



# ENVIRONMENTAL MANAGEMENT PROGRAMME

for

## DIEPWALLE FOREST TENTED CAMP

on

Remainder Farm 218 Deep Wall, Garden Route National  
Park, Knysna

In terms of the

National Environmental Management Act (Act No. 107 of 1998, as  
amended) & 2014 Environmental Impact Regulations (as amended)



**Prepared for Applicant: South African Experiences Trading  
(Pty) Ltd.**

**Date: 6 February 2024**

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**PURPOSE OF THIS REPORT:**

Environmental Management Programme

**APPLICANT:**

South African Experiences Trading (Pty) Ltd

**CAPE EAPRAC REFERENCE NO:**

KNY650/05

**SUBMISSION DATE**

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*Submitted for:*

***Stakeholder Review & Comment***

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## ENVIRONMENTAL MANAGEMENT PROGRAMME REQUIREMENTS

Appendix 4 of Regulation 982 of the 2014 EIA Regulations contains the required contents of an Environmental Management Programme (EMPr). The checklist below serves as a summary of how these requirements were incorporated into this EMPr.

**Table 1:** Checklist in terms of Appendix 4 of Regulation 982 of 2014 EIA Regulations

Requirement	Description
Details and expertise of the EAP who prepared the EMPr; including curriculum vitae.	<p>The report was compiled by Siân Holder of Cape EAPrac. The author has 15 years' experience as an EAP and holds MEd Environmental Education, BTech &amp; Nat.Dipl. Nature Conservation qualifications.</p> <p>The report has been reviewed &amp; verified for release by Louise-Mari van Zyl, as the principle EAP: EAPSA, <b>Registration Number 2019/1444</b>. Ms van Zyl has over twenty years' experience as an environmental practitioner.</p>
A detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description.	<u>Section 1</u>
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 must be avoided, including buffers	Appendix 1
<p>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 the phases of the development including –</p> <ul style="list-style-type: none"> <li>(i) Planning and design;</li> <li>(ii) Pre-construction activities;</li> <li>(iii) Construction activities;</li> <li>(iv) Rehabilitation of the environment after construction and where applicable post closure; and</li> <li>(v) Where relevant, operation activities.</li> </ul>	<p><u>Section 4 – Environmental Impacts &amp; Mitigations</u>  <u>Section 5 - Responsibilities</u>  <u>Section 6 – Pre-Construction Design</u>  <u>Section 7 – Construction Phase</u>  <u>Section 8 – Operation Phase</u>  <u>Section 9 – Decommissioning Phase</u></p>
A description and identification of impact management outcomes required for the aspects contemplated above.	<u>Section 4</u>
<p>A description of the proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated above will be achieved and must, where applicable include actions to –</p> <ul style="list-style-type: none"> <li>(i) Avoid, modify, remedy control or stop any action, activity or process which causes pollution or environmental degradation;</li> <li>(ii) Comply with any prescribed environmental management standards or practises;</li> <li>(iii) Comply with any applicable provisions of the Act regarding closure, where applicable; and</li> </ul>	<p><u>Section 4</u>  <u>Section 6</u>  <u>Section 7</u>  <u>Section 8</u>  <u>Section 9</u></p>



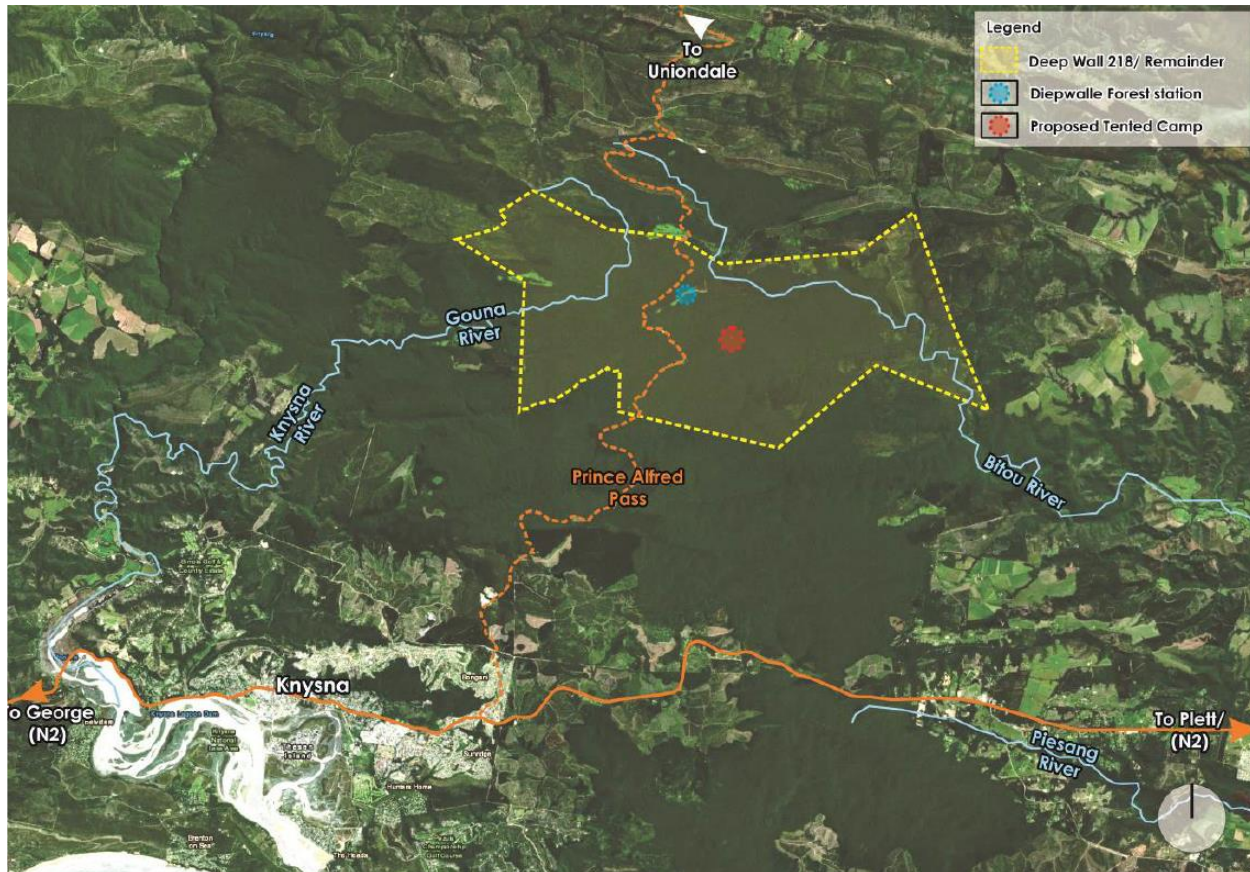
Requirement	Description
(iv) Comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable.	
The method of monitoring the implementation of the impact management actions contemplated above.	<u>Section 10</u> <u>Section 11</u>
The frequency of monitoring the implementation of the impact management actions contemplated above.	<u>Section 10</u>
An indication of the persons who will be responsible for the implementation of the impact management actions.	<u>Section 5</u>
The time periods within which the impact management actions must be implemented.	Not Applicable
The mechanism for monitoring compliance with the impact management actions.	<u>Section 10</u>
A program for reporting on compliance, taking into account the requirements as prescribed in the Regulations.	<u>Section 10</u>
An environmental awareness plan describing the manner in which – (i) The applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) Risks must be dealt with in order to avoid pollution or the degradation of the environment.	<u>Section 5</u> <u>Section 6</u> <u>Section 7</u> <u>Section 8</u> <u>Section 10</u>
Any specific information that may be required by the competent authority.	Not Applicable.

## ABBREVIATIONS AND ACRONYMS

<b>BSP</b>	Biodiversity Sector Plan - to inform land use planning, environmental assessments, land and water use authorisations, as well as natural resource management, undertaken by a range of sectors whose policies and decisions impact on biodiversity.
<b>CARA</b>	Conservation of Agricultural Resources Act (Act 43 of 1983) - provides for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.
<b>CBA</b>	Critical Biodiversity Area - areas required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan.
<b>DFFE</b>	National Department of Forestry, Fisheries & the Environment – the national authority responsible for the sustainable environmental management and integrated planning.
<b>DEA&amp;DP</b>	Department of Environmental Affairs and Development Planning – the provincial authority for sustainable environmental management and integrated development planning. The competent authority is this case.
<b>DWS</b>	Department of Water & Sanitation Affairs – National authority mandated to enforce the National Water Act (NWA).
<b>EA</b>	Environmental Authorisation – Authorisation obtained on completion of an Environmental Impact Assessment in terms of the National Environmental Management Act (NEMA).
<b>ECA</b>	Environment Conservation Act, 1989 - To provide for the effective protection and controlled utilization of the environment and for matters incidental thereto.
<b>ECO</b>	Ecological Control Officer – independent site agent appointed to observe and enforce the implementation of environmental policies and principles on a development site.
<b>EIA</b>	Environmental Impact Assessment - a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.
<b>EMPr</b>	Environmental Management Programme – an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented and that positive benefits of the projects are enhanced.
<b>GIS</b>	Geographic Information System - system designed to capture, store, manipulate, analyse, manage, and present all types of geographical data.
<b>GPS</b>	Global Positioning System - a radio navigation system that allows land, sea, and airborne users to determine their exact location, velocity, and time 24 hours a day, in all weather conditions, anywhere in the world.
<b>NEMA</b>	National Environmental Management Act (Act 107 of 1998, as amended) – national legislation that provides principles for decision-making on matters that affect the environment.
<b>NEM:BA</b>	National Environmental Management: Biodiversity Act (Act No.10 of 2004) – provides for the management and conservation of South African biodiversity within the framework of NEMA.
<b>NFA</b>	National Forestry Act (Act No.84 of 1998) - provides for the protection of forests, as well as specific tree species within South Africa.
<b>NSBA</b>	National Spatial Biodiversity Assessment – aims to assess the state of South Africa's biodiversity based on best available science, with a view to understanding trends over time and informing policy and decision-making across a range of sectors.
<b>NWA</b>	National Water Act (Act No.36 of 1998) - ensures that South Africa's water resources are protected, used and managed.

## 1. INTRODUCTION

**Cape Environmental Assessment Practitioners (Cape EAPrac)** was appointed by the Applicant, South African Experiences Trading (Pty) Ltd. – Chiefs Camps to develop an Environmental Management Programme (EMPr) which will be used to promote and ensure environmental monitoring and control during all relevant phases (construction, operational and decommissioning) associated with the development of the Diepwalle Forest Tented Camp on Remainder Farm 218 Deep Wall, within the Garden Route National Park, Knysna (Figure 1 & 2).



**Figure 1:** Location Map of Diepwalle Forest Tented Camp in Re/218 Deep Wall (yellow polygon) (Google Earth Pro, 2022).

Remainder Farm 218 Deep Wall is located within the Diepwalle Forest section of the Garden Route National Park, Garden Route District and Knysna Local Municipality, measuring 4129.85ha, registered to the Republic of South Africa, and held under title deed T 110/1952. As such the property is zone Protected Area in terms of the National Environmental Management: Protected Areas Act (NEM:PAA, Act 57 of 2003).

The project site ( $\pm 1.5$ ha in extent) is an existing / historic clearing within a forested landscape, located  $\pm 15$ km northeast of Knysna,  $\pm 33$ km south of Uniondale,  $\pm 16$ km northwest of Wittedrift and  $\pm 22$ km northwest of Plettenberg Bay. Access to the study area from the south (Knysna) is off an existing forest track (historic Ysterhoutrug road) negotiated via the gravel R339 / Prince Alfred Pass; from the east (Wittedrift/ Plettenberg Bay) via the R340; or from the north (Uniondale) via the Prince Alfred Pass.

The R339 provides current access to the existing SANParks Diepwalle Forest Station and offices, which also serves as an overnight hut facility for the Outeniqua Hiking Trail. This main camp will serve as the base-camp for vehicle parking area for all Tented Camp guests, as well as the storage of bulk equipment and goods. Guests will be ferried to & from the tented camp from here. The Diepwalle Community Tea Garden is also located at the Diepwalle Forest Station / main camp area, and will serve to cook / prepare all meals for the guests of the Diepwalle Forest Tented Camp.



**Figure 2:** Location of study area & access route in regional context (Google Earth Pro, 2022, as edited).

The existing clearing in the forest for the Diepwalle Forest Tented Camp was historically used as a sawmill site and later served as a film set for the filming of two movies based on the well-known forest novels by South African author Dalene Matthee, namely “Fiela se Kind” (1988) and “Toorbos” (1993). A pool that was present during historical woodcutting activity (late 1800s) was further excavated for use by elephants during filming.

The proposed camp is described as a luxury retreat which is temporal and mobile in nature. During summer (Nov.- April), the camp will be operational, and during winter all moveable items will be removed. Guests and materials / supplies will be transported in via an existing track and dropped off in an existing vehicle turn-around area. The Site Development Plan has been created & adjusted to accommodate identified site sensitivities (e.g. protected trees & aquatic features at the site and their associated impact buffer zones).

Fixed infrastructure restricted to raised wooden decks:

- 15 guest-tent platforms in gaps between trees, to support dome tents;
- Communal / dining deck partially under stretch tent, with communal toilet, pool & hot-tubs;
- Yoga deck;
- Raised wooden boardwalks linking decks / raised platforms;
- Platforms for 2 x 10 000lt rainwater tanks (2.5m x 2.5m each); and

Temporary / mobile infrastructure to be placed on ground:

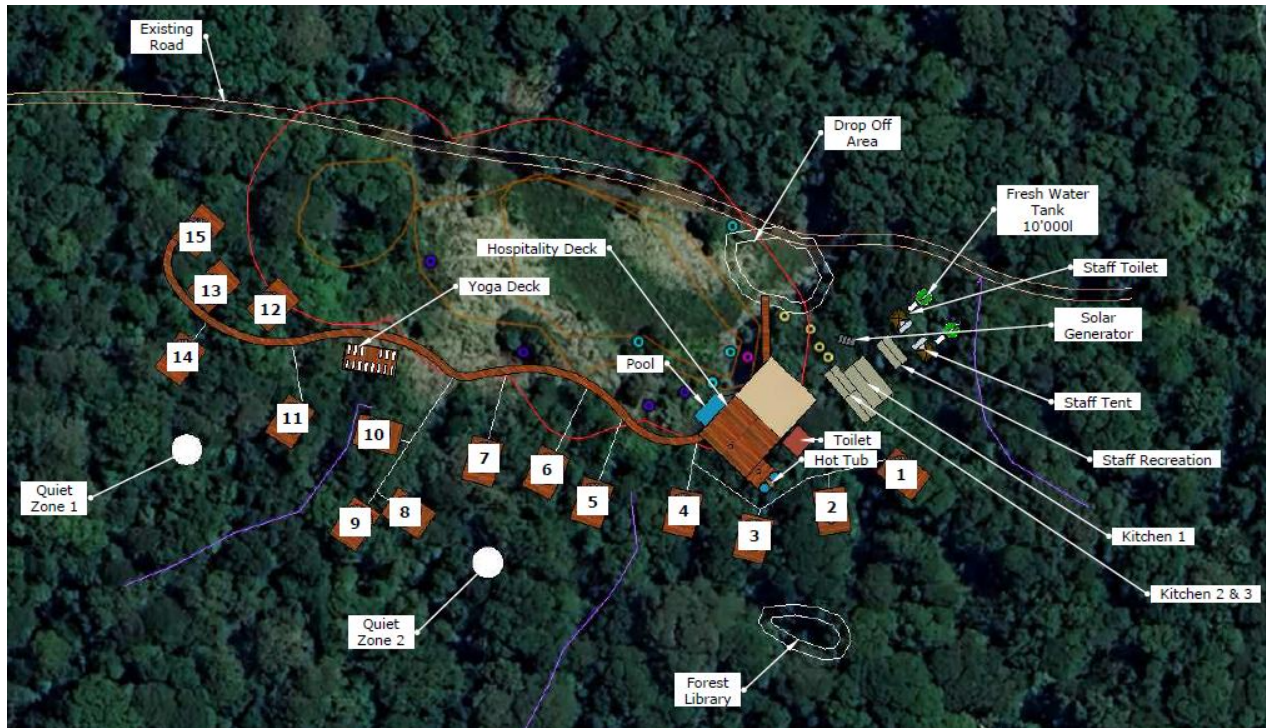
- 3 x canvas staff tents, and 2 x staff toilets (male & female);
- 3 x kitchen & storage tents;
- 2 x ‘zen’ / quiet gaps & 1 x forest library;
- Solar generator on mobile trailer.

Services will be as follows:

- Power: Heating of water & pre-prepared food on gas, while lights by solar generator (panels, inverter & batteries on movable trailer).
- Water: Rainwater storage tanks to be filled by water tanker and/or gravity pipeline from Diepwalle Forest Station / Camp reservoirs through Forest. To be assisted by pressure pump.

- Sewerage: Chemical toilets (sealed units) to be emptied by service provider to Knysna WWTW.
- Greywater: Water from sinks, basins, pool & hot-tubs to be disposed of via soak-aways – existing slip-paths through the Forest. Sink & basins to be fitted with fat screens to remove all fat, grease & oils. Only biodegradable soaps / detergents permitted.

The existing Diepwalle Forest Station will serve as a basecamp for camp operations – guests will leave their vehicles in the existing parking area & will be shuttled to & from the tented camp site. All bulk storage, food preparation & waste disposal will take place in partnership with the Diepwalle Community Kitchen / Tea Garden.



**Figure 3:** Conceptual camp layout indicating proposed infrastructure.

This activity requires an Environmental Authorisation in terms of the National Environmental Management Act (NEMA, Act 107 of 1998) before commencing. This document provides part of a series of documents that is being circulated for public and stakeholder input as part of the Environmental Impact Assessment (EIA) process, before being provided to the competent authority, the national Department of Forestry, Fisheries & the Environment (DFFE), for decision making.

This EMPr contains **management requirements** and **recommendations** made by *Cape EAPrac*, the appointed specialist, as well as in terms of the regulations contained in the **National Environmental Management Act** (NEMA, Act 107 of 1998), and best practice principles. The EMPr should be updated to include any conditions of the **Environmental Authorisation** (EA) as issued.

## 1.1 PURPOSE OF THE EMPR

The purpose of this EMPr is to ensure that the environmental impacts and management of the various phases, of the proposed activity, on the receiving environment are managed, mitigated and kept to a minimum (ie. the **outcome** of implementing the EMPr). The EMPr must provide easily understood and clearly defined **actions** that must be implemented during each phase of the proposed activity. The EMPr is a dynamic document that is flexible and responsive to new and changing circumstances.

The document is binding on the Applicant (SA Experiences Trading (Pty) Ltd.), all contractors and sub-contractors to the site. It must be included as part of any documents / agreements, as well as contractual documents between the Applicant and any contractors. Copies of this EMPr must be kept on site and all **senior personnel** are expected to familiarise themselves with the content of this EMPr.

Any changes or deviations to this EMPr must be authorised by the competent authority.

## **1.2 STATUS OF THE EMPR**

It is of utmost importance that this EMPr be read in conjunction with any legally obtained authorisations such as an Environmental Authorisation (EA), the conditions of the General Authorisation (in terms of the National Water Act) and the Forestry Licence (in terms of the National Forestry Act). This EMPr is viewed as a dynamic document that must be reviewed and updated on a continual basis.

The EMPr is valid for the duration of the project with each applicable phase corresponding to the identified requirements.

## **2 EMPR PHASING**

### **2.1 PRE-CONSTRUCTION PHASE**

The pre-construction phase refers to the design & planning phase of the project. This will ensure that any requirements, impact mitigation measures and best practise mechanisms are built into the planning / design phase to be developed in the construction and operational phase. In term of this application, the pre-construction can be considered as the site selection and layout designs and mitigations.

The final positioning / orientation of the deck platforms will need to be confirmed with SANParks & the appointed ECO prior to construction. These will remain *in situ* each season to be dismantled and removed at the end of the concession period (decommissioning). The deck structures will be built around trees were possible.

### **2.2 CONSTRUCTION PHASE**

The construction phase refers to the actual construction of the development on the property, and includes all earthworks and installation of services (water, sewerage, stormwater, greywater, electricity etc.). In terms of this application, this phase relates to the construction of the services described above infrastructure.

### **2.3 OPERATIONAL PHASE**

The Operation Phase of this project relates to the seasonal operation of the camp and its associated catering and tourism facilities, as well as the ongoing management and maintenance of the site and its access road, as required to ensure limited impacts within natural environments. In terms of this application, this refers to all activities that are undertaken once the site is handed over for tourist / guest accommodation. Maintenance of the fixed and temporary infrastructure undertaken during the operational phases must still apply the principles provided in terms of the Construction Phase of this EMPr.

The Applicant must ensure that the Operational Phase maintains the underpinning principles 'Duty-of-Care-to-the-Environment' and ideals of sustainable development.

### **2.4 SEASONAL DISMANTLING / DISASSEMBLY PHASE**

At the end of each operation season (Apr.- Nov.) the temporary / on-fixed infrastructure & facilities of the camp will be dismantled and removed, for reconstruction before the next summer season, during the 7-year concession period. The construction phase requirements / mitigation measures will be

applicable to the seasonal disassembly phases, as well as general management & maintenance requirements applicable to the fixed infrastructure (that remain on site) and the site itself.

## **2.5 CLOSURE AND DECOMMISSIONING PHASE**

Decommissioning refers to the process of removing all fixed & temporary infrastructure and operating assets of the development after completion of the operating life cycle. The Concession with SANParks is for a period of 7-years, with the option to renew.

The requirements applicable relate to the full rehabilitation of the camp site back to a natural state.

## **3 LEGISLATIVE REQUIREMENTS**

The project Applicant is required to comply with all necessary legislation and policies applicable to development and management of the development. These include but are not limited to:

### **3.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA, ACT 107 OF 1998 )**

The National Environmental Management Act (**NEMA**, Act 107 of 1998, as amended), makes provision for the identification and assessment of **activities** that are potentially detrimental to the environment and which require authorisation from the competent authority (in this case, the national Department of Forestry, Fisheries & the Environment (DFFE) based on the findings of an Environmental Impact Assessment (EIA).

**NEMA** embraces the notion of sustainable development as contained in the Constitution of South Africa (Act 106 of 1996) in that everyone has the right:

- to an environment that is not harmful to their health or wellbeing; and
- to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures.

**NEMA** aims to provide for cooperative environmental governance by establishing principles for decision-making on all matters relating to the environment and by means of Environmental Implementation Plans (EIP) and Environmental Management Plans/Programmes (EMPr), of which this EMPr is one.

Principles contained in Section 2 of the NEMA, amongst other things, prescribe that environmental management must:

- In order of priority aim to: avoid, minimise or remedy disturbance of ecosystems and loss of biodiversity;
- Avoid degradation of the environment and avoid jeopardising ecosystem integrity;
- Pursue the best practicable environmental option by means of integrated environmental management;
- Protect the environment as the people's common heritage;
- Control and minimise environmental damage; and
- Pay specific attention to management and planning procedures pertaining to sensitive, vulnerable, highly dynamic or stressed ecosystems.

It is incumbent upon the Applicant and the landowner (SANParks) to ensure that the abovementioned principles, entrenched in this EMPr are upheld and complied with.

The proposed development triggers a number of listed activities, which require assessment and authorisation via a Basic Assessment (BA) Process.

**Table 2:** NEMA 2014 (as amended in April 2017) listed activities applicable to Diepwalle Forest Tented Camp.

Activity No(s):	Basic Assessment Activity(ies) as set out in Listing Notice 1 of the EIA Regulations, 2014 as amended	Portion of the proposed project to which the applicable listed activity relates.
12	The development of –  (ii) infrastructure or structures with a physical footprint of 100 square metres or more;  (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.	The Tented camp with combined physical footprint of approx. 1508m <sup>2</sup> to be developed within 32m of a small, man-made & unmapped <b>pond &amp; saddle seep wetland</b> confirmed via an Aquatic study.
19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal, or moving of soil, sand, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse.	The Tented camp is to be developed within 32m of a small, man-made & unmapped <b>pond &amp; saddle seep wetland</b> confirmed via an Aquatic study.
Activity No(s):	Scoping and EIA Activity(ies) as set out in Listing Notice 2 of the EIA Regulations, 2014 as amended	Portion of the proposed project to which the applicable listed activity relates.
N/A		
Activity No(s):	Basic Assessment Activity(ies) as set out in Listing Notice 3 of the EIA Regulations, 2014 as amended	Portion of the proposed project to which the applicable listed activity relates.
6	The development of resorts, lodges, hotels, tourism or hospitality facilities that sleep 15 people or more.  i. Inside a protected area identified in terms of NEMPAA	Seasonal camp with accommodate more than 15 people when in operation in the summer months.
12	The clearance of an area of 300m <sup>2</sup> 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. iv. 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 v. 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.	Clearance of vegetation more than 300m <sup>2</sup> within a National Protected Area: Garden Route National Park, for create of deck & tent footprints.
14	The development of -  (ii) infrastructure or structures with a physical footprint of 10m <sup>2</sup> or more; where such development occurs—  (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;  i. Outside urban areas:(aa) A protected area identified in terms of NEMPAA, excluding conservancies;  (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;  (gg) Core areas in biosphere reserves.	The Tented camp with combined physical footprint of approx. 1508m <sup>2</sup> to be developed within 32m of a small, man-made & unmapped <b>pond &amp; saddle seep wetland</b> confirmed via an Aquatic study.
<p><b>Activity 15 of Listing Notice 3</b> was considered, however as there is no re-zoning applicable that relates to residential, retail, commercial, industrial or institutional land uses, this Activity is <b>not applicable</b>.</p> <p>The proposed development is considered to be a tourism-based land-use, which aligns with the conservation land use of the National Park.</p>		

### 3.2 ENVIRONMENT CONSERVATION ACT, 1989 (ECA)



The EIA regulations contained in the Environmental Conservation Act (ECA) have been replaced by NEMA. However, property owners must comply with the draft regulations pertaining to noise as published in the province of Western Cape Provincial Extraordinary Gazette as provision made in section 25 of the ECA), as well as Section 24 of the ECA regarding waste management and Section 20 of the ECA dealing with waste management under Part IV, Control of Environmental Pollution.

### **3.3 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (NEM:BA) (ACT 10 OF 2004)**

This Act controls the management and conservation of South African biodiversity within the framework of NEMA. Amongst others, it deals with the protection of species and ecosystems that warrant national protection, as well as the sustainable use of indigenous biological resources. Sections 52 & 53 of this Act specifically make provision for the protection of critically endangered, endangered, vulnerable and protected ecosystems that have undergone, or have a risk of undergoing, significant degradation of ecological structure, function or composition as a result of human intervention through threatening processes.

The National List of Threatened Ecosystems (Notice 1477 of 2009, Government Gazette No. 32689, 6 November 2009) was gazetted in 2014 and updated in November 2022. The list of threatened terrestrial ecosystems supersedes the information regarding terrestrial ecosystem status in the National Spatial Biodiversity Assessment (NSBA) 2004 & 2011 & 2022.

In addition to the management of ecosystems, this Act makes provision for the management and control of alien invasive vegetation. This includes the listing of invasive species that are a threat to natural ecosystems. These species must be strictly controlled and / or eradicated.

The Site Development Plan is designed to avoid high sensitivity biodiversity areas. Development will be positioned within existing openings / gaps between the trees and to avoid the identified sensitive areas of the site (wetland seep & excavated pool). Remnant high sensitivity areas designated as No-Go areas.

### **3.4 NATIONAL WASTE MANAGEMENT STRATEGY**

The National Waste Management Strategy presents the South African government's strategy for integrated waste management for South Africa.

It deals among others with: Integrated Waste Management Planning, Waste Information Systems, Waste Minimisation, Recycling, Waste Collection and Transportation, Waste Treatment, Waste Disposal and Implementing Instruments.

It is advisable that an integrated waste management system be adopted, which includes waste minimisation, waste recycling and the proper storage and disposal of waste, which does not impact of the health of the environment and human health.

### **3.5 NATIONAL WATER ACT (NWA, ACT 36 OF 1998)**

The National Water Act (NWA) gives effect to the constitutional right of access to water. The Act's overall purpose is to ensure that South Africa's water resources are protected, used and managed in ways which take into account a number of factors, including inter-generational equity, equitable access, redressing the results of past racial and gender discrimination, promoting sustainable and beneficial use, facilitating social and economic development, and providing for water quality and environmental protection.

The NWA makes persons who own, control, occupy or use land responsible for taking measures to prevent pollution of water resources, and empowers Government authorities to take measures to enforce this obligation.

Section 21 c) & i) of the National Water Act (NWA) requires the Applicant to apply for authorisation from the Department of Water and Sanitation (DWS) for any activity in, or in proximity to any watercourse. Two aquatic features were identified by the Aquatic Specialist on the Diepwalle camp site: the **excavated pool / “Frog / Wooded Pond”** and a **seasonal saddle seep wetland**.

While the **excavated pool** is considered artificial and is not classified as a watercourse in terms of the NWA, its historic presence at the site has attracted a range of hydrophytic (water loving) plants and a population of at least two frog species. Given its location in a National Park and priority conservation area these are features which contribute to biodiversity in the area and **warrant protection from disturbance**.

The seep wetland located in the existing clearing of the site, is classified as a watercourse, and showed two distinct zones of wetness, each approximately corresponding with the two zones of dominant vegetation in the clearing: *Helichrysum petiolare* in the temporary wetland zone and *H. cymosum* in the seasonal wetland zone. Both zones are interspersed throughout with alien invasive bramble (*Rubus* sp.) and bracken fern (*Pteridium aquilinum*).

A **management setback / buffer of 10m** has been recommended by the Aquatic Specialist around the wetland area and excavated pool, within which various activities are either supported or discouraged. The preferred layout alternative has responded to this setback and associated mitigation recommendations.

Given that the entire development site falls within the regulated 500m from this wetland, and that the outcome of the Risk Matrix was determined to be low, an Application for a **General Authorisation (GA) for Section 21 c) and i) water uses in terms of the NWA** is required. This application has already been processed and the General Authorisation, dated 23 Oct.2023, was issued by DWS in Nov.2023 (see Appendix 6 for a copy of the GA).

### **3.6 NATIONAL FOREST ACT (ACT 84 OF 1998)**

The National Forests Act (NFA) provides for the **protection of forests**, as well as **specific tree species**, quoting directly from the Act: “no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree, except under a licence or exemption granted by the Minister to an applicant and subject to such period and conditions as may be stipulated”.

The Forestry Directorate of the Department of Forestry, Fisheries & the Environment (DFFE) is responsible for the implementation and enforcement of the NFA, which includes **prohibition of damage to indigenous trees in any natural forest without a licence** (Section 7 of the NFA), as well as the prohibition of the cutting, disturbing, damaging destroying or removing **protected trees** without a licence (Section 15 of the NFA).

Given that the proposed development of the Diepwalle Forest Tented Camp will require the rescue & transplant, trimming and removal of Forest trees, which include a number of protected tree species, an **Application for a Forestry Licence in terms of both Section 7 & 15 of the NFA will be required**.

The positioning of the structures within the Diepwalle camp have been guided as far as possible by the avoidance of large and protected trees (using gaps / openings in the forest), as well as limiting encroachment deep into the surrounding Forest environment. The accuracy of this positioning in relation to the trees is limited due to GPS mapping constraints etc., and thus the preferred layout must be considered as approximate only. Therefore, the final positioning and orientation of the camp

structures, and the associated impact on surrounding trees, will need to be confirmed on site prior to construction, in collaboration with SANParks and under supervision of an appointed Environmental Control Officer (ECO).

### **3.7 NATIONAL VELD & FOREST FIRE ACT (ACT 101 OF 1998)**

The purpose of the National Veld and Forest Fire Act is to **prevent and combat veld, forest and mountain fires** throughout the RSA and to provide institutions, methods and practices for achieving this purpose. Institutions include the formations of such bodies as **Fire Protection Associations** (FPA's) and **Working on Fire**. The Act provides the guidelines and constitution for the implementation of these institutions as well as their functions and requirements.

As the development site is located with the Garden Route National Park, the necessary fire prevention measures must comply with those set in the Park's Management Plan, rule & regulations. A equipped first-aid kit and fire-fighting equipment must be available, while staff will be trained in first-aid and fire-fighting. An auditable Emergency Response Plan will be compiled for the Diepwalle camp site, in line with SANParks' requirements and standards.

### **3.8 NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)**

The protection and management of South Africa's heritage resources are controlled by the National Heritage Resources Act (Act No. 25 of 1999). Heritage Western Cape (HWC) is the enforcing authority in the Western Cape and is registered as a Stakeholder for this environmental process.

The National Heritage Resources Act requires relevant authorities to be notified regarding this proposed development, as the following activities are relevant:

- any development or other activity which will change the character of a site exceeding 5 000 m<sup>2</sup> in extent.

The proposed Diepwalle Tented Camp site is approximately 15 000m<sup>2</sup> in size.

In terms of Section 34(1), no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the SAHRA, or the responsible resources authority (in this case, Heritage Western Cape). As no buildings and/or structures were noted on or within the direct proximity of the site, this section of the NHRA is not applicable.

In terms of Section 36 (3), no person may destroy, damage, alter, exhume or remove from its original position, or otherwise disturb, any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority, without a permit issued by the SAHRA, or a provincial heritage authority (in this case, Heritage Western Cape). Furthermore, in terms of Section 35 (4), no person may destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object, without a permit issued by the SAHRA, or the responsible resources authority (In this Case, Heritage Western Cape).

Although the site is densely overgrown, the nature and timeframes associated with former land use means that little, if any, tangible evidence of cultural significance are likely to remain. It is however possible that subsurface historic material (e.g. old rubbish dumps) may be unearthed, in which case, the following HWC Standard Clause will apply: *"If during ground clearance or construction, any archaeological material or human graves are uncovered, work in that area should be stopped immediately and the ECO must report this to Heritage Western Cape. The heritage resource may require inspection by the heritage authorities, and it may require further mitigation in the form of excavation and curation in an approved institution."*

According to SAHRIS Palaeontological sensitivity mapping, the study area is highlighted as being of low (blue) palaeontological sensitivity, and thus no further studies are required in this case.

### **3.9 OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993)**

The Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work.

In terms of this Act, a Health and Safety Officer and Protocol must be implemented on any sites. The appointment of a Health and Safety Officer is the responsibility of the proponent and contractor and is included in this report to ensure due diligence on construction sites. It is the responsibility of the appointed HSO to conduct any required audits and as such only the appointment of an HSO will be auditable in terms of this document.

### **3.10 SANS 10400 APPLICATION OF THE NATIONAL BUILDING REGULATIONS**

As a State Department, SANParks is not bound by the requirements of Spatial Planning and National Building Regulations administered by to the Knysna Local Municipality i.e. as such prior written approval of the Municipality is not required. The provisions of the Municipal Spatial Development Plan (SDP) and associate Integrated Development Plan (IDP) are thus not applicable to the Protected Area nor this development within it.

## **4 ENVIRONMENTAL IMPACTS & MITIGATIONS**

The following professionals have provided input into this environmental process:

- Terrestrial Biodiversity - **Dr. Christopher Brooke**, Biodiversity Management Services (Pty) Ltd.
- Fauna - **Dr. Christopher Brooke**, Biodiversity Management Services (Pty) Ltd.
  - **Lizette Moolman**, SANParks Scientific Services, Garden Route National Park
  - **Melanie de Morney**, SANParks Scientific Services, GRNational Park
- Botanical - **Bianke Fouché**, Confluent Environmental
- Aquatic - **Dr. Jackie Dabrowski**, Confluent Environmental
- Cultural Heritage, Archaeology & Palaeontology - **Stefan de Kock**, Perception Planning
- Historical Land-use - **Klaas Havenga**, SANParks Section Ranger: Diepwalle, GRNational Park
- Camp Details & Operation - **Lysta Stander**, SA Experiences Trading (Pty) Ltd.

This section simply lists the potential key impacts that were identified and assessed by the various specialists, as well as the resultant post-mitigation significance (more details on the significance and ratings of these impacts are provided in Sections 6.4 – 6.7 below and in the specialist reports attached in Appendix E).

**Table 3:** List of impacts & post mitigation impact significance.

Impact	Significance / Status with Mitigation
<b>Construction Phase Terrestrial Biodiversity / Faunal Impacts</b>	
Destruction, fragmentation or degradation of habitats	Low Negative
Spread and/or establishment of alien and/or invasive species	Low Negative
Mortalities and displacements of fauna and flora SCCs.	Low Negative
<b>Operational Phase Terrestrial Biodiversity Impacts</b>	
Continued fragmentation and degradation of habitats and ecosystems	Low Negative
Spread and/or establishment of alien and/or invasive species	Low Negative
Displacement and direct mortalities of faunal species (including SCC) due to disturbance (noise, light, vibration)	Low Negative

Impact	Significance / Status with Mitigation
Reduced dispersal / movement of fauna	Low Negative
<b>Decommissioning Phase Terrestrial Biodiversity Impacts</b>	
Continued fragmentation and degradation of habitats and ecosystems	Low Negative
Spread and/or establishment of alien and/or invasive species	Low Negative
<b>Construction Phase Botanical Impacts</b>	
Loss of SCC & other delicate species (e.g., mosses) caused by vegetation clearance, site management practices, and disturbance.	Low Negative
Loss of SCC and other delicate species (e.g., mosses) caused by vegetation clearance and disturbance within the footprint of the project.	Negligible
<b>Operation Phase Botanical Impacts</b>	
Potential poaching of SCC seedlings & other plant species (e.g., orchids) from both guests and staff.	Negligible
SCC are negatively affected by maintenance activities: tree trimming & rotting vegetation removal.	Negligible
<b>Decommissioning Phase Botanical Impacts</b>	
SCC seedlings and other species (e.g., orchids) negatively affected by disassembly of infrastructure before the off season (i.e. Winter).	Negligible
<b>Construction Phase Aquatic Risks</b>	
Movement of vehicles, materials and workers disturbing wetland soils, habitat & species.	Negligible
Handling of fuel and other building materials polluting sensitive wetland habitat.	Negligible
Construction of boardwalks and platforms (decks) disturbing soils, habitat & animal movement.	Low Negative
<b>Operation Phase Aquatic Risks</b>	
Overflow of wastewater or backwashing of pool polluting wetland / buffer with Chlorine & personal care-products.	Negligible
Camp access for deliveries and removals expanding access road footprint into wetland.	Negligible
Camp activities disturbing aquatic biota: disruption of normal behavior, injury or death.	Negligible
Disposal of greywater & wastewater pollution to wetland, pool & buffer	Negligible
<b>Decommissioning Phase Aquatic Risks</b>	
Vehicles or workers removing materials from the site: disturbing wetland, pool & buffer.	Negligible
<b>Heritage Impacts All Phases</b>	
Impacts on Cultural Landscape	Low Negative
Impacts on Archaeology Resources	Low Negative
Impact on Palaeontology Resources	Low Negative
<b>Construction Phase Social Impacts</b>	
Creation of employment and business opportunities	Medium Positive
Impact of construction activities and vehicles	Low Negative
<b>Operational Phase Social Impacts</b>	
Creation of employment and business opportunities	Medium Positive
Generate income & exposure for SANParks & Tourism	Medium Positive
<b>Cumulative Social Impacts</b>	
Cumulative impact on sense of place	Low Negative
Cumulative impact on services	Low Negative
Cumulative impact on local economies	Low Positive
<b>Decommissioning Phase Social Impacts</b>	
Social impact on the local economy associated with decommissioning	Low Negative

#### 4.1 MITIGATIONS

Table 4: Recommended mitigation measures required for the construction, operation and decommissioning of the Diepwalle Forest Tented Camp development.

Mitigation	Condition of Approval	Included in EMPr	Construction <sup>1</sup>	Operational	Decommissioning
			Phase	Phase	Phase

<sup>1</sup> In this instance, the construction phase includes mitigation measures associated with pre-construction and planning.

Mitigation	Condition of Approval	Included in EMPr	Construction <sup>1</sup> Phase	Operational Phase	Decommissioning Phase
<b>Aquatic &amp; Botanical Biodiversity</b>					
Check weather forecasts daily - cease work during, & immediately following, rainfall. Work must be undertaken during dry weather.		✓	✓		✓
Pre-construction, the wetland and pool buffer must be surveyed and demarcated with temporary wooden survey poles and danger tape. The delineated edge of the existing road must be demarcated / fenced to ensure vehicles do not make the road any bigger / wider.		✓	✓		✓
All drivers and workers must be informed that the buffer and wetland beyond the danger tape is a 'No-go' area unless specifically working on construction of the communal platforms in the buffer or boardwalks along the buffer edge.		✓	✓	✓	✓
The vehicle parking area must be clearly demarcated with hoarding & laminated signs. This should be limited to the turnaround / drop off point indicated in the SDP.	✓	✓	✓		✓
As part of the site demarcation, a botanist must be present during this initial construction plan to point out and mark important trees and plants within the forest environment – to guide final placement / orientation of footprints. A plant search and rescue must be conducted in all footprints.  All new staff must be briefed / inducted about the layout of the construction site and must be made aware of the no-go areas and fact that the surrounding environment is sensitive and must not be disturbed. Rescued seedlings and smaller plants must be kept in a nursery at Diepwalle Forest Station for the duration of the construction phase, where the plants will be cared for the nursery staff that already have long-term experience working with forest species in Knysna. Any additional SCC plants that are observed later of during construction within the development footprint must be rescued and added to the rescued plants in the nursery. Plants that were rescued and that can't be re-used in the development footprint after construction must be donated to an indigenous nursery or must be used by Diepwalle and SANParks in other forest restoration projects in the Knysna forest.	✓	✓	✓		✓
Staff must be told that the environment is sensitive, but care must be taken <b>not</b> to point out individual potentially ornamental plant species, such as the EN tree seedlings, tree orchids and mosses. Instead, staff must be aware of no-go areas and must be informed that no biological material may be removed from the site unless it is part of management of the site.		✓	✓	✓	✓
Ongoing monitoring and clearing of invasive plants on the site should occur. This is a requirement by law.  No kikuyu grass ( <i>Cenchrus clandestinus</i> ) will be allowed anywhere, as this is a listed invasive species. This invasive species was not observed on the site.		✓	✓	✓	✓
Areas for waste disposal including all litter and toilet facilities must be provided to accommodate workers, and no waste product of any sort may be burned or disposed of at the site.		✓	✓	✓	✓
Toilets must be placed on a level platform before construction starts. Ablution facilities must be regularly maintained and cleaned. At least one toilet per ten to fifteen construction staff should be available.		✓	✓		✓

Mitigation	Condition of Approval	Included in EMPr	Construction <sup>1</sup> Phase	Operational Phase	Decommissioning Phase
If the road becomes very muddy and navigation becomes difficult, a combination of some / all of the following methods can be implemented: Improve drainage with cutoff drains, low berms across the road, and shaping the crows to drain downstream; compact the base layer & add a binding agent such as cement if necessary, add a surface layer of fractured stone, sand & fines & compact to a smooth surface.		✓	✓	✓	✓
During construction, no cement may be mixed anywhere except on the existing road surface.		✓	✓		
All refuelling of vehicles may be done at the tented camp, and no fuel or oil for vehicles may be stored at the proposed camp site.		✓	✓	✓	✓
Vehicles entering the site must be checked for leaks of oil or fuel at the Diepwalle camp before being permitted to enter the development site. Any vehicle with leaks must be immediately removed from the site until repaired. Sandbags or sawdust should be available on the site to ensure that any accidental oil or toxic material spills can be contained and stopped quickly. Any contaminated soil on the site must be removed by a registered hazardous waste service provider (Spill Tech, Interwaste, EnviroServ etc.). Vehicles with leaks must not be allowed to operate on the site until they have been repaired.		✓	✓	✓	✓
Stripping / grubbing of topsoil must be kept to a minimum. Where topsoil is disturbed (for installation of poles, water-tank platforms, staff & kitchen tents), this should be stockpiled for re-use on site i.e. may not be removed from site.		✓	✓		
Construction materials must be sourced, transported & stockpiled responsibly to minimise risk of contamination & pollution of site.  Stockpiles and soil must all be covered by a geotextile or plastic covering, which must also be banded (e.g., sandbags) when the piles are not in use on the site. This will prevent the material from washing away and contaminating the substrate of the site which likely still contains useful seeds and soil organisms.		✓	✓		
As far as possible, all wood cutting and preparation for decking and boardwalks must be done at the Diepwalle campsite so assembly is all that's required on site.		✓	✓		✓
If tools like electric drills are required on site, a generator will be necessary. This should be filled with fuel at the Diepwalle camp, and 2 x 5 L cans of fuel may be retained on site to refill the generator if required. Refilling must be undertaken with care (within drip trays) outside of the wetland buffer at the site of the staff camp indicated on the SDP.		✓	✓		✓
Wood for decking should be stockpiled in the staff quarters area, taking care to minimise the footprint of disturbance and not spread materials over an unnecessarily large area.		✓	✓		
Holes for pole supports for boardwalks and platforms must preferably be dug using an auger or by hand to minimise the footprint of disturbance.	✓	✓	✓		
Plants surrounding the work area will inevitably become trampled. Therefore, a maximum disturbance area of 2m either side of the deck and boardwalk is acceptable. However, wherever feasible steps should be taken to reduce the area disturbed.	✓	✓	✓		✓

Mitigation	Condition of Approval	Included in EMPr	Construction <sup>1</sup> Phase	Operational Phase	Decommissioning Phase
Small gaps (15 - 20m) should be left between planks on the boardwalks to allow filtered light through so plants can still grow under the boardwalk.		✓	✓		
Boardwalk sides should be left open to allow small animals to move in and out of the buffer area, under the boardwalk, during quieter times.	✓	✓	✓	✓	✓
All waste materials (screws, wood cuts etc) must be collected in designated bins as work progresses for disposal off site.		✓	✓		✓
Revegetation of bare soil following with rescue plants on conclusion of construction.  Drainage structures must be checked to ensure that there are no blockages or pollution that is blocking the free flow of water over the site.  Erosion control measure should be in place in areas of water flow.		✓	✓		✓
Cover the pools when not in use to reduce the risk of them filling up and overflowing during rain. Covering will also reduce cleaning requirements and algal growth. It will also reduce the relatively low risk of small animals getting into the pool and drowning				✓	✓
Backwashed water must be discharged to the wastewater tank for disposal at the Diepwalle camp site.	✓	✓		✓	
No pool / hot tub water may be discharged into the wetland or buffer area.	✓	✓		✓	✓
All camp staff and guests must be made aware that the wetland and artificial pool are sensitive site features with restricted access.	✓	✓	✓	✓	✓
When any water is brought into or out of the camp , a maximum of 5 000 L of water may be transported on one vehicle, as the weight may cause damage to the access road. Should damage to the road begin to occur (deep rutting) then a lighter weight tank will need to be used.		✓	✓	✓	✓
All vehicles must stick to the existing access track and turnaround point indicated on the SDP. No new tracks can be made, and no vehicles may enter the buffer or wetland.		✓	✓	✓	✓
Lighting along all boardwalks and decks in / adjacent to the buffer must be 'warm' in colour, solar powered, and motion triggered. This is to minimise the attraction of insects which in turn influences the behaviour or frogs and other animals that feed on them.		✓		✓	
At a reasonable time, all lights must be switched off so they don't continue to switch on with the motion trigger after 10pm.		✓		✓	
A single bench can be placed at the artificial pool so guests can enjoy the frog calls and appreciate a different outlook. This can be reached from a small footpath from the access road.			✓	✓	
No driving after dark as far as possible. The aim is avoid driving over frogs or toads which may move onto the road at night.		✓		✓	
No insect zappers are permitted in any part of the camp. The excavated pool and wetland provide habitat for many insects which in turn are prey for other animals. No insect killer sprays (e.g. Doom) are permitted in camp. If mosquitoes cause annoyance then people can apply deterrant lotions or sprays, and wear long sleeves / trousers.		✓		✓	



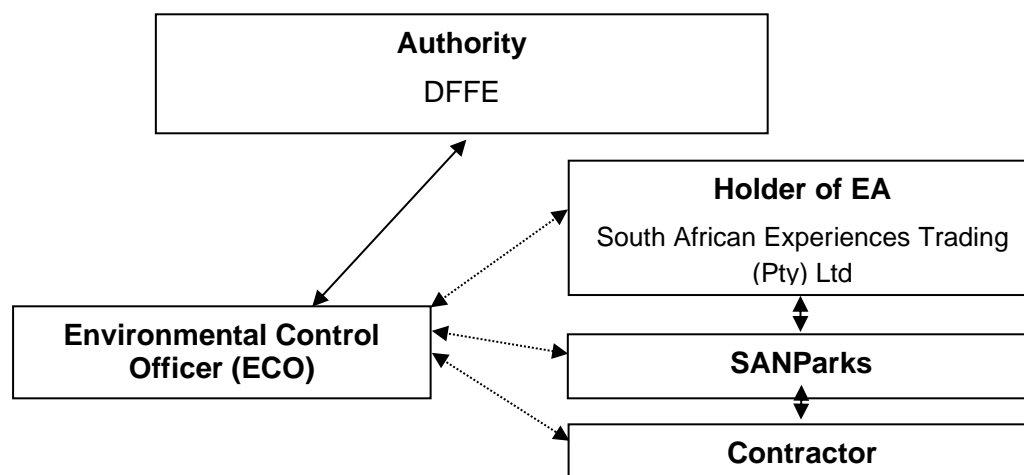
Mitigation	Condition of Approval	Included in EMP	Construction <sup>1</sup> Phase	Operational Phase	Decommissioning Phase
Emergency supplies or materials suitable for rapid response to spillage of waste (e.g. sewage) or diesel for the generator must be kept along with other safety equipment like a fire extinguisher in the staff area. An example would be lime for spreading on spilt sewage, and spades for removing contaminated soil.		✓		✓	
All staff MUST be trained that all grey water must be disposed of in the wastewater container on site. This includes buckets of dirty water used for washing glass pod windows (if selected as an accommodation option), dishes, cleaning tents, cleaning the pool etc.		✓		✓	
Biodegradable, eco-friendly detergents must be sourced and used throughout the camp.	✓	✓		✓	
Washing of linen, towels and clothing must be done off site.	✓	✓		✓	
No buckets of dirty water may be thrown into the surrounding environment.					
Clear instructions must be provided for guests and staff for the use and management of chemical toilets.		✓		✓	
The access road to the proposed Camp site must be kept locked at all times when guests and staff are not making use of it.		✓	✓	✓	✓
Diepwalle management can strategically monitor the plants within and nearby the camp to ensure that any loss of plants are due to natural causes and not poaching or bark stripping.  Camera traps can be setup in the forest around the campsite. This can help to catch potential poachers and also help to monitor wildlife around the campsite during the year.		✓		✓	
Guests to the camp must be informed that no plant material may be removed from the site, but guests do not need to know exactly which species are vulnerable to poaching. Diepwalle can include information in the camp information folders stating the legal implications of plant poaching.		✓		✓	
All staff and guests must be made aware that the wetland area and forest are sensitive habitats and that they are not allowed to access any areas that are not clearly marked as paths or boardwalks.		✓		✓	
Work to remove items from the site must be undertaken in a similar manner recommended for the camp construction in that vehicles must stick to the road and not be overloaded, work may not be undertaken during rainfall, and the wetland and buffer are No-go areas.		✓			✓
From the perspective of aquatic sensitivities, the boardwalks and platforms may be left on site when the camp closes during the winter months. It is envisaged that the accommodation would be removed (e.g. glass pods / tents), along with water and wastewater storage tanks and pumps.		✓		✓	✓
Pools must be completely emptied and covered securely. They should preferably have covers made from decking underlain by		✓		✓	✓

Mitigation	Condition of Approval	Included in EMPr	Construction <sup>1</sup> Phase	Operational Phase	Decommissioning Phase
irrigation plastic so they don't blow off in the wind and so that animals cannot fall into them, and they cannot be filled by rain.					
The site must be completely cleared of all waste or litter.		✓	✓	✓	✓
When boardwalks and decking are removed completely (end of concession with SANParks) all wood must be stockpiled for removal at a site already disturbed (i.e. the staff camp), and every hole in the ground must be completely refilled with soil from the area (SANParks to provide a suitable source).		✓			✓
<b>Terrestrial Biodiversity / Fauna</b>					
Clearing of Helichrysum & AIP removal to be done so strategically over time i.e. only small portions of habitat will be disturbed at one time. Alien plant removal & clearing areas directly surrounding the kitchen, dining and parking areas may also be prioritised as this will improve aesthetics and assist in preventing insects in these communal areas. No more than 25% of Helichrysum in clearing per season.		✓	✓	✓	✓
Control of AIPs & Bramble should be manual - removing as much of the plant (including root system) as possible. Follow-up clearing be done on a yearly basis to prevent reinfestation of AIP in the area.	✓	✓	✓	✓	✓
Rehabilitate / replant areas of clearance or disturbance with indigenous species rescued from the site.	✓	✓	✓		✓
ECO to oversee layout stages to advise on the best placement for poles and walkways in relation to mole excavations and activity. Excavations & activity sites to be demarcated to ensure plant & fauna species not disturbed by human traffic during setup and deconstruction.	✓	✓	✓		
Not using a generator (use solar & charged batteries), minimizing noise (no loud music etc) will likely lessen the effect on sensitive species.	✓			✓	
No artificial lighting should be used for aesthetic purposes (light the clearing or artificial dam). Lights should be downlighting & fitted with motion activation. Lights should be shielded to limit light emitted greater than 90°. Lowest lumen lights possible for the desired effect are advised.		✓		✓	
All external lighting is switched off after certain time or when the specific area is not in use.		✓		✓	
Creating boardwalks with removable sections (e.g. two-meter section every 10 meters of boardwalk) – to be removed at the end of each season. Or sections raised 1 meter or more above the ground will allow the species to move freely though the area and limit the negative effects of linear infrastructure.	✓	✓	✓		✓
Once walkways have been constructed, no person should walk next to or through the natural vegetation	✓		✓	✓	
Access road management should not be graded but rather manual repairs be done where needed – maintain as 'two-track road'. Placing gravel surfaces where necessary to enable drainage & prevent mud. Alternatively, a small culvert can be placed along the up side of the road to divert water to an area where suitable under-road drainage can be constructed. Small bolster humps and associated drains on the downward slope of the road verge drains flow into into well vegetated and stable areas.	✓		✓	✓	
Avoid excessive activities around excavated pool. Place small bench for guest to observe animals visiting pool to drink.		✓	✓	✓	✓
Final position of tents, decks & walkways should incorporate trees as far as possible (be built around trees rather than removing them).		✓	✓		
Search & rescue of saplings of particularly <i>Afrocarpus falcatus</i> , <i>Curtisia dentata</i> , <i>Ocotea bullata</i> & <i>Podocarpus latifolius</i> at possible tent locations.	✓		✓		✓

Mitigation	Condition of Approval	Included in EMP	Construction <sup>1</sup> Phase	Operational Phase	Decommissioning Phase
Rescued plants should be transplanted elsewhere (e.g. in the clearing for aesthetical value) or moved to the Diepwalle Forest Nursery for rehabilitation post decommissioning or rehabilitation project elsewhere.					
All refuse facilities must be animal proof and rubbish bins have lockable lids. No food or food waste left unattended at kitchen and dining areas.		✓	✓	✓	
All tents and equipment to be removed from the site during each seasonal deconstruction. Movement and disturbance must be restricted to the use of the walkways and existing footprints / envelopes.		✓	✓	✓	✓
At the end of each seasonal operation final sweeps should be carried out to ensure that there is no litter or plastic debris remaining on the site. This includes anything that may have fallen through cracks in the decks or walkways.		✓	✓		✓
Removal of all materials that can harm wildlife: liquids such as fuels and oils, exposed wires and lighting.		✓	✓	✓	✓
Water tanks left on the site must be sealed or closed properly, to avoid wildlife getting trapped. Should animals and vegetation get trapped in water tanks, they would need to be cleaned and sanitized prior to opening the camp again.		✓	✓	✓	✓
Any damage to the environment caused during dismantling / decommissioning should be rehabilitated before the camp is closed: includes repairs to road verges & parking areas where there is heavy vehicle traffic.		✓	✓	✓	✓
Heritage					
If during ground clearance or construction, any archaeological or palaeontological material or human graves are uncovered, work in that area should be stopped immediately and the ECO must report this to Heritage Western Cape. The heritage resource may require inspection by the heritage authorities, and it may require further mitigation in the form of excavation and curation in an approved institution.	✓	✓	✓		

## 5 RESPONSIBILITIES

This section deals with the responsibilities of various parties during the Construction Phase of any development.



## **5.1 HOLDER OF THE EA**

The holder of the EA and the property owner (SANPark) are the overseeing entity responsible for ensuring that all activities undertaken on the property comply with the Environmental Authorisation (EA) and associated Environmental Management Programme (EMPr) (& any other approval / licence / permit), as well as the management and maintenance of the site and protected vegetation.

The responsibilities of the holder of the EA / property owner include, but are not limited to the following:

- Ensure that **all tender documentation** include reference to, and the need for compliance with, the EA and EMPr as well as any other legally binding documentation, which include and are not limited to:
  - the Water Use General Authorisation (GA);
  - Forestry Licence.
- Be conversant with, and ensure that all Contractors, Sub-contractors, Engineers (and future senior site managers / personnel) are made aware of, and understand the conditions and recommendations, contained in the abovementioned documentation;
- Ensure that all Contractors, Sub-contractors and Engineers (during construction & dismantling activities) are made aware of their 'Duty of Care to the Environment' and that any damage or degradation of the natural environment within the bounds of the property will be not be tolerated and must be dealt with / remedied at the cost of the perpetrator;
- Take remedial and/or disciplinary action in circumstances where persons are found to be in contravention of the abovementioned legally binding documentation.

## **5.2 ENGINEERS, CONTRACTORS & SERVICE PROVIDERS**

The Engineers, Contractors and Service Providers are often the parties responsible for physically carrying out the construction activities for which majority of the recommendations in this EMPr are intended. Service providers and Contractors include: services, building contractors, 'handy-men' and engineers overseeing the installation and maintenance of services etc. The responsibilities indicated here are also relevant to Sub-Contractors.

The responsibilities of these parties include but are not limited to the following:

- Be conversant and compliant with the EA, the EMPr, and any relevant License, Permit or any legally binding documentation relevant to their operations;
- Have a responsibility to adhering to any conditions and recommendations laid out in above mentioned documentation;
- Prevent actions that may cause harm to the environment;
- Be responsible for any remedial activities in response to an environmental incident within their scope of influence;
- Liaise with the holder of the EA in complying with the EMPr, and in the event that any industry regulated standards are in contradiction with the EMPr or any other authorisations.
- Review and amend to any construction activities to align with the EMPr and Best Practice Principles;
- Ensure compliance of all site personnel and / or visitors to the EMPr and any other authorisations.

## **5.3 ECOLOGICAL CONTROL OFFICER (ECO)**

It is recommended that a suitably qualified Environmental Control Officer (ECO) be appointed to oversee all activities for the duration of the pre-construction and construction phases (i.e. construction activities, services, road works). The ECO must have at least 3 years' experience and proven competency as an ECO.

The responsibilities of the ECO include but are not limited to the following:

- Provide environmental induction training to Contractors on site prior to construction activities commencing
- Provide maintenance, update and review of the EMPr, if necessary;
- Liaison between the Project Holder of the EA, Contractors, Authorities and other lead stakeholders on all environmental concerns, including the implementation of the EMPr;
- Compilation of Environmental Control Reports (ECR) to ensure compliance with the EA, EMPr and duty of care requirements, where necessary;
- Compilation of the Environmental Audit Report or Environmental Completion Statement, after completion of construction (or as otherwise defined in the Environmental Authorisation), where necessary;
- Ensuring / guiding and monitoring compliance with the EA and EMPr and any legally binding documentation;
- Facilitating consultation with relevant environmental authorities (e.g. DEA&DP, DFFE, CapeNature or Municipality);
- Provide guidance and interpretation of the EA and EMPr where necessary;
- Issuing site instructions to the contractor for corrective actions required;
- The ECO is required to conduct regular site visits for the duration of the construction period, in order to ensure the Contractor receives the necessary induction and that all procedures are in place. Additional visits may be undertaken in the event of any unforeseen environmental accidents;
- The duration and frequency of these visits may be increased or decreased at the discretion of the ECO;
- Attendance of site meetings if required;
- Maintain a record of environmental incidents (e.g. spills, impacts, legal transgressions etc.) as well as corrective and preventative measures taken. This information must also be included in the ECR;
- Maintain a public complaints register in which all complaints and action taken must be recorded. This information must also be included in the ECR.

#### **5.4 ECO SITE VISIT FREQUENCY**

The following site frequency for ECO site visits has been determined:

- Every week during site clearing and demarcation activities;
- Bi-weekly during construction of the boardwalks & decks (fixed infrastructure);
- Monthly during installation of temporary / non-fixed infrastructure.
- 6 months post construction and site handover in order to inform the Completion Statement.

Ad hoc site visits may be undertaken in the event of any incidents or specific requests from the project holder of the EA or project team.

Note that this frequency is likely to overlap for the different phases of the development in which case the higher frequency shall apply.

#### **5.5 ENVIRONMENTAL INDUCTION & TRAINING**

The Holder of the EA in consultation with SANPark and the Contractor shall ensure that adequate environmental awareness training of senior site personnel takes place and that all construction workers, future on-site staff responsible during operation of the facility, as well as its seasonal disassembly, receive an induction presentation on the sensitivity of the site and importance of adhering to the conditions and provisions of the EA and EMPr. The presentation shall be

conducted, as far as is possible, in the employees’ language of choice. The Contractor must provide a translator from their staff for the purpose of translating, if this is deemed necessary.

As a minimum, training must include:

- Explanation of the importance of complying with the EA and EMPr and the employees accountability;
- Discussion of the potential environmental impacts of construction, operation & disassembly activities;
- The benefits of improved personal performance;
- Employees’ roles and responsibilities, including emergency preparedness ;
- Explanation of the mitigation measures that must be implemented when carrying out their activities;
- Explanation of the specifics of this EMPr and its specification (no-go areas, etc.);
- Explanation of the management structure of individuals responsible for matters pertaining to the EMPr.

Where staff turnover is high and with additional appointment of sub-contractors or operators, it may be necessary to undertake additional induction training sessions. The Contractors and Operators must keep records of all environmental training sessions, including names, dates and the information presented.

## 6 PRE-CONSTRUCTION DESIGN CONSIDERATIONS

It is recommended that sustainable design considerations are implemented during the planning phase to ensure that the impacts associated with the development are avoided, minimised or managed before construction commences.

<b>6.1 <u>STORMWATER MANAGEMENT PREPARATION</u></b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To prepare the site to minimise the negative impacts of stormwater			Damage to the environment caused by stormwater runoff - erosion		
<b>Management Actions</b>					
Apply the principles of Low Impact Development (LID) in the design of the drainage systems. Final design of the stormwater system must take place prior to construction to ensure timeous implementation.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Site Plans	Once off	Architect / Engineer	Prior to construction	Audit	Once off
<ul style="list-style-type: none"> <li>• If the road becomes very muddy and navigation becomes difficult, a combination of some / all of the following methods can be implemented: Improve drainage with cutoff drains, low berms across the road, and shaping the crows to drain downstream; compact the base layer &amp; add a binding agent such as cement if necessary, add a surface layer of fractured stone, sand &amp; fines &amp; compact to a smooth surface.</li> <li>• Placing gravel surfaces where necessary to enable drainage &amp; prevent mud. Alternatively, a small culvert can be placed along the up side of the road to divert water to an area where suitable under-road</li> </ul>					

drainage can be constructed. Small bolster humps and associated drains on the downward slope of the road verge drains flow into into well vegetated and stable areas.

- Drainage structures must be checked to ensure that there are no blockages or pollution that is blocking the free flow of water over the site.
- Erosion control measures should be in place in areas of water flow.

## 6.2 WATER RESOURCE PROTECTION

Management Statement		Impacts & Risks Avoided			
To minimise the use of scarce water resources by improving consumption methods		Unsustainable or wasteful use of water for construction and operation purposes.			
Management Actions					
a. Water storage and harvesting must be incorporated into the designs. Rainwater tanks must be shown on building plans.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Site Plans	Once off	Architect / Engineer	Prior to construction	Audit	Once off
b. Water efficiency must be incorporated into the design of the tents.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Site Plans	Once off	Architect	Prior to construction	Audit	Once off
<b>Dual Flush Toilets</b>					
All tents and ablution facilities should be fitted with dual flush systems.					
<b>Low flow shower heads</b>					
The installation of low flow shower heads can not only reduce water consumption by up to 50%, but also the energy required for water heating by up to 50% (Eartheasy, 2008).					
Low flow shower heads make use of either aerators or pulse systems to reduce the flow without compromising the quality of the shower. The choice of shower head is up to designer, but must have a flow of less than seven liters per minute.					
<b>Low flow Taps</b>					
Low flow tap use aerators to reduce the flow of the water. These are either built into the faucet or added as an aftermarket product. The faucets in bathrooms should have a peak flow of less than 10 liters per minute. It is not necessary to install aerators in kitchen sinks as they are seldom run without a plug. All bathroom basins must be fitted with low flow faucets.					

## 6.3 ENERGY RESOURCES

Management Statement		Impacts & Risks Avoided			
To minimise the use of energy resources by improving consumption methods		Excessive and unnecessary energy consumption			
Management Actions					

Incorporate energy efficiency into the design of the development					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Energy saving checklist	Once off	Applicant & SANParks	Ad hoc	Audit	Once off
<p><b>Heating:</b> <b>Gas</b> will be the primary source of energy for all heating of food, which will be prepared at the Diepwalle Station Tea-Garden / Kitchen, as well as for heating of basin &amp; shower water in the guest and staff tents, and Kitchen sink. The menu will be designed in such a way that lunches and dinners will be primarily focus around Tappas Style food which will minimise the requirements for major cooking and cooling facilities on site. This will further reduce the requirement for a massive power supply.</p> <p><b>Lighting:</b> A <b>Solar panel generator</b>, with invertor and batteries attached to a mobile trailer, will be used for lighting throughout the camp. The Solar generator mobile unit will be positioned next to the kitchen tents at night and then pulled into position in sunny areas within the camp clearing and/or at the Diepwalle Forest Station during the day, to charge the batteries installed as part of the unit. Fully charged back-up batteries will always be available, as well paraffin lamps &amp; candles.</p> <p>Stand-alone solar lights will be placed in sunny positions on the communal deck and boardwalk to illuminate these areas at night fall.</p> <p><b>Energy Efficient Lighting</b></p> <p>In terms of Best Practice, it is required that energy saving lighting fixtures be used throughout the entire development. It is therefore specified that Light Emitting Diode (LED) lighting be used as opposed to incandescent lighting. This is required for all internal and external lighting, including street lighting. Proximity / motion sensors should be used in areas where lighting for pedestrians is required.</p> <p>NO external High Pressure Sodium (HPS) or Metal Halide (MH) spot or floodlights should be installed.</p> <p>CF lighting uses quantities of mercury in the bulbs and tubes which pose serious environmental hazards. The mercury from one CF bulb can pollute many thousand litres of water if not treated correctly (Eden District Municipality, 2011). CF lighting (energy saving bulbs and tubes) must be correctly disposed of at registered Hazardous waste sites. Companies like Pick n Pay and Woolworths offer facilities to collect CF bulbs for recycling and disposal. The following should be considered when handling CF bulbs (eHow Home, 2011):</p> <p><b>Disposing of Burnt Out Bulbs</b></p> <ul style="list-style-type: none"> <li>- Seal the bulb inside two plastic bags, or one thick freezer bag, before disposal.</li> <li>- Find the nearest recycling station that handles hazardous materials. Check with your city's municipal office to see if there is a recycling program in your town.</li> <li>- Take the bulbs to the recycling station. Ask the people there about the process of giving them your bulbs and follow all their instructions.</li> <li>- Tell everyone you know who is using energy efficient bulbs how to properly dispose of them as the use of these bulbs is growing.</li> </ul> <p><b>If a Bulb Breaks</b></p> <ul style="list-style-type: none"> <li>- Open a window and leave the room. Let no one inside for at least 15 minutes.</li> <li>- Collect the fragments and powder with stiff paper or cardboard. Wear disposable rubber gloves. Do not use a vacuum cleaner.</li> <li>- Clean the entire area with a wet wipe or wet paper towel. Use adhesive tape to collect excess powder.</li> <li>- Seal all pieces and cleanup materials in a plastic bag. Follow the above procedures on disposal or recycling. Wash your hands completely afterward.</li> <li>- Dispose of the vacuum bag in the same manner the next time you vacuum the area. If it's a canister vacuum, wipe it completely clean.</li> </ul>					

## 6.4 FINAL / MICRO-SITING OF DECK FOOTPRINTS

Management Statement	Impacts & Risks Avoided
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Avoid large trees, protected trees & tree clumps as far as possible.			Removal of forest trees and associated habitats.		
<b>Management Actions</b>					
Final positioning and orientation of the camp structures, and the associated impact on surrounding trees, will need to be confirmed on site prior to construction, in collaboration with SANParks and under supervision of an appointed Environmental Control Officer (ECO) and botanist.					
Large trees should be incorporated into the alignment and design of decks as far as possible.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method Statement	Once off	Developer / contractor	Pre implementation	Audit	Once off

<b>6.5 DEMARCATION OF WORK AND NO-GO AREAS</b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To clearly define the work area and avoid impacting on No-Go Conservation Areas.			Negative construction impacts on natural and rehabilitated areas.		
<b>Management Actions</b>					
<p>a. Clearly identify and demarcate (with hoarding &amp;/or danger tape) the development area, area of works and spoiling areas. Work area / disturbance envelopes must be restricted to max. 2m around all deck / boardwalks.</p> <p>b. The wetland and pool buffer must be surveyed and demarcated with temporary wooden survey poles and danger tape. The delineated edge of the existing road must be demarcated / fenced to ensure vehicles do not make the road any bigger / wider.</p> <p>c. All drivers and workers must be informed that the buffer and wetland beyond the danger tape is a 'No-go' area unless specifically working on construction of the communal platforms in the buffer or boardwalks along the buffer edge.</p> <p>d. The vehicle parking area must be clearly demarcated with hoarding &amp; laminated signs. This should be limited to the turnaround / drop off point indicated in the SDP.</p>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method Statement	Once off	Developer / contractor	Pre implementation	Audit	Once off
<p>e. Construction materials, fuels &amp; chemicals may only be stored in a designated work area. Stockpiles and soil must all be covered by a geotextile or plastic covering, which must also be bunded (e.g., sandbags) when the piles are not in use on the site.</p>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method Statement	Once off	Developer / contractor	Pre implementation	Audit	Once off

f. Provide on-site sanitation and rest areas for personnel: <ul style="list-style-type: none"> <li>Toilets must be placed on a level platform before construction starts.</li> <li>Ablution facilities must be regularly maintained and cleaned.</li> <li>At least one toilet per ten to fifteen construction staff should be available.</li> </ul>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method Statement	Once off	Developer / contractor	Pre implementation	Audit	Once off

<b>6.6 <u>PLANT SEARCH &amp; RESCUE</u></b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
Rescue small plants & tree saplings of conservation concern from all disturbance footprints and along access road median & shoulders – for use in rehabilitation on site or elsewhere.			Destruction of transplantable plant species.		
<b>Management Actions</b>					
a. Obtain approval from SANParks & Dept.of Forestry for tree rescue operations – include in Forestry Licence Application. b. Search & rescue of saplings of particularly <i>Afrocarpus falcatus</i> , <i>Curtisia dentata</i> , <i>Ocotea bullata</i> & <i>Podocarpus latifolius</i> at possible tent & deck locations. c. Rescued plants should be transplanted elsewhere (e.g. in the clearing for aesthetical value) or moved to the Diepwalle Forest Nursery for rehabilitation post decommissioning or rehabilitation project elsewhere.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method Statement	Once off	Developer / contractor	Pre implementation	Audit	Once off

## 7 CONSTRUCTION CONSIDERATIONS

These Construction Phase requirements are aimed at using Best Practise Principles and / or specialist recommendations to manage the impacts on the environment during the construction of the development.

### 7.1 SITE CLEARANCE PLAN

Site clearance should be limited / restricted to areas where infrastructure is to be placed directly on the ground (staff & kitchen tents etc.), and undertaken in a systematic manner within the demarcated areas to minimise the impacts on the site. Holes for pole supports for boardwalks and deck platforms must be dug using an auger or by hand to minimise the footprint of disturbance.

The following table provides a methodology to implementing site clearance according to this EMP and the EA.

**Table 5:** Site Clearance Methodology.

No	Action	Scheduling
1	<b>Survey</b> no-go areas for demarcation and finalise layout on site under supervision of ECO, Botanist & SANParks.	Prior to construction
2	<b>Establish stockpile</b> (incl. waste disposal area, portable toilets etc.) The necessary ablution facilities must not be placed in in any of the delineated watercourses or wetland areas (including 20m buffer).	Prior to construction.
3	<b>Demarcate work and no-go areas</b> using correct demarcation methods.	Prior to construction.
4	Demarcate <b>protected areas as no-go areas</b> .	Prior to construction.
5	<b>Plant search &amp; rescue</b> of tree seedlings from work areas.	Prior to construction.
6	<b>Erosion control measures</b> must be put in place prior to any construction activities that would result in soil being exposed.	Prior to construction.
7	Weather forecasts from the South African Weather Bureau of up to three days in advance must be monitored on a daily basis to avoid exposing soil, works or materials during a storm event. This must be considered in conjunction with tide tables for beach construction work.	Construction
8	Undertake with manual vegetation clearing and trimming of trees within the demarcated work areas only – in terms of Forestry Licence.	Construction
9	Vegetation clearing should occur <b>in parallel with the construction progress</b> to minimise erosion and/or run-off. Completed areas must be rehabilitated and replanted with rescued plants.	Construction
10	Any biomass from the clearing activities must be stockpiled within the development footprint at an area / areas approved by the ECO. It is recommended that the biomass must be <b>chipped in situ</b> and stockpiled within designated areas within the footprint. Alternatively it must be removed and taken to an approved disposal site for biomass. <b>NO DUMPING IS ALLOWED.</b>	Construction
11	Any cleared areas that will not be immediately constructed or planted, must be covered with the wood chips or other mulch to prevent wind erosion.	Construction

### 7.2 ROAD & STORMWATER MANAGEMENT / MAINTENANCE

Management Statement	Impacts & Risks Avoided
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To prevent widening of access road & minimise the generation of contaminated stormwater.		Minimise damage to shoulder vegetation, sedimentation, erosion and / or undercutting			
<b>Management Actions</b>					
<ul style="list-style-type: none"> <li>The delineated edge of the existing road and parking area must be demarcated / fenced to ensure vehicles do not make the road any bigger / wider.</li> <li>All drivers and workers must be informed that the areas beyond danger tape are 'No-go' areas.</li> <li>Access road management should not be graded but rather manual repairs be done where needed – maintain as 'two-track road'. Placing gravel surfaces where necessary to enable drainage &amp; prevent mud.</li> <li>A small culvert can be placed along the up side of the road to divert water to an area where suitable under-road drainage can be constructed. Small bolster humps and associated drains on the downward slope of the road verge drains flow into into well vegetated and stable areas</li> <li>Minimise the quantity of stormwater entering cleared areas.</li> </ul>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method Statement	Once off	Developer / contractor	Pre implementation	Audit	Once off
<p>Any areas that are identified by the ECO as being prone to erosion must be suitably protected. During construction, the Contractor shall protect all areas susceptible to erosion by installing necessary temporary and permanent drainage works as soon as possible and by taking any other measures necessary to prevent stormwater from concentrating in streams and scouring along road edge etc.</p> <p>Any erosion channels developed during construction must be backfilled, compacted and restored to an acceptable condition.</p> <p>Stabilisation of cleared areas to prevent and control erosion and/or sedimentation shall be actively managed. Consideration and provision shall be made for the following methods (or combination thereof): brushcut packing, mulch or chip cover, straw stabilising, planting/sodding, soil binders and anti-erosion compounds, mechanical cover or packing structures (including the use of geofabric, log/pole fencing, etc.). Traffic and movement over stabilised areas shall be restricted and controlled, and damage to stabilised areas shall be repaired and maintained.</p> <p>In areas where construction activities have been completed and where no further disturbance would take place, rehabilitation and re-vegetation should commence as soon as possible. A suitable rehabilitation method statement must be submitted to the ECO for approval.</p>					
<b>7.3 <u>NOISE &amp; VIBRATION</u></b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To ensure nuisance from noise and vibration does not occur & impact of Forest fauna.			Nuisance impacts to Forest fauna & invertebrates.		
<b>Management Actions</b>					
a. Fit and maintain appropriate mufflers on earth-moving and other vehicles on the site.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance

As required	Initially when vehicle or machinery is introduced to the site and thereafter monthly. As required if complaints registered.	Contractor	During construction and operation	Audit	As required
b. Enclose noisy equipment such as generators and pumps.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
As required	Initially when vehicle or machinery is introduced to the site and thereafter monthly. As required if complaints registered.	Contractor	During construction	Audit	As required
c. Provide noise attenuation screens, where appropriate.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
As required	Initially when vehicle or machinery is introduced to the site and thereafter monthly. As required if complaints registered.	Contractor	During construction	Audit	As required
d. Where an activity is likely to cause a noise nuisance to Forest fauna, restrict operating hours to between 7am and 5pm weekdays and 7am to 1 pm Saturday, except where, for practical reasons, the activity is unavoidable. No working at night.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
As required	As required if complaints registered.	Contractor	During construction	Audit	As required

<p>Vibrations from the vehicle and generator engines negatively affect forest organisms on or in the ground and noise disturbs numerous species that use auditory cues for feeding and communicating. Important species to consider in this regard are amphibians (frogs), Chiroptera (bats) and many invertebrates (insects). Engine vibrations are well known as a deterrent for moles and other burrowing mammals. Importantly, vibrations and noise from generators can inhibit communication, predator prey interactions and habitat use in many invertebrate species. Specific to this study will be the effect of the generator on the communication of the frogs, habitat use and disturbance to moles and all round disturbance to forest invertebrates.</p>					
<b>7.4 TRAFFIC CONTROL</b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To manage and minimise the nuisance effect created by construction traffic on R339.			The development entrance access is on sharp bend on R339 and construction traffic is likely to temporarily affect road users.		
<b>Management Actions</b>					
Implement a traffic management strategy during construction.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method Statement	Daily	Contractor	During construction	Audit	As required
<ul style="list-style-type: none"> <li>Construction related activities should be timed where possible to avoid peak periods.</li> <li>No construction workers, apart from security personnel, should be allowed to stay on site overnight.</li> <li>Contractors appointed by the developer must ensure that workers are transported to and from the site daily.</li> <li>Construction related activities should comply with all relevant building regulations. In this regard activities on site should be restricted to between 07h00 and 17h00 during weekdays and 08h00 and 13h00 on Saturdays. No work should be permitted after 13h00 on Saturdays and on Sundays or on holidays.</li> </ul>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To manage and minimise access to and damage to single track private access road from vehicles passing each other.			Avoid public access to site & widening of road and damage to shoulder vegetation by passing each other.		
<b>Management Actions</b>					
<ul style="list-style-type: none"> <li>Implement a traffic management strategy during construction: Lock entrance gate at R339 access after hours.</li> <li>Make use of existing clearings adjacent to access road to allow vehicles to pass one another.</li> </ul>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Inspection of condition of road shoulders. Photographic.	Weekly	Contractor	During construction	Audit	As required

<b>7.5 WASTE MANAGEMENT</b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To minimise the waste load discharged to the environment. Improve waste disposal methods during construction.			Prevent pollution of forest environment (& consequent injury / death of fauna). Reduce waste volumes to landfill sites.		
<b>Management Actions</b>					
Reduce wastes by selecting, in order of preference, avoidance, reduction, reuse and recycling.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Record of volumes of material removed	As required	Contractor	As required	Audit	Records
Maintain a high quality of housekeeping and ensure that materials are not left where they can be washed or blown away to become litter.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Photographic	Weekly	Contractor	As required	Audit	Records
Provide animal-proof bins (with lockable lids) for construction workers and staff at locations where they consume food. NO food waste / scraps to be left on site.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Photographic	Weekly	Contractor	As required	Audit	Records
Conduct ongoing awareness with staff of the need to avoid littering.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Induction & tool-box talks	Weekly	Contractor	As required	Audit	Attendance registers
<b>7.6 STOCKPILE MANAGEMENT</b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		

<p>To manage soil stockpiles so that sediment in run-off are minimised and material sprawl is avoided.</p>	<p>Pollution due to dust and sediment run off. Expanding trampling &amp; damage to vegetation &amp; encroachment into no-go areas.</p>
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**Management Actions**

- Construction materials must be sourced, transported & stockpiled responsibly to minimise risk of contamination & pollution of site.
- Stockpiles and soil must all be covered by a geotextile or plastic covering, which must also be bunded (e.g., sandbags) when the piles are not in use on the site. This will prevent the material from washing away and contaminating the substrate of the site which likely still contains useful seeds and soil organisms.
- Wood for decking should be stockpiled in the staff quarters area, taking care to minimise the footprint of disturbance and not spread materials over an unnecessarily large area

Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Photographic	As required	Contractor	As required	Audit	Records

Keep topsoil and underburden stockpiles separate.

Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Visual inspection of stockpiles	Daily when stripping topsoil	Contractor	Continuously during construction	Audit	Records

**7.7 STORING FUELS & CHEMICALS**

<b>Management Statement</b>	<b>Impacts &amp; Risks Avoided</b>
<p>To ensure that fuel and chemical storage is safe, and that any materials that escape do not cause environmental damage.</p>	<p>Avoid hydrocarbon pollution to soil and watercourses / coastal environments</p>

**Management Actions**



- Minimise fuels and chemicals stored onsite.
- Temporary storage and disposal of hazardous waste will be done in compliance with relevant legislation (i.e. stored in sealable / covered containers with appropriate bunding).
- Refuelling areas (for chainsaws & cutting equipment to be in designated positions, with suitable mitigation to reduce the risk of hydrocarbon spills).
- All refuelling of vehicles may be done at the tented camp, and no fuel or oil for vehicles may be stored at the proposed camp site.
- If tools like electric drills are required on site, a generator will be necessary. This should be filled with fuel at the Diepwalle camp, and 2 x 5 L cans of fuel may be retained on site to refill the generator if required. Refilling must be undertaken with care (within drip trays) outside of the wetland buffer at the site of the staff camp indicated on the Layout.
- Install bunds and take other precautions to reduce the risk of spills.
- Vehicles entering the site must be checked for leaks of oil or fuel at the Diepwalle Forest Station camp before being permitted to enter the development site. Any vehicle with leaks must be immediately removed from the site until repaired.
- Vehicles with leaks must not be allowed to operate on the site until they have been repaired.
- Implement a contingency plan to handle spills, so that environmental damage is avoided.
- Spill kits must be available on site to clean up any minor hydro-carbon spillages.
- Sandbags or sawdust should be available on the site to ensure that any accidental oil or toxic material spills can be contained and stopped quickly.
- Any contaminated soil on the site must be removed by a registered hazardous waste service provider (Spill Tech, Interwaste, EnviroServ etc.).

**7.8 REHABILITATION & BOTANICAL MANAGEMENT**

Management Statement		Impacts & Risks Avoided			
To ensure that degradation to existing botanical components are minimised and that any rehabilitation is undertaken with conservation orientated approach.		To minimise the disturbance to existing flora To minimise the introduction and/or spread of weed species			
Management Actions					
Demarcate sensitive No-Go areas and protected trees to avoid damage during construction.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method statement	As required	Contractor / Owner	Continuously	Audit	Visual / photographic
Rehabilitation may only make use of indigenous vegetation, rescued from the site.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Visual photographic /	As required	Contractor / Owner	Continuously	Audit	Visual / photographic

<b>7.9 FAUNA MANAGEMENT</b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To ensure that impacts to native faunal species is minimised and / or avoided.			To minimise the impact to fauna		
<b>Management Actions</b>					
<ul style="list-style-type: none"> <li>Excavations &amp; activity sites to be demarcated to ensure plant &amp; fauna species not disturbed by human traffic during setup and deconstruction.</li> <li>Areas that are targets for clearing or AIP removal be done so strategically over time. This will limit the effects on the species as only small portions of habitat will be disturbed at one time.</li> <li>Not using a generator - minimising noise (no loud music etc.</li> <li>Creating boardwalks with removable sections, or sections raised 1 meter or more above the ground will allow the species to move freely though the area and limit the negative effects of linear infrastructure.</li> <li>All refuse facilities are animal proof and rubbish bins have lockable lids. Ensure that no food or food waste is left lying around.</li> </ul>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Ad hoc	As required	Contractor	Continuously	Audit	Visual / photographic
<b>7.10 SOCIAL REQUIREMENTS</b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To ensure equitable, fair and safe social interaction on construction sites			Loss of employment opportunities to the region		
<b>Management Actions</b>					
It is strongly recommended that the Contractor make use of local labour as far as possible for the construction phase of the project.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Employment records	Ad hoc	Contractor	Ad hoc	Audit	Once off
<b>Targets</b> <ul style="list-style-type: none"> <li>The contractor should endeavour to source local suppliers that are BEE compliant.</li> <li>The contractor must ensure that suitable procurement policies are in place that supports local economic growth.</li> <li>Locally sourced &amp; manufactured products must be used as far as possible.</li> </ul>					
<b>Site Security</b>					

Theft and other crime associated with construction sites is not only a concern for surrounding residents, but also the developer and the contractor.

Considering this, contractors need to be proactive in order to curtail theft and crime on and resulting from the construction site. It is recommended that the contractor develop a jobsite security plan prior to commencement of construction. This jobsite security plan should take into account protection of the construction site from both internal and external crime elements as well as the protection of surrounding communities from internal crime elements. All incidents of theft or other crime should be reported to the South African Police Service, no matter how seemingly insignificant.

**7.11 METHOD STATEMENTS**

Management Statement	Impacts & Risks Avoided
To ensure efficient communication mechanisms in the implementation of environmental performance requirements	Prevention of potential impacts are avoided during construction by means of correct communication

**Management Actions**

Method statements are written submissions by the Contractor to the ECO in response to the requirements of this EMP or to a request by the ECO. The Contractor shall be required to prepare method statements for several specific construction activities and/or environmental management aspects.

Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method statement	Ad hoc	Contractor	As required	Audit	Once off

Based on the specifications in this EMP, the following method statements are required as a minimum (more method statements may be requested as required at any time under the direction of the ECO):

- Demarcation of No-Go areas
- Site clearing
- Hazardous substances and their storage.
- Materials requirements & Sourcing.
- Solid waste control system.
- Fire control and emergency procedures
- Petroleum, chemical, harmful and hazardous materials storage, if any.
- Stormwater Management and Erosion Control.

**7.12 CEMENT BATCHING**

Management Statement	Impacts & Risks Avoided
Prevent contamination of soil & water resources by cement / concrete.	Cement powder has a high alkaline pH that may contaminate and adversely affect both soil pH and water pH negatively. A rapid change in pH can have consequences on the functioning of soil and water organisms as well as on the botanical component.

**Management Actions**

<ul style="list-style-type: none"> <li>All concrete batching must take place on the road or parking area.</li> <li>All batching must be done by hand in wheel barrows, or on 'dagga' boards, or plastic line bunds.</li> <li>All spill cement or slurry must be picked up immediate and re-used.</li> <li>No cement / concrete may be disposed of anywhere on site – remove.</li> </ul>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Method statement	As required	Contractor	As required	Audit	Method statement records

### 7.13 HERITAGE REQUIREMENTS

Management Statement	Impacts & Risks Avoided
To minimise the impacts of development, operation and maintenance of the Project on the heritage values in the Project area.	Ensure heritage impacts are minimised, and impacts outside of the approved disturbance area are avoided.

#### Management Actions

It is possible that subsurface historic material (e.g. old rubbish dumps) may be unearthed during construction, in which case the following HWC Standard Clause will apply:

“If during ground clearance or construction, any archaeological material or human graves are uncovered, work in that area should be stopped immediately and the ECO must report this to Heritage Western Cape. The heritage resource may require inspection by the heritage authorities, and it may require further mitigation in the form of excavation and curation in an approved institution.”

Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Site records	Ad hoc	Contractor	Ad hoc	Audit	Once off

- Should any heritage remains of potential cultural value be exposed during excavations, these must be immediately reported to the ECO and the Provincial Heritage Resource Authority of the Western Cape, namely Heritage Western Cape in terms of the national Heritage Resources Act (Act No. 25 of 1999). Heritage remains uncovered or disturbed during earthworks may not be disturbed further until the necessary approval has been obtained from Heritage Western Cape.
- Should any archaeological remains including (but not limited to) fossil bones, fossil shells, coins, indigenous ceramics, colonial ceramics, marine shell heaps, stone artefacts, bone remains, rock art, rock engravings and any antiquity be discovered during construction, they must be immediately reported to the ECO and Heritage Western Cape and not disturbed further until the necessary approval has been obtained.
- Should any human remains be uncovered, they must immediately be reported to the ECO and the HWC archaeologist, who can be contacted on **(021) 483 9685**. Construction in the area must cease immediately and the site may not be disturbed further until the necessary approval has been obtained.

## **7.14 HEALTH AND SAFETY**

The Contractor must ensure compliance with the Occupational Health and Safety (No. 85 of 1993). Of key importance is the following (Section 8 of the aforesaid act):

8. General duties of employers to their employees:

- (1) Every employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees.
- (2) Without derogating from the generality of an employer's duties under subsection (1), the matters to which those duties refer include in particular-
  - (a) the provision and maintenance of systems of work, plant and machinery that, as far as is reasonably practicable, are safe and without risks to health;
  - (b) taking such steps as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard to the safety or health of employees, before resorting to personal protective equipment;
  - (c) making arrangements for ensuring, as far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances;
  - (d) establishing, as far as is reasonably practicable, what hazards to the health or safety of persons are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in his business, and he shall, as far as is reasonably practicable, further establish what precautionary measures must be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons, and he shall provide the necessary means to apply such precautionary measures;
  - (e) providing such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of his employees;
  - (f) as far as is reasonably practicable, not permitting any employee to do any work or to produce, process, use, handle, store or transport any article or substance or to operate any plant or machinery, unless the precautionary measures contemplated in paragraphs (b) and (d), or any other precautionary measures which may be prescribed, have been taken;
  - (g) taking all necessary measures to ensure that requirements of this Act are complied with by every person in his employment or on premises under his control where plant or machinery is used;
  - (h) enforcing such measures as may be necessary in the interest of health and safety;
  - (i) ensuring that work is performed and that plant or machinery is used under the general supervision of a person trained to understand the hazards associated with it and who have the authority to ensure that precautionary measures taken by the employer are implemented; and
  - (j) causing all employees to be informed regarding the scope of their authority as contemplated in section 37 (1) (b).

The Occupational Health and Safety Act aims to provide for the health and safety of persons at work and for the health and safety of persons in connection with the activities of persons at work and to establish an advisory council for occupational health and safety.

Health & Safety on site is the responsibility of the contractor and the proponent.

Although this is not the function of the ECO, it is a standard requirement for building construction and must be monitored and evaluated by a suitably qualified Health & Safety person. It will not form part of any environmental audit in the future.

## 8 OPERATIONAL PHASE ENVIRONMENTAL MANAGEMENT REQUIREMENTS

The Operational Phase of this EMP refers to the day to day management activities that are required to ensure sustainability and the achievement of the principles and objectives of the development. The requirements are applicable to the proponent, any HOA that is put in place, all employees and all visitors to the property.

<b>8.1 <u>WASTEWATER / STORMWATER MANAGEMENT</u></b>					
<b>Management Statement</b>			<b>Impacts &amp; Risks Avoided</b>		
To ensure management of wastewater & stormwater during operation phase.			Overflow of wastewater or backwashing of pool polluting wetland / buffer with Chlorine & personal care-products.		
<b>Management Actions</b>					
<ul style="list-style-type: none"> <li>Backwashed water from pool &amp; hot tubs must be discharged to the wastewater tank for disposal at the Diepwalle Forest Station site.</li> <li>No pool / hot tub water may be discharged into the wetland or buffer area</li> <li>No stormwater runoff should be allowed to concentrate onto open spaces and roadways downstream of the property. Stormwater must infiltrate through the existing vegetation.</li> </ul>					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Ensure soft landscaping	Ongoing	Developer / HOA	As required	Audit	Audit

<b>8.2 <u>REHABILITATION OF NATURAL VEGETATION</u></b>	
<b>Management Statement</b>	<b>Impacts &amp; Risks Avoided</b>
To ensure that indigenous vegetation is encouraged to revegetate disturbed areas.	<ul style="list-style-type: none"> <li>Ongoing spread of alien invasive species.</li> <li>Ensure protected species and natural forest are taken into consideration.</li> </ul>
<b>Management Actions</b>	
<ul style="list-style-type: none"> <li>Applicant &amp; SANParks must practice ongoing alien invasive management.</li> <li>Plants that were rescued and that can't be re-used in the development footprint after construction must be donated to an indigenous nursery or must be used by Diepwalle and SANParks in other forest restoration projects in the Knysna forest.</li> <li>Ongoing monitoring and clearing of invasive plants on the site should occur.</li> </ul>	

Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Visual / photographic	Ongoing	Owner	As required	Audit	Audit
Retain and manage protected and indigenous vegetation.					
Method of monitoring implementation	Frequency of Monitoring	Responsible Party for implementing management action	Time period	Mechanism for monitoring Compliance	Programme for reporting on Compliance
Visual / photographic	Ongoing	Owner	As required	Audit	Audit
Clearing of Helichrysum & AIP removal to be done so strategically over time i.e. only small portions of habitat will be disturbed at one time. Alien plant removal & clearing areas directly surrounding the kitchen, dining and parking areas may also be prioritised as this will improve aesthetics and assist in preventing insects in these communal areas. No more than 25% of Helichrysum in clearing per season.					

## 9 DECOMMISSIONING PHASE ENVIRONMENTAL MANAGEMENT REQUIREMENTS

As mentioned above, should the concession period not be renewed / extended, the Holder of the EA, in collaboration with the landowner (SANParks) is required to remove all infrastructure (fixed & temporary) from the site, and rehabilitation it back to a pristine condition. All relevant legislation and policies must be complied with for the given period.

In general, in the following must be undertaken:

- No-Go areas must be demarcated prior to demolition. As with the construction and seasonal dismantling & reassembly requirements, a maximum disturbance area / envelope of 2m around the infrastructure (decks, boardwalk, tents etc.) must be maintained to limit trampling of vegetation.
- Adequate ablution facilities must be provided to demolition team/s during decommissioning.
- Work to remove items from the site must be undertaken in a similar manner recommended for the camp construction in that vehicles must stick to the road and not be overloaded, work may not be undertaken during rainfall, and the wetland and buffer are No-go areas. All vehicles must stick to the existing access track and turnaround point indicated on the SDP. No new tracks can be made, and no vehicles may enter the buffer or wetland.
- Demolition and removal of all decks, platforms, pool, hot tubs, tents, wate tanks etc. All waste materials (screws, wood cuts etc) must be collected in designated bins as work progresses for disposal off site. All wood must be stockpiled for removal at a site already disturbed (i.e. the staff camp), and every hole in the ground must be completely refilled with soil from the area (SANParks to provide a suitable source).
- Water from pool & hot tubs may be discharged into the wetland or buffer area.
- The site must be completely cleared of all waste or litter. final sweeps should be carried out to ensure that there is no litter or plastic debris remaining on the site. This includes anything that

may have fallen through cracks in the decks or walkways. Removal all materials that can harm wildlife: liquids such as fuels and oils, exposed wires and lighting.

- Any damage to the environment caused during decommissioning should be rehabilitated before the camp is closed. This includes repairs to road verges & parking areas where there is heavy vehicle traffic.
- Replanting of *Afrocarpus falcatus*, *Curtisia dentata*, *Ocotea bullata* and *Podocarpus latifolius* trees and other plant species rescued during initial construction phase (& maintained in the Diepwalle Forest Station). Revegetation of bare soil.

## 10 MONITORING

Monitoring is an important tool in determining the effectiveness of management actions by measuring changes in the environment. These could be in the form of fixed point photography where an area is photographed on a regular / seasonal basis to ascertain changes, monitoring of a particular aspect such as landscape integrity parameters, recordings of animal movement from fixed point etc. The most important aspect of any monitoring programme is **consistency and continuity**. This will ensure a level of scientific accuracy to determine baselines / thresholds and measure changes / deviations, which then drive management reactions.

To this end, a **monitoring plan** should be implemented. Ideally, a baseline monitoring assessment should be implemented prior to the project beginning as to understand how species occurrence changes during and post development. Although, this may not be of direct significance to the proposed project, it will hugely assist other projects of a similar nature going forward. The plan should include the implementation of **camera traps** and possible **recording devices for species detection**. **Invertebrate mortalities** should also be recorded periodically around the camp as a direct result of lighting in the evenings and at night. Collaborations between SANParks and local research institutions may be one way to approach this. Furthermore, it would be beneficial to keep a **record of interesting and unexpected animal species** that are seen in and around the camp. One possible record keeping that is recommended is that of iNaturalist (<https://www.inaturalist.org/>) as this makes records available and contributes to our knowledge of species through citizen science.

- The Applicant must acknowledge SANParks' right to undertake necessary conservation management activities in and in proximity to the Diepwalle site .
- The Applicant should participate in any SANParks-Private Parties forum, should this be formed, and to comply with any standards thereby agreed or established.
- The Applicant must acknowledge that failure to comply with any of the environmental standards and requirements would imply material breach of the PPP Agreement.

Any required monitoring reports must be made available to the competent authority as required.

The type and frequency of monitoring must include:

- During construction photographs must be taken from pre identified fixed points and a comprehensive record maintained;
- Incident Reports;
- Site meeting minutes.

### 10.1 MONITORING TIMEFRAMES SUMMARY

**Table 6:** Monitoring Timeframe Summary

MONITORING TIMEFRAMES		
Type	Frequency	Criteria



ECO visits	As per section 5.4	Site photographs / site diary
Record keeping	Monthly during construction.	Site photographs, method statements, site meeting minutes (if applicable)
	3 month post construction – during initial season of operation	Completion Statement
Auditing	Annually	Compliance with the EA, EMPr, municipal permits and any other approvals
Final Audit	3 month post decommissioning / site closure.	Compliance with the EA, EMPr, municipal permits and any other approvals

## 10.2 ENVIRONMENTAL AUDITS

- A final construction phase Completion Statement must be submitted within 3 months of completion of the initial construction of the site (start of the concession period). This Completion Statement must include the monitoring results as above, where applicable to construction.
- An independent Environmental Audit should be undertaken annually during the concession / operation contract, to confirm implementation of the operational & seasonal dismantling requirements.
- A final Environmental Audit must be undertaken three months after the final decommissioning / closure of site to confirm implementation of the complete site rehabilitation requirements, as required by SANParks.
- An audit checklist should be compiled as an appendix of the EMPr to ensure environmental compliance. Audit checks should be undertaken during construction / re-assembly, during operation and after each seasonal removal of the facilities on an annual basis.
- In addition, to the environmental compliance audits, the SANParks Environmental Manager and relevant Section Ranger will conduct site inspections from time to time. SANParks will monitor, evaluate and score the operations (based on the line items in the checklist) and that a score of less than 85% for three (3) consecutive audits would imply material breach of the PPP Agreement.

## 10.3 AUDIT REPORT FORMAT

In order to comply with the 2014 EIA Regulations, any audits must be undertaken using the following format:

**Table 7:** Environmental Audit Requirements

Appendix 7 of Regulation 326 of the 2014 EIA Regulations, as amended contains the required contents of an Environmental Audit Report. The checklist below serves as a summary of how these objectives & requirements were incorporated into this Audit Report.	
Objective	Description
The objective of the environmental audit report is to -	
(a) Report on – (i) the level of compliance with the conditions of the environmental authorisation and the EMPr, and where applicable, the closure plan; and	

Appendix 7 of Regulation 326 of the 2014 EIA Regulations, as amended contains the required contents of an Environmental Audit Report. The checklist below serves as a summary of how these objectives & requirements were incorporated into this Audit Report.

<b>Objective</b>	<b>Description</b>
(ii) the extent to which the avoidance, management and mitigation measures provided for in the EMPr, and where applicable, the closure plan achieve the objectives and outcomes of the EMPr, and closure plan.	
(b) Identify and assess any new impacts and risks as a result of undertaking the activity.	
(c) Evaluate the effectiveness of the EMPr, and where applicable, the closure plan.	
(d) Identify shortcomings in the EMPr, and where applicable, the closure plan.	
(e) Identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr, and where applicable, the closure plan.	
<b>Requirement</b>	<b>Description</b>
(1) An Environmental audit report prepared in terms of these Regulations must contain -	
(a) Details of –	
(i) The independent person who prepared the environmental audit report; and	
(ii) The expertise of independent person that compiled the environmental audit report.	
(b) A declaration that the independent auditor is independent in a form as may be specified by the competent authority.	
(c) An indication of the scope of, and the purpose for which, the environmental audit report was prepared.	
(d) A description of the methodology adopted in preparing the environmental audit report.	
(e) An indication of the ability of the EMPr, and where applicable the closure plan to –	
(i) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity on an on-going basis;	
(ii) Sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the closure of the facility; and	
(iii) Ensure compliance with the provisions of environmental authorisation, EMPr, and where applicable, the closure plan.	
(f) A description of any assumptions made, and any uncertainties or gaps in knowledge.	
(g) A description of an consultation process that was undertaken during the course of carrying out the environmental audit report.	
(h) A summary and copies of any comments that were received during any consultation process.	

Appendix 7 of Regulation 326 of the 2014 EIA Regulations, as amended contains the required contents of an Environmental Audit Report. The checklist below serves as a summary of how these objectives & requirements were incorporated into this Audit Report.

Objective	Description
(i) Any other information requested by the competent authority.	

Any other requirements of the EA or any other authorisations must be incorporated into an Audit where necessary.

## 11 NON-COMPLIANCE

Any person is liable on conviction of an offence, in terms of regulation 49(a) of the National Environmental Laws Second Amendment Act (Act 30 of 2013), to imprisonment for a period not exceeding ten (10) years or to a fine not exceeding R10 million or an amount prescribed in terms of the Adjustment of Fines Act, 1991 (Act No. 101 of 1991).

It is the responsibility of the ECO to report matters of non-compliance to SANParks and the Employer's Representative or the Holder of the EA, if no representative is in place. It is the responsibility of the Holder of the EA, and not the ECO, to report such matters of non-compliance to the competent Authority.

### 11.1 PROCEDURES

The Holder of the EA shall comply with the environmental specifications and requirements of this EMP, any Approval / License issued and Section 28 of NEMA, on an on-going basis and any failure on his part to do so will entitle the authorities to **impose a penalty**<sup>2</sup>.

In the event of non-compliance the following recommended process shall be followed:

- The competent authority shall issue a **Notice of Non-compliance** to the Holder of the EA, stating the nature and magnitude of the contravention.
- The Holder of the EA shall **act to correct the transgression** within the period specified in by the authority.
- The Holder of the EA shall provide the competent authority with a **written statement** describing the actions to be taken to discontinue the non-conformance, the actions taken to mitigate its effects and the expected results of the actions.
- In the case of the Holder of the EA failing to remedy the situation within the predetermined time frame, the competent authority may recommend halting the activity and SANParks may impose a hold on the PPP Agreement.
- In the case of non-compliance giving rise to physical environmental damage or destruction, the competent authority shall be entitled to undertake or to cause to be undertaken such **remedial works** as may be required to make good such damage at the cost of the Project applicant.
- In the event of a dispute, difference of opinion, etc. between any parties in regard to or arising out of interpretation of the conditions of the EMP, disagreement regarding the implementation or method of implementation of conditions of the EMP, etc. any party shall be entitled to require that the issue be referred to **specialists and / or the competent authority** for determination.

<sup>2</sup> A penalty may not necessarily be a monetary fine but could also be a stoppage in work time, additional mechanisms to prevent pollution or degradation at the cost of the proponent or even a directive to cease activities from the competent authority.

- The competent authority shall at all times have the right to **stop work** and/or certain activities on site in the case of non-compliance or failure to implement remediation measures.'

## 12 REFERENCES

**Aquanotion, 2008.** [www.twoflush.com/conservbody.htm](http://www.twoflush.com/conservbody.htm). Aquanotion Ltd, Alberta, Canada.

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