, Waste licenses, Water Use Authorisations, compliance audits and due diligence investigations.

Stellenbosch University (2003-2006) Research and administrative management.

Prior experience (1992-2002) Worked in administrative positions for Provincial and Local government, as well as private sector in Human Resources and Financial Management.

Selected projects (Environmental Authorisation applications)

Community, Government Housing and Sporting Facilities:

Environmental Consultant for City of Cape Town Professional Team for Human Settlement Department (various housing development projects)
Marosla North development and biodiversity offset, Kraaifontein
Garies Landfill site
Kalkfontein Informal Settlement Upgrade
Jack Muller and Danie Uys Park – revitalisation and wetland rehabilitation, Bellville
Nuwe Begin (WCape Provincial housing pilot project), Blue Downs, Cape Town

Commercial/Industrial/Educational Developments:

Melkbos Apartments, Melkbosstrand
Fair Cape biodegester, Durbanville, Cape Town
Journeys End wine Cellar and effluent treatment plant, Sir Lowry's Pass
Consol Glass Cullet Processing Plant, Bellville
Meerlust Bottling and storage facility, Stellenbosch
Synergy school, Sunnyside, Cape Town

Infrastructure Developments:

Scholtz River stormwater infrastructure, Greyton
Haute Cabriere bridge upgrade, Franschhoek
Bloubos Road Extension, Strand
Soetrivier Weir, Strand
Greenways Stormwater, Strand
Penhill sewer system installation, Cape Town
Ceres Nduli new reservoir and Groenplaatjies water pipeline upgrade, Ceres
Scholtz River flood attenuation, Greyton
Department of Public works Correctional Facility WWTW's, Helderstroom and Buffeljagsriver
Telkom masts Pringle Bay farms; Albia, Atlantis
Flood damage repairs (various applications for Theewaterskloof Municipality)
Telkom mast
Vanrhynsdorp prison storm water, Vanrhynsdorp
R300 Ring Road Toll project, Cape Town

Agriculture / Aquaculture Developments:

Molapong Aquaculture development, Saldanha
Spier berms and wetland rehabilitation, Stellenbosch
Vergenoegd Agricultural Development, Worcester
Hondeklipbaai Abalone Farm, Hondeklipbaai
Lakenvlei Farm Dam, Ceres
Spier berms and wetland rehabilitation, Stellenbosch
Woodlands Farm Dam, Humansdorp

Current Position

- Director: Environmental Impact Assessment

Year of birth

- 1973

Nationality

- South African

Language

- English – fluent
- Afrikaans – fluent

Qualifications

- N4 Certificate – Human Resources Management
- Certificate in Social Impact Assessment
- BA (Anthropology, African Politics)
- MPhil Community and Development
- LLM Environmental Law (Professional Masters)

Professional Registrations

- EAPASA (2019-1346)

Key skills

- Process facilitation
- Impact assessment
- Environmental management
- Public participation
- Monitoring and evaluation
- Project management