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## ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR A SMALL CAMPING RESORT, ASSOCIATED INFRASTRUCTURE AND TOURISM FACILITIES ON PORTION 152 OF THE FARM UITZICHT NO. 216, KNYSNA

### BRENTON COVE

Compiled in terms of the National Environmental Management Act, 1998 (Act 107 of 1998, as amended)  
and the Environmental Impact Assessment Regulations 2014 (as amended)



|                    |                        |
|--------------------|------------------------|
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**ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)  
FOR  
BRENTON COVE**

**Submitted for: Public review and comment – submission with Revised Draft BAR**

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### National Environmental Management Act

An EMPr must comply with Section 24N of NEMA and the Environmental Impact Assessment Regulations 2014 (GN 982 Appendix 4) which requires that it must include the following:

| REQUIREMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REPORT SECTION                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| (a) details of-<br>(i) the EAP who prepared the EMPr; and<br>(ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Section 3<br/>Annexure J</b> |
| (b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Section 2</b>                |
| (c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Annexure B</b>               |
| (d) a description of the impact management [objectives] outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-<br>(i) planning and design;<br>(ii) pre-construction activities;<br>(iii) construction activities;<br>(iv) rehabilitation of the environment after construction and where applicable post closure; and<br>(v) where relevant, operation activities;                                                                                                                                          | <b>Section 6</b>                |
| (e) a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Section 6</b>                |
| (f) a description of proposed impact management actions, identifying the manner in which the impact management [objectives and] outcomes contemplated in paragraph (d) [and (e)] will be achieved, and must, where applicable, include actions to –<br>(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;<br>(ii) comply with any prescribed environmental management standards or practices;<br>(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and<br>(iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable; | <b>Section 6</b>                |
| (g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Section 6</b>                |
| (h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Section 6</b>                |
| (i) an indication of the persons who will be responsible for the implementation of the impact management actions;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Section 6-8</b>              |

|                                                                                                                                                                                                                                                                                                         |                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| (j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;                                                                                                                                                                                      | <b>Section 3.1.2, 7-8</b> |
| (k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);                                                                                                                                                                                           | <b>Section 3 and 8</b>    |
| (l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;                                                                                                                                                                                       | <b>Section 6-8</b>        |
| (m) an environmental awareness plan describing the manner in which-<br>(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and<br>(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and | <b>Section 3.1.3</b>      |
| (n) any specific information that may be required by the competent authority.                                                                                                                                                                                                                           | <b>N/A</b>                |
| 1. Where a government notice gazetted by the Minister provides for a generic EMPr, such generic EMPr as indicated in such notice will apply.                                                                                                                                                            | <b>N/A</b>                |

## 1 INTRODUCTION

**HillLand Environmental** has been appointed as the Environmental Assessment Practitioners (EAPs) by the Applicant, **Brenton Cove CC**, represented by **Mr. R Neethling**, to ensure compliance with the regulations contained in the National Environmental Management Act (NEMA, No 107 of 1998, as amended) and Environmental Impact Assessment Regulations (2014, as amended) for the proposed camping resort on Portion 152 of Farm Uitzicht No 216, Brenton on Lake, Knysna.

This EMPr is submitted as per the requirements of a Basic Assessment in terms of NEMA.

The monitoring of compliance of the EMPr is mandatory in terms of the construction phase and the ongoing operational phase for the camp resort.

Due to the small scale of the project, it is recommended that an external audit is required every **5 years**.

This EMPr, in terms of the NEMA duty of care, also includes the rehabilitation phase, property management and ongoing alien invasive clearing (operational phase) that were highlighted as part of the process, and it will be the landowner's responsibility to ensure that the establishment of the camp resort complies with the EA (once issued) and EMPr as issued.

The report is divided to provide clear distinction between the Construction Phase and the ongoing Operational aspects (tourism, management, rehabilitation and alien clearing) of the property.

This EMPr **must be provided to the contractor undertaking the construction and to any 3<sup>rd</sup> party who may be involved with the operational aspects of the tourism component of the property.**

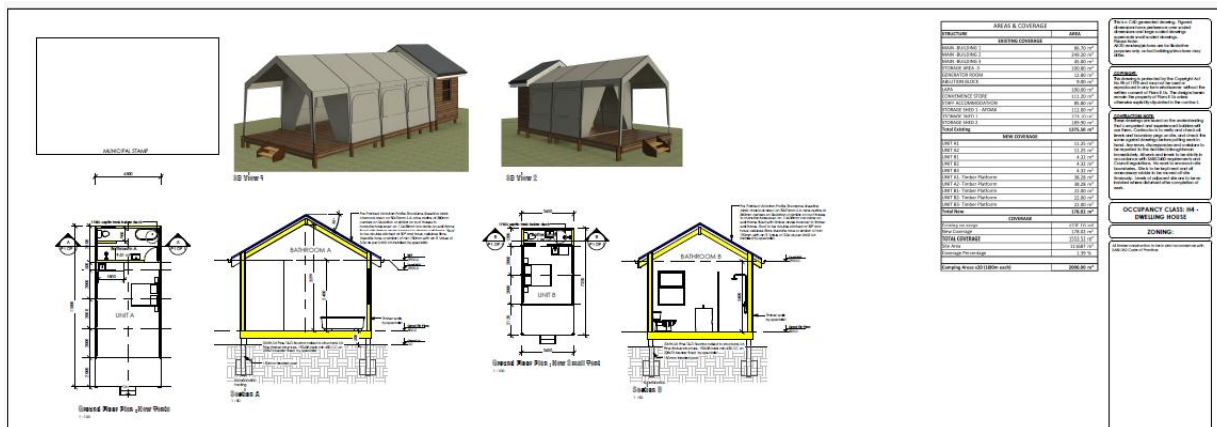
**The EMPr is regarded as binding on all contractors, sub-contractors, agents, consultants, construction and staff on the property.**

Certain fundamental aspects are therefore of importance:

- The EMPr and these requirements are binding on all contractors, their sub-contractors, landowner and farm staff.
- **It is the responsibility of the applicant/ landowner** to ensure that his/her staff or agents are made aware of the environmental requirements for working on the property.
- The contractor(s) and /or landowner (as the case may be) will be required to make good any damage caused through their actions or the actions of their sub-contractors and/or staff (in addition to any penalties for non-compliance issued).

Please note that this EMPr is a dynamic document, which will grow and be changed with new proposals in the field as the need arises.





**Figure 1: All 25 proposed camping sites will be created on raised wooden decks with a small private bathroom.**

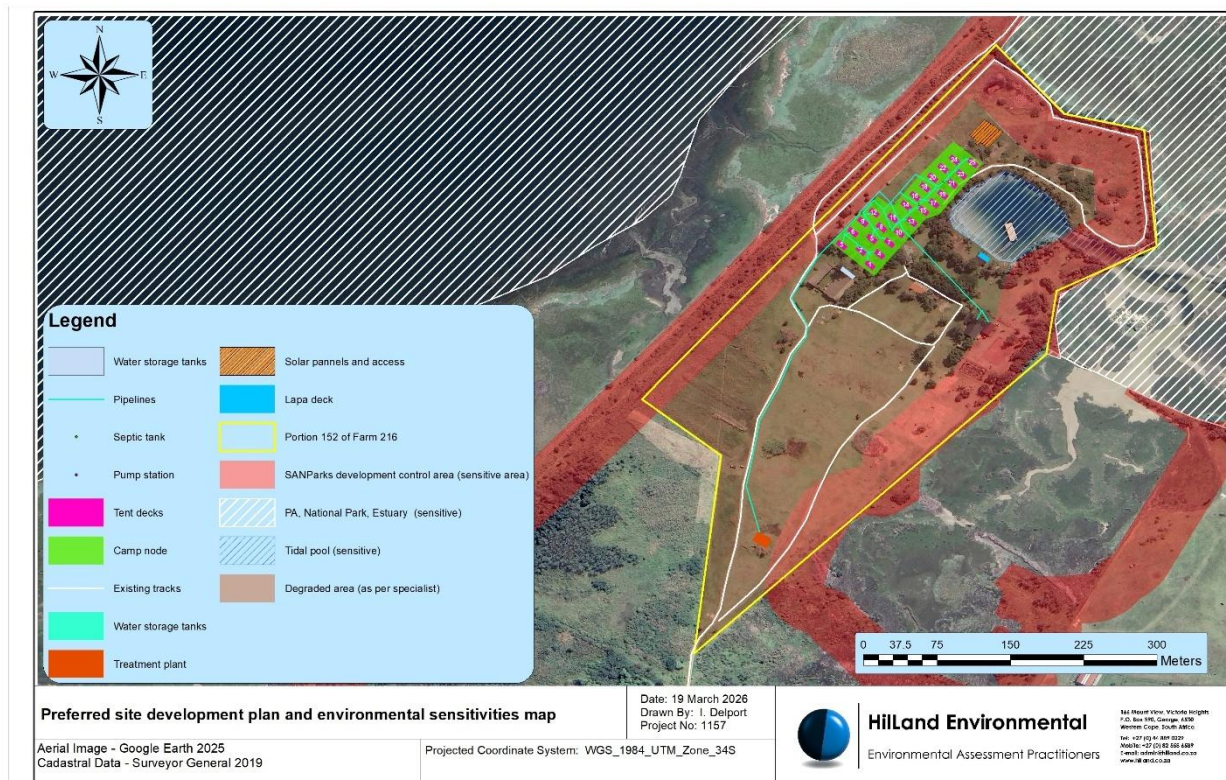


Figure 2: Proposed site plan showing the proposed camping area node and the proposed expansion to the existing Lapa with a wooden deck and proposed associated infrastructure





**Figure 3 Plan showing the new proposed services - note all services fall outside of the SANParks Development Control Area (green hatching)**

The proposal entails the establishment of a small camping resort on the property which will involve the following:

- Twenty five (25) permanent wooden decks, each with a small bathroom will be constructed on which a more luxury tent will be erected, associated services, access track and grass parking will be provided.
- By controlling the tent for each of the 25 sites, the exact numbers of guests can be limited and the potential of guests arriving with "non-conforming" camping equipment can be completely eliminated. Guest will pre-book and arrive with their tented accommodation ready and waiting for them.



**Figure 4 3D representations of the proposed decks with a permanent bathroom and space for tent to be erected.**

- Existing structures will be renovated where required and used by the landowner or as tourist facilities.
- The small deck area will be added to the existing lapa at the pond and the lapa will act as the dining facility for the resort.

Associated services will entail the following:

**Summary on the potable water:**

- Total water demand is 9000 litres per day for the 25 camping sites
- Required storage – 2x 9000 litres = 18 000 litres or 2x 10 000 litre jojo tanks.
- Water supply –
  - Rainwater harvesting – from all existing roof structures – the current rainwater storage capacity already exceeds the required 18 000 litres. Water will be chlorinated in the rainwater tanks and pumped to the 2 main supply tanks.
  - Borehole – has a supply of 18 000 litres per hour. This means 0.5 hrs of pumping will provide the entire daily demand requirements. Water from the boreholes will be sterilized with chlorine or UV before being pumped to the storage tanks.
  - Municipal supply – the property has existing municipal potable water supply that services all the existing water uses on the property.

As per GRDM comment: filled by rainwater to be marked as non-potable if not treated to comply with SANS 241: 2015 Specifications for Drinking Water. The borehole water to be treated before utilizing the water as potable water to ensure compliance with SANS 241:2015 (Specifications for drinking water).

- Water reticulation – water will be pumped in 75mm ring main with 20mm connections to all structures and buildings.
- Toilet and garden water – a separate recycling system will be used for water for toilet flushing and garden irrigation from the treated effluent at the sewage treatment package plant as part of the recycling of treated effluent. The sustainability of the project in terms of wise water use, will be maximised through the recycling of the treated effluent for flushing toilets and through not using potable water for garden irrigation.

**Summary on the sewage:**

- Sewage daily treatment 8600 litres (when at 100% occupancy)
- Internal sewage reticulation will be collected in sealed below ground plastic tanks of 5 x 3 600 litre capacity – (approximately 1 for every 5 tents / structures),
- Outflow from the tanks piped to a sealed underground sewage pump station of 5000 litre capacity
- Sewage will be pumped from the sealed tank to the sealed package plant with the capacity to treat 8 600 litres per day (at full occupancy).
- Water will be treated to General Standards
- Treated water will be sterilized and pumped to 2x 10 000 litre storage tanks
- From the tanks the water is recycled for use in garden irrigation and toilet flushing
- The treatment plant will be a Fluidco installed and managed and maintained system.
- As a precaution, all tanks will have a sump to ensure that should there be any overflow or accidental spillage or leakage, this cannot pollute any surrounding water body or ground water.

**WULA – note:**

- Any surplus water from the water treatment plant that is not recycled (closed treatment and use cycle) for toilet flushing must be discharged by municipal honey sucker tanker / private honey sucker tanker to the municipal sewage treatment works **until such time as the Water Use Licence for irrigation use of the treated effluent has been issued.**
- Potable water for the project will make use of ONLY the captured rainwater harvesting and existing potable municipal supply **until such time as the use of supplementary borehole water has been granted a Water Use Licence.**

**Electrical supply**

- The property has an existing electrical connection, however, the proposed facilities will connect to **solar power** that will be installed (infrastructure shown on the SDP).
- Municipal electrical supply is available and used on site currently.
- All cooking and water heating will be done using gas appliances.

**Access**

- The additional 25 cars making use of the camping site will access from the existing municipal roads in Brenton-on-Lake. There are strict speed limits due to the wildlife.
- The engineers confirm that this will not have any impact of traffic flow in Brenton-on-Lake.
- Existing roads and tracks on the property will be used, supplemented with a G5 or grass blocks where necessary. Internal speed limits will be restricted by the tracks specifically due to the free roaming wildlife in the area
- Stormwater will not be concentrated and will be dissipated in the existing garden areas (grass swales).

**Refuse**

- Refuse will be collected on site and divided into general waste (black bags), recyclable waste (blue bags) and compostable waste (plant matter) and this will be collected by the municipality

as part of the weekly refuse collection service available in the area. Compostable materials will continue to be composted and used on site in the landscaping.

•

The construction and operational phases of the proposed camp site will be done in accordance with an Environmental Management Programme (EMPr) that includes “camping rules” which will be set by the owner in order to ensure compliance. Guests who do not abide by the rules set, will be requested to leave the property or will not be admitted to the property.

The property has access to the Knysna Estuary (as do most waterfront properties) and therefore visitors will be able to canoe /kayak. They will access the water using the existing jetty and slipway and will be compelled to follow the GRNP rules and regulations relating to the Quiet Zone of the estuary in accordance with the Knysna Estuary Management Plan.

No power boats will be allowed to access the Knysna Estuary from the property or be moored in the pond area as the **Quiet Zone** is restricted to non-motorised watercraft.

No motorbikes and drones will be permitted based on the proximity to the estuary and limiting any nuisance impacts to the surrounding area.

Calculations:

- The camping area and associated services will require the **use of approximately 8000m<sup>2</sup>**.
- **There will however be only temporary vegetation clearing (for service installation) and limited loss of vegetation (for the 25 decks) – the area is all transformed gardens and lawns and no natural vegetation will be cleared.** As confirmed by the specialist, it will not require the clearance of any sensitive species and/or habitat as the entire site is transformed.

The following general camping rules for Brenton Cove Camping are proposed (subject to additions and alterations based on the process):

**General Camping Rules for Brenton Cove Camping.**

**Brenton Cove is within the Western Heads Goukamma Conservancy and needs to be treated as such.**

**1. Check-In and Check-Out Times**

**Arrival:** Accommodation may be occupied from 14h00 on the day of arrival.

**Departure:** Sites must be vacated by 10h00 on the day of departure.

**2. Noise Restrictions**

No noise and loud music between 21h30 and 06h00 to maintain a peaceful environment.

**3. Driving Regulations**

Vehicles must remain on designated roads; off-road driving or driving on closed/no-entry roads is prohibited.

**Speed Limits:** 10 km/h inside the camping area and the 20km/h restriction in Brenton-on-Lake must be respected.

**4. Wildlife Interaction**

Feeding or disturbing wildlife can lead to animals becoming aggressive and dangerous.

Do not be fooled into thinking that the peaceful looking bushbuck are not extremely dangerous.

**5. Flora and Fauna Protection**

No removing, damaging, or possessing any plant, animal, or natural item.

**6. Fire Regulations**

Fires are only permitted in designated braai (barbecue) areas.

Knysna had an incredibly destructive fire on the 7<sup>th</sup> June 2017 and any fire must be very carefully monitored.

Collecting firewood from the environment is prohibited; purchase from local shop.

**7. Safety Precautions**

Be aware of your surroundings, including potential wildlife encounters. Store valuables safely.

**8. Maintain Cleanliness**

Dispose of waste properly using provided bins. Littering is prohibited to protect wildlife and the environment.

**9. Pets**

There are free roaming bushbuck in the area - No pets are allowed in the camping area. Guide dogs for visually impaired guests are an exception, but only with prior consultation.

**10. Firearms and Dangerous Weapons**

All firearms and dangerous weapons must be declared upon entry and will be safely stored for you.

**11. Prohibited Items**

The use of drones, motorbikes and power boats is prohibited.

**12. Respect Fellow Campers**

Be considerate of other campers by minimizing noise and sharing communal facilities respectfully.

**13. Emergency Preparedness**

Carry a basic first aid kit, know the location of the nearest medical facilities, and have emergency contact numbers accessible.

**14. Canoeing/Kayaking**

Canoeing/Kayaking is allowed on the Knysna Estuary. Kayaks are available for rent from office.

**15. Knysna Salt Marshes**

This accommodation site is surrounded by the salt marshes and must not be trespassed.

**16. Garden Route National Park**

**The Knysna Estuary is a Protected Area and the rules of the SANParks regarding the estuary and its use MUST be respected at all times.**

**Access to the Knysna Estuary** – it is important to note that the GRNP is on the boundary of the property however public access to the GRNP is subject to the SANParks rules in relation to public access.

Access to the water MUST comply with the SANParks requirements for watercraft and use areas in relation to the GRNP Estuary Management Plan.

The owner intends to have a few canoes or kayaks that are duly registered with SANParks for guests to make use of.

If a guest arrives with an own non-motorised watercraft – it must be in possession of any necessary SANParks permit or approval. No fishing or bait collection from the property is permitted.



**Figure 5: Brenton-on-Lake public slipway and access – available to the general public clearly indicating the local rules and regulations. Similar signage will be requested to be installed on the boundary of the property to inform any guests leaving the property and entering the estuary.**

Quiet zone description and allowable as per the management plan:



**Quiet zone****Quiet zone objective**

The main objective of the tourist-orientated zone which comprises of both quiet marine (and estuarine) and terrestrial components is to provide non-motorised medium to high volume visitor access to areas whilst limiting impacts by not providing neither infrastructure for motorised access nor accommodation facilities.

**Quiet zone characteristics**

This zone is characterised by unaccompanied non-motorised access to areas which generally retain a natural appearance and character. Access is controlled. Visitors are allowed accompanied or unaccompanied access, mainly on foot, for a wide range of experiences. A larger number of visitors are allowed within the quiet zone, permitting more frequent visitor contact when compared to the primitive zone (which is not included in the zonation of the Knysna Estuary). For the quiet marine and estuarine zone, unaccompanied, non-motorised activities are allowed in the area but only for canoeing, sailing or non-motorised vessels / boats. Anchoring and/or overnighting by sailing vessels/boats is not allowed. Within this zone, more sensitive areas must be protected by precinct level planning, which should direct development and utilisation to more robust areas. This zone can also provide non-motorised access within low and high intensity leisure zones away from vehicular access roads.

**Quiet zone visitor activities and experience**

Estuarine activities are limited and experience equates to relaxation in a natural environment. Access is allowed for non-motorised/sailing vessels/boats only. No anchoring or overnighting is permitted by sailing vessels/boats. Only non-motorised activities (canoeing, sailing, etc.) are permitted. Interaction with other users: Infrequent interaction between user groups.

**Quiet zone limits of acceptable change**

Biophysical environment: Some deviation from a natural/pristine state is allowed, but care should be taken to restrict impacts on the environment by managing non-motorised users, vessel numbers, resource-use, etc.

Aesthetics and recreational environment: Activities which impact on the relative natural appearance and character of the area should be restricted, as the presence of larger visitor numbers and the facilities required may impact on the feeling of “wildness” experienced within this zone.

**Quiet zone facilities**

Type and size: Access by non-motorised/sailing vessels/boats only. No anchoring or overnighting is permitted by sailing vessels/boats. No infrastructure in the marine or estuarine areas, only zone demarcations.

Sophistication of facilities: only zone demarcations.

Audible equipment and communication structures: None. Allowed, but must be managed to retain a relative level of solitude.

Access: Access by non-motorised/sailing vessels/boats only. No anchoring or overnighting is permitted by sailing vessels/boats.

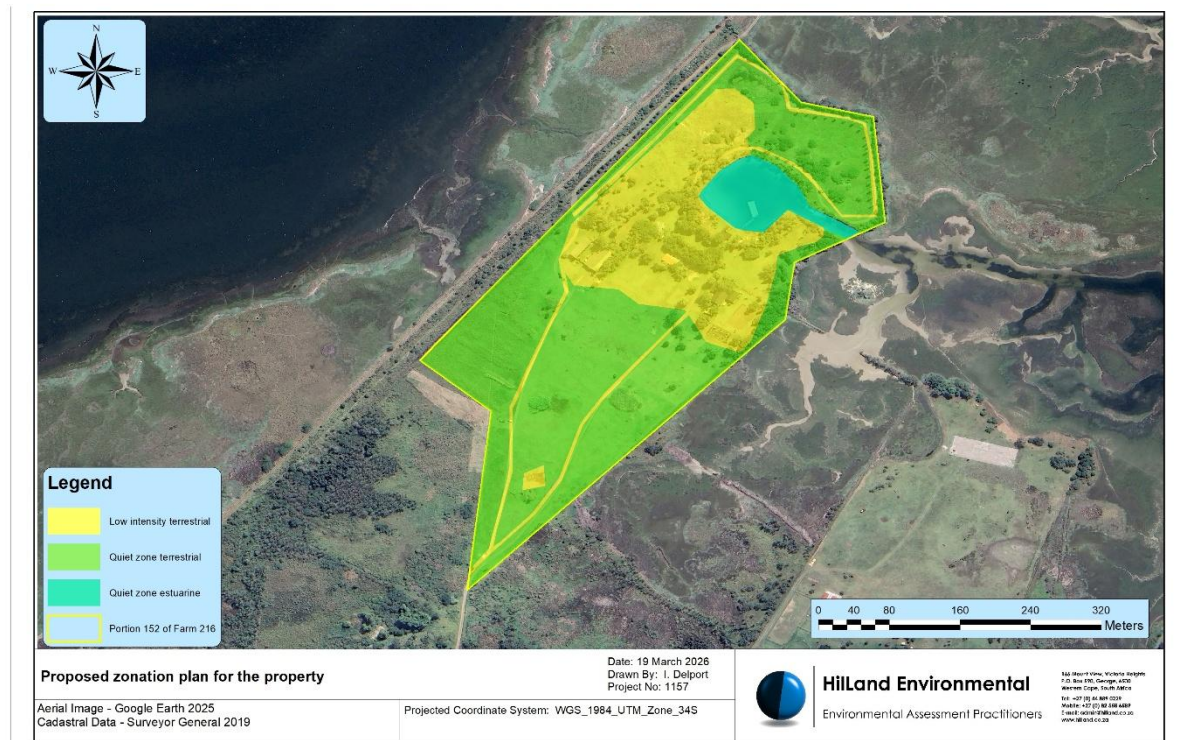
**Quiet zone infrastructure**

Limited permanent management infrastructure is permissible in this zone, to service tourist and management needs. Given the potentially high-volume tourist usage of the zone, park operations staff may need to service tourist facilities in this zone.

**Access to the railway line** – the Heritage Outeniqua Choe-Tjoe line runs adjacent to the property. This line is NOT accessible to guests in any way and guests are NOT permitted to walk along the line as this will be contrary to the safety requirements of the line. The line is in the process of being repaired and reinstated since being out of service since the 2006 flood event.

**SANParks Protected Environment Development Control Area** requires that activities proposed within 50m of the High-Water Mark of the Estuary will require approval from SANParks. The proposed activities have been specifically located outside of this area.

## 2.1 PROPERTY ZONATION PLAN



**Figure 6 Potential zonation use map for the property. Yellow = low intensity terrestrial, Green = quiet zone terrestrial, Blue = quiet zone estuarine**

| Area                      | Description                                                                                                                                                                                                                                                                                                                    |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Low intensity terrestrial | Existing residential use and low intensity leisure and accommodation - Proposed use for tourism accommodation and infrastructure for the small camp with low numbers. Camps without large commercial facilities.<br><br>Motorised and non-motorised access. Numbers of visitors higher than remote, primitive and quiet zones. |
| Quiet zone terrestrial    | Allows unaccompanied non-motorised access to areas generally retaining a natural appearance.<br><br>Access is not specifically controlled.<br><br>Proposed use for walking, hiking, bird watching etc. as the area is adjacent to the GRNP quiet estuarine area.                                                               |

|                      |                                                                                                                                                                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | Rehabilitation, restoring and conservation to be implemented within these areas which will entail continued implementation of alien clearing and natural restoration of indigenous vegetation.                                                                         |
| Quiet zone estuarine | The manmade tidal pond links to the adjacent GRNP quiet zone – use of non-motorised vessel access only proposed.<br><br>Allowable as per SANParks Estuary Management Plan: Allows unaccompanied non-motorised access to areas generally retaining a natural appearance |

### 3 TERMS OF REFERENCE

The main terms of reference of this EMPr is to identify and mitigate any potential negative environmental impacts that may be associated with the construction and creation of cultivation fields in accordance with the site layout plan.

#### **The full and approved EMPr must be made available to all staff working on the project**

Certain fundamental aspects are therefore of importance:

The EMPr and these requirements are binding on all contractors, their sub-contractors and farm staff.

**It is the responsibility of the applicant/ holder /developer /owner** to ensure that any contractor(s), sub-contractor(s) or staff is made aware of the environmental requirements.

**The contractor or landowner (as the case may be) will be required** to make good any damage caused through their actions or the actions of their sub-contractors or staff (in addition to any penalties for non-compliance issued).

#### 3.1 ENVIRONMENTAL CONTROL OFFICER (ECO)

An Environmental Control Officer (ECO) must be appointed **prior to commencement of any construction works for the development phase**, to oversee construction on-site, ensure compliance with the Environmental Authorisation (EA) and the EMPr and to assist with issues as they may arise on-site during the operational phase.

As the project is small scale and will be ongoing, it is anticipated that the ECO will be called on to offer advise as and when required by the owner to ensure that the construction rehabilitation and monitoring requirements of the EMPr and EA are complied with.

It will be the ECO's responsibility to ensure that the mitigation / rehabilitation measures and recommendations referred to in the EA are implemented and to ensure compliance with the provisions of this EMPr. The ECO will undertake the required monitoring and produce the associated compliance reports.

The applicant will be responsible for the remuneration of the ECO and any other expenses encountered in the process of environmental monitoring of the construction.

##### 3.1.1 SELECTION OF THE ECO

The appointed ECO must be able to demonstrate that (s)he is of sufficient competency to undertake the required task. This includes:

- Previous experience of environmental control of similar sites;
- Experience or qualifications for the relevant fields;
- Working experience with contractors; &
- Intimate knowledge of the particular proposal and expected areas of concern.

---

### 3.1.2 ROLES AND RESPONSIBILITIES OF THE ECO

The ECO will undertake the following tasks:

- Ensure **compliance** with the EMPr at all times during the pre-construction and construction phase;
- Ensure **compliance** with relevant management conditions of the EA (once issued) during the pre-construction and construction phase;
- Meet with the contractor/ staff to set out the environmental parameters within which they must work (pre-construction and construction phase);
- Provide an **Environmental Induction (Environmental Education)** prior to the commencement of any work (pre-construction phase (prior to commencement of activities));
- Indicate where **all no-go areas** are to be demarcated (all areas outside of the camp sites) and to ensure adherence to these delimitations at the induction session **BEFORE** any construction or site clearance commences on-site (pre-construction phase);
- Indicate where **erosion protection and siltation prevention measures** are required or need to be supplemented and to ensure correct implementation;
- Advice on **rehabilitation/landscaping measures** to be implemented;
- Check up on general environmentally friendly construction practices (e.g. no littering, safe and secure environment, contamination risks, etc.);
- The ECO should visit the site **monthly during the physical construction** and thereafter can be **reduced to once every 6 months during the operational phase**, or as required by the applicant when advise is required.
- It is recommended that the ECO provides applicant with feedback following any site visit to provide mitigation measures for implementation.
- The ECO has the discretion to undertake more frequent visits if he/she feels this is justified due to the actions of the contractors and to make ad hoc visits in order to ensure compliance;
- The ECO is to keep a site diary; a photographic record of activities taking place on site as well as copies of any reports submitted to the Department.
- ECO is to ensure that no off-site damage is caused as a result of the establishment of the camp area;
- **Any issues noted on site must be immediately reported to the owner, contractor and resolved;**
- The ECO is to submit a **completion report** to the competent authority (DFFE), Municipality (in terms of the OSCAE), SANParks and applicant upon completion of the construction phase and before the EA lapses;
- The ECO must provide the competent authority with an **annual operational phase report**.
- It must be noted that the **ECO HAS THE AUTHORITY TO SUSPEND WORK ON SITE FOR ANY ACTION BEING UNDERTAKEN THAT DOES NOT COMPLY WITH THE ENVIRONMENTAL REQUIREMENTS OF THE SITE**. Such a stop order has an immediate effect and will be communicated through the landowner to the contractor or staff (as the case may be) responsible.



**The Environmental Authorisation (EA) (once issued) will be inserted here in the Final EMPr.**

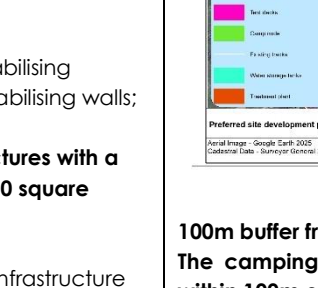
**If the EA conditions are not included at this point in the report, then the reader is NOT reading the final approved EMPr and should request such a document prior to continuation.**

The following listed activities are triggered in accordance with the Environmental Impact Assessment Regulations (2014, as amended) (GN NO. R. 324 - 327) have been applied for:

The National Environmental Management Act (Act 107 of 1998, as amended) and NEMA: EIA Regulations (2014, as amended) applies to the proposal as listed activities are triggered.

## Listing Notice 1

[illegible]

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such development occurs within an urban area;</p> <p>(ee) where such development occurs within existing roads, road reserves or railway line reserves;</p> <p>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of the development and where indigenous vegetation will not be cleared.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>Existing structures and infrastructure within this area pre-dates the NEMA EIA regulations.</p> <p><b>Calculations:</b><br/>Disturbance zones within 32m of the HWM: Approximately 1375m<sup>2</sup></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>17</p>  | <p><b>Development—</b></p> <p>(i) in the sea;</p> <p>(ii) in an estuary;</p> <p>(iii) within the littoral active zone;</p> <p>(iv) in front of a development setback; or</p> <p><b>(v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater;</b></p> <p><b>in respect of—</b></p> <p>(a) fixed or floating jetties and slipways;</p> <p>(b) tidal pools;</p> <p>(c) embankments;</p> <p>(d) rock revetments or stabilising structures including stabilising walls; or</p> <p><b>(e) infrastructure or structures with a development footprint of 50 square metres or more —</b></p> <p>but excluding—</p> <p>(aa) the development of infrastructure and structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(bb) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) the development of temporary infrastructure or structures where such structures will be removed within 6 weeks of the commencement of development and where coral or indigenous vegetation will not be cleared; or</p> <p>(dd) where such development occurs within an urban area.</p> | <p><b>Activity 17 (v) (e)</b></p> <p>The proposal will require the development of infrastructure (decks and associated infrastructure) exceeding 50m<sup>2</sup> within 100m of the HWM of the estuary</p>  <p>100m buffer from the HWM indicated with the yellow line. The camping decks and infrastructure and the lapa deck will fall within 100m of the HWM and will exceed 50m<sup>2</sup>. These will require Environmental Authorisation.</p> <p>Existing structures and infrastructure within this area pre-date the NEMA EIA regulations.</p> <p><b>Calculations:</b><br/>Disturbance zones within 100m of the HWM: Approximately 6490m<sup>2</sup></p> |
| <p>19A</p> | <p><b>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from—</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p><b>Activity 19A (ii)</b></p> <p>The proposal will require the movement of material more than 5m<sup>3</sup> within 100m from the HWM of the estuary – limited earthworks will be required as the proposal is limited to the planting of support poles for the camping decks and lapa, and the temporary earthworks</p>                                                                                                                                                                                                                                                                                                                                                                                                                           |



associated with infrastructure, (pump stations, conservancy tank, sewage treatment plant and pipelines).



100m from the HWM of the estuary indicate with the yellow line.  
All earthworks (permanent and temporary) will require Environmental  
Authorisation within this area.

**Activity 54 (V) (f)**  
The deck to be added to the existing lapa is likely to exceed 50m².  
Deck to be added – approximately 10m long and 5m wide.  
No other expansion to existing facilities are proposed.



Expansion of existing lapa 50m<sup>2</sup> of more within 100m of the HWM (yellow line)

### Listing Notice 3

| NEMA: EIA Regulations:<br>Listing Notice 3 |                                         |                                              |
|--------------------------------------------|-----------------------------------------|----------------------------------------------|
| Activity<br>Nr                             | Description and applicability in the WC | What is applied for and reason for inclusion |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6  | <p><b>The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more.</b></p> <p><b>i. Western Cape</b></p> <ul style="list-style-type: none"> <li>i. Inside a protected area identified in terms of NEMPAA;</li> <li>ii. <b>Outside urban areas;</b> <ul style="list-style-type: none"> <li>(aa) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; or</li> <li>(bb) <b>Within 5km from national parks, world heritage sites, areas identified in terms of NEMPAA or from the core area of a biosphere reserve; -</b></li> </ul> </li> </ul> <p>excluding the conversion of existing buildings where the development footprint will not be increased.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p><b>Activity (6) (i) (ii) (bb)</b></p> <p>The proposed 25 camping sites will be the development of tourism facilities that sleep 15 or more people, (ii) (bb) outside the urban area and within 5km of the GRNP.</p>                                                                                                                                                                                                                                                                                                                                 |
| 14 | <p><b>The development of—</b></p> <ul style="list-style-type: none"> <li>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or</li> <li>(ii) <b>infrastructure or structures with a physical footprint of 10 square metres or more;</b></li> </ul> <p><b>where such development occurs—</b></p> <ul style="list-style-type: none"> <li>(a) within a watercourse;</li> <li>(b) in front of a development setback; or</li> <li>(c) <b>if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</b></li> </ul> <p>excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p> <p><b>i. Western Cape</b></p> <ul style="list-style-type: none"> <li>i. <b>Outside urban areas:</b> <ul style="list-style-type: none"> <li>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</li> <li>(bb) National Protected Area Expansion Strategy Focus areas;</li> <li>(cc) World Heritage Sites;</li> <li>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</li> <li>(ee) Sites or areas listed in terms of an international convention;</li> </ul> </li> </ul> | <p><b>Activity 14(ii)(c)(i)(i)(hh)</b></p> <p>The proposal will require the development of infrastructure 10m<sup>2</sup> or more within 32m from the edge of a watercourse, outside urban areas and within the estuarine functional zone.</p>  <p><b>32m from the edge of a watercourse (pink line) within the estuary functional zone.</b></p> <p><b>Calculations:</b></p> <p><b>Disturbance zones within 32m of the HWM: Approximately 1375m<sup>2</sup></b></p> |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                          |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(gg) Core areas in biosphere reserves; or</p> <p><b>(hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 23 | <p><b>The expansion of—</b></p> <p>(i) dams or weirs where the dam or weir is expanded by 10 square metres or more; or</p> <p><b>(ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more;</b></p> <p><b>where such expansion occurs—</b></p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback adopted in the prescribed manner; or</p> <p><b>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</b></p> <p>excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p> <p><b>i. Western Cape</b></p> <p><b>i. Outside urban areas:</b></p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) World Heritage Sites;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ee) Sites or areas listed in terms of an international convention;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(gg) Core areas in biosphere reserves; or</p> <p><b>(hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.</b></p> | <p><b>Activity 32(ii)(c)(i)(i)(hh)</b></p> <p><b>The deck to be added to the lapa will exceed 10m<sup>2</sup>, is within 32m of a watercourse, outside an urban area and within the estuarine functional zone.</b></p>  <p><b>Expansion to the lapa within 32m of the watercourse (pink line)</b></p> |

## 6 MANAGEMENT OUTCOMES AND OBJECTIVES FROM THE BAR

| Environmental impact                      | Impacts to avoid                                                                                                      | Impact management actions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Impact management outcomes                                                                           |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Biodiversity loss and habitat disturbance | Disturbance of the estuarine habitat or natural habitat beyond the property boundary<br>Disturbance of milkwood trees | <p>Confine new disturbances to the lawn and garden areas<br/>Implement EMPr which outlines the specialist recommendations:</p> <ol style="list-style-type: none"> <li>1. <i>"The salt marsh areas adjacent to the site must be protected. No high-impact activities must be allowed to occur within these areas. They have significance beyond the site and are critically important to the health of the Knysna Estuary as a whole. Any visitors to site must be encouraged to treat these as sensitive areas.</i></li> <li>2. <i>The tidal pond should be retained and managed as an ecological resource. It also has recreational value, but this is not inconsistent with management of biodiversity and ecosystem processes in the Knysna Estuary.</i></li> <li>3. <i>No modification of the estuarine edges or channels must take place.</i></li> <li>4. <i>Quality of water in the estuary must be protected by not allowing sewerage or irrigation run-off into the estuary. Fertilisers must not be used on the property.</i></li> <li>5. <i>The planted milkwood hedge along the northern and eastern boundaries of the site should be retained and enhanced. To develop a good thicket microhabitat within this area it will probably be necessary to allow this thicket area to expand into a slightly wider zone. This can be deliberately managed, or else allowed to happen through natural succession of thicket. The objective is to create a self-sustaining canopy with protected (closed) margins. Under the National Forests Act of 1998 (Act No. 84 of 1998) cutting or pruning of milkwoods requires a license, except if less than 25% of the crown is pruned, but not for the topping of such trees, and not for new development or redevelopment.</i></li> <li>6. <i>Alien invasive species need to be strictly managed on site. This is currently being successfully achieved and the landowner is encouraged to persist.</i></li> <li>7. <i>Any landscaping should make use of site-appropriate indigenous species. For example, a suitable tree species on site is obviously the milkwood, although other species may also be appropriate"</i> (Hoare, 2025).</li> </ol> | <p>Sensitive remain undisturbed<br/>No impact to the estuary<br/>Biodiversity is being preserved</p> |



|                                    |                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |
|------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|                                    |                                                                                                        | <p>The following figure represents the working areas map. Specific guidance in the EMPr is provided for each of the areas where work will be undertaken. The camp areas will be on lawn, therefore, no vegetation clearing or working areas are specified.</p>  <p><b>Plan showing the working areas associated with this proposal in green. The remainder of the property will be regarded as 'no-go' areas associated with the proposal</b></p>                                                                                                                                                                               |                                    |
| Water resource degradation         | Contamination of estuary; over-abstraction from borehole; untreated wastewater discharge               | <ul style="list-style-type: none"> <li>- Implement conditions of the WULA when issued</li> <li>- Implement EMPr</li> <li>- Irrigate with treated water</li> <li>- Maintain infrastructure</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Adequate protection of the estuary |
| Noise, nuisance and visual impacts | Disturbance of the surrounding area<br>Negative visual impact<br>Negative impact to the sense of place | <ul style="list-style-type: none"> <li>- Implement and enforce camp rules that prohibits powerboats, motorbikes and drones</li> <li>- Limit construction to normal working areas</li> <li>- Implement EMPr that outlines the visual specialist recommendations: <ul style="list-style-type: none"> <li>• No blue, white, red or bright colours should be used for the tenting fabric as this will result in strong colour contrast. Grey, grey-green, grey-brown or dark khaki colours should be used.</li> <li>• The roof structures for the ablution portions of the fixed campsites should have roof material that is mid-grey or grey-green in colour so as to reduce colour contrast.</li> </ul> </li> </ul> | Reduced noise and nuisance impacts |



|                                   |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                              |
|-----------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                                   |                                                 | <ul style="list-style-type: none"> <li>• Additional tree plantings around the vehicle parking area, as well as to the west and north of the proposed site, need to be included in the site development plan.</li> <li>• Light spillage could negatively set a precedent in close proximity to the lagoon. No over-head lighting should be utilised, with campsite lighting downward facing and low to the ground (Refer to Annexure C for generic light mitigations).</li> <li>• All existing medium to large indigenous trees will need to be retained</li> <li>• Large remaining alien trees to remain (under permit) for shade and screening until the newly planted indigenous trees replace the alien tree.</li> </ul> |                                                                                                              |
| Soil erosion and land degradation | Sedimentation, erosion and pollution            | <ul style="list-style-type: none"> <li>- Implement EMP</li> <li>- Ensure adequate stormwater management</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>Adequate stormwater management</p> <p>No erosion and or sedimentation</p> <p>No impact on the estuary</p> |
| Encroachment into the GRNP        | Guest breaking SANParks GRNP estuary use rules. | <ul style="list-style-type: none"> <li>- Camping rules ensure that all guests respect the GRNP and SANParks rules.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Good working relationship between the tourism facility and the SANParks                                      |

## 7 SPECIFICALLY REQUIRED ENVIRONMENTAL MANAGEMENT PRACTICES

### 7.1 PERMITS/AUTHORISATIONS TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF ACTIVITIES

The following must be in place before commencement of activities, and the landowner and contractor must ensure that he has a copy of the approval on-site and implements all conditions in addition to this EMPr:

1. Environmental authorization (EA)  
The EA is likely to request commencement notification
2. OSCAE permit exemption (can only be applied for once EA has been issued)
3. SANParks approval for all activities within 50m of the HWM (SANPARKS AUTHORISATION IN TERMS OF REGULATION 8(1) OF THE REGULATIONS FOR THE PROPER ADMINISTRATION OF THE KNYSNA PROTECTED ENVIRONMENT)
4. Building plan approval where applicable
5. WULA before the following may be undertaken:

A Water Use Licence (WULA; **WU44123**) application is being undertaken separately to this proposal for the following:



## 7.2 PRE-CONSTRUCTION PHASE

### 7.2.1 ENVIRONMENTAL INDUCTION (EDUCATION)

All staff (construction and/or property staff) must be briefed by the ECO in an environmental education programme regarding the environmental status and requirements of the site, prior to any activities commencing on site. This will include providing general guidelines for minimizing environmental damage during construction, as well as education with regards to basic environmental ethics, such as prevention of littering, the lighting of fires, etc. Records of environmental training (attendance register and training content) must be kept. Please refer to Annexure D of this EMPr.

Induction is required for all staff members or persons working on the project before them commencing on site.

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### 7.2.2 METHOD STATEMENT

The owner shall, **prior to the commencement** of such activity agree with the ECO the following:

- Storage of construction materials
- Delivery of materials
- Solid waste
- Wastewater
- Erosion and sedimentation control
- Stormwater management
- Cement and concrete batching

The ECO is to approve the method statement(s) **before** the works may commence. A pro-forma method statement showing what is required is attached in Annexure E.

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### 7.2.3 PEGGING OF THE CAMP AREA AND ASSOCIATED INFRASTRUCTURE AND THE NO-GO AREAS

A surveyor must survey and peg the camp area, decks and, where required by the ECO, the associated infrastructure.

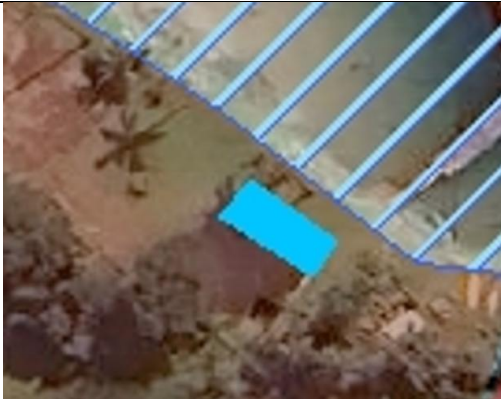
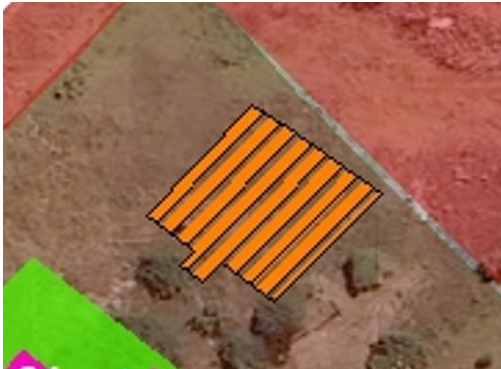


Figure 7: Plan showing the working areas

Table 1: The description of the area where work will be undertaken and the allowable construction working area

| Description                                                                                         | Allowable working area                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pipelines and cables, yellow dotted line on above map                                               | A 1m construction working area will be allowed                                                                                                                      |
| Camping node<br> | Work associated with the installation of internal services and construction of deck must remain within the green node                                               |
| Deck addition to lapa                                                                               | Deck construction will be restricted to the planting of support poles and installation of the deck on the poles. Working area to be kept to a minimum, 0.5m at most |



|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                |                                                                                                                                                               |
| <p>Services entail the installation of the solar pannels, and water storage tanks.</p> <p>Solar pannels:</p>  <p>Water storage tanks:</p>  | <p>It is not anticipated that heavy machinery will be necessary, 1m working area allowable, 3m working area should the use of heavy machinery be required</p> |
| <p>Existing infrastructure – grey coloured areas on the above map</p>                                                                                                                                                                                                                                           | <p>Where work in and to existing infrastructure is required, a 1-2m working area will be allowed.</p>                                                         |

**As recommended by the specialist, Dr D Hoare: The absolute NO-GO area will be regarded as the estuarine areas, especially the tidal channels. Any impacts to these areas must be limited, no erosion or siltation of the channels, limit impacts that will affect the water quality, salinity, or average quality. No on-site floodwater disposal should be directed primarily into the tidal channel. No additional earthworks should be permitted that would expand the existing non-tidal parts of the site.**

No indigenous trees are to be removed, and work must be undertaken around them. All construction working areas must be rehabilitated to the satisfaction of the ECO and as specified in this report. Existing tracks and tracks and parking specified on the SDP are to be used.



All people working on site must be made aware of the boundaries within which work is to be done. That area, in which no work is required, are to be considered as no-go areas and may not be disturbed without written approval by the ECO.

The following applies:

- All contractors/ staff – all areas outside that of the defined working area, are deemed a no-go area.
- Disturbance within the work area is to be kept to a minimum, as all disturbed areas around structures will require rehabilitation (placing topsoil and re-seeding to ensure vegetative cover) on completion of the work by the contractor.
- All construction activities must be restricted to the demarcated/defined areas (infrastructure and associated working area around) to ensure that no further disturbance into the surrounding vegetation or pond.
- No encroachment or activities may take place outside the work areas.
- Storage sites for construction material and access must be approved by the ECO prior to commencing.
- Methods of demarcation will be agreed with the ECO and may include danger tape, rope, fencing, silt-fencing, shade cloth, mulch bags, wire fencing, pegs etc.

| Activities                                     | Size and Scale                                                                                          | Mitigation Measures                                                                                                                                                                                     | Timeframe for Implementation                                        | Method of Monitoring Implementation                                                           | Frequency of Monitoring                                         | Responsible Persons                                                                                              | Compliance Monitoring                                                                                                                   |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pre-Construction and Construction phase</b> |                                                                                                         |                                                                                                                                                                                                         |                                                                     |                                                                                               |                                                                 |                                                                                                                  |                                                                                                                                         |
| Defining the work areas                        | Establishment of small camp resort and associated infrastructure and tourism facilities on the property | The landowner and contractors are to comply with the requirements of the EMPr<br><br>Demarcation of working areas is required by means of shade netting or suitable alternative as agreed to by the ECO | During the pre-construction and construction phases on the property | ECO, landowner and contractor to continually monitor compliance during the construction phase | ECO to conduct inspections of works (as specified in this EMPr) | Landowner and Contractor to implement no-go demarcation<br><br>ECO, landowner and contractor to monitor the site | ECO to monitor during the construction phase. Non-compliance to be reported and corrected by contractor/ landowner (as the case may be) |

#### 7.2.4 VEGETATION CLEARANCE AND PLANT RESCUE PROGRAMME

- Demarcate the working areas so that there is no accidental damage to the rehabilitation area and sensitive areas beyond the sites.
- Based on site selection, it is not anticipated that any plant rescue will be required positioned in disturbed lawn/garden areas. Scan through the area prior to vegetation clearing for transplantable species for plant rescue (bulbs).
- For successful transplant, a sod including the desired plant with its roots intact should be removed and replanted.
- A record of rescued plants is to be maintained (please refer to the attached table that should be filled out in Annexure E).
- Vegetation clearing may only commence once plant rescue is completed. All cut vegetation shall be chipped and used as mulch.

**NO removal, damage or disturbance of flora outside of the immediate development area is permitted.**

A record of rescued plants is to be maintained (please refer to the attached table that should be filled out in Annexure F).

| Activities                                      | Size and Scale                                                                                          | Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                       | Timeframe for Implementation      | Method of Monitoring Implementation                                                                               | Frequency of Monitoring                                                          | Responsible Persons         | Compliance Monitoring                          |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------|------------------------------------------------|
| <b>Pre-construction and Construction phases</b> |                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                           |                                   |                                                                                                                   |                                                                                  |                             |                                                |
| Clearance of vegetation                         | Establishment of small camp resort and associated infrastructure and tourism facilities on the property | Plant rescue programme must be implemented <b>prior</b> to the commencement of vegetation clearing as per the EMPr<br><br>Vegetation clearing must be <b>limited</b> to the agriculture area and clear demarcation of the no-go area (rehabilitation area and sensitive areas around the sites) will be required to ensure no disturbance to sensitive areas / areas to remain unaffected by the proposal | During the pre-construction phase | Plant rescue to be conducted <b>in conjunction</b> with the ECO prior to the commencement of vegetation clearance | Inspection of pre-construction activities (vegetation clearing) will be required | Landowner. Contractor. ECO. | To be included in the monitoring report/update |

### 7.2.5 PROTECTION OF FAUNA (ANIMALS)

**Prior to commencement of activities, the site needs to be inspected for the presence of any faunal species and faunal rescue to be implemented if and when required (ECO to provide guidance).**

Disturbance to fauna within the disturbance areas is to be avoided at all times.

The contractor(s) and landowner shall be responsible for informing all employees about the need to prevent any harmful effects on natural vegetation on or around the working area as a result of their activities.

Clearing of natural vegetation shall be kept to a minimum. The removal, damage and disturbance of natural vegetation without the written approval of the ECO are prohibited.

The contractor(s) and landowner shall ensure that no hunting, trapping, shooting, poisoning or otherwise disturbance of any fauna takes place.

### 7.2.6 SOIL MANAGEMENT

- Topsoil will only be removed where support poled for decks will be planted and where associated infrastructure such as driveways, parking areas will be paved (not applicable if it will not be paved) and ablution facilities will be constructed.
- As topsoil is a valuable resource, it must be stripped from all **construction areas before work commences**. This topsoil should be stockpiled next working areas (to remain in disturbed areas as approved by ECO) and use in rehabilitation of the disturbed area after construction is complete.
- The soil removed for installation of the pipelines or cables must not be removed, but placed to the side of the trench, while the sub-soil is placed to the other side. The soil is returned in the same order with the vegetated topsoil closing the trench and stimulating re-growth.
- No topsoil stripping is to take place prior to the completion of the plant rescue programme.

### 7.2.7 HERITAGE RESOURCES

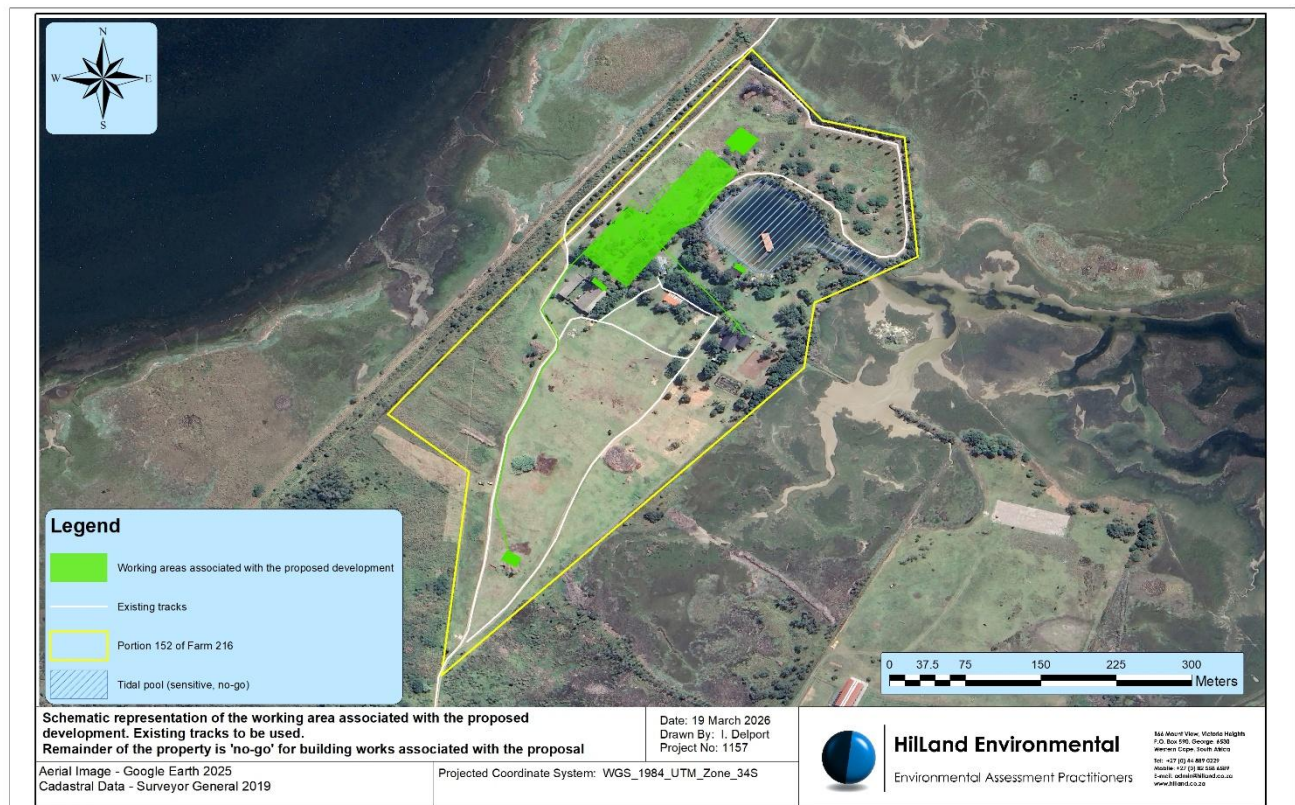
Should it be suspected that an object or structure of heritage value has been uncovered during earthworks or the clearing of vegetation (including but not limited to bones, burial sites, structures older than 50 years, stone tools, shell middens, pottery etc.), then all work is to immediately **cease**, and the ECO is to be contacted to inform Heritage Western Cape (HWC). Work shall not be recommended until HWC has visited the site, inspected the object in question and advised on how to proceed. If the object requires removal by a trained archaeologist, this process will be at the expense of the developer. It is the contractor's responsibility to ensure all staff on site is aware of this procedure.

| Activities                                      | Size and Scale                                                                                          | Mitigation Measures                                                                                                             | Timeframe for Implementation            | Method of Monitoring Implementation                                          | Frequency of Monitoring            | Responsible Persons                                                                                                                                                                          | Compliance Monitoring                   |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Pre-construction and Construction phases</b> |                                                                                                         |                                                                                                                                 |                                         |                                                                              |                                    |                                                                                                                                                                                              |                                         |
| Clearance of vegetation and earthworks required | Establishment of small camp resort and associated infrastructure and tourism facilities on the property | Should any object or structure of heritage value be discovered, work is to cease, ECO is to be contacted and advise accordingly | Pre-construction and construction phase | ECO to monitor compliance during the pre-construction and construction phase | Continual monitoring of compliance | Contractor to ensure that work ceases should any object or structure of heritage value be discovered and the ECO should be contacted<br><br>The ECO is to contact HWC and advise accordingly | Incidents to be reported on in a report |

## 7.3 GENERAL CONSTRUCTION REQUIREMENTS

All work and associated storage of materials must remain within the green working areas highlighted on the plan below. Allowable working areas have been specified earlier in this report.

Access or storage of materials outside of these areas must be approved by the ECO prior to taking place.



### 7.3.1 ACCESS

Access to the property and internally to the structures and camp area is to remain on existing roads and tracks. Additional tracks to be created as indicated on the SDP to provide access to the individual sites. **Movement of construction vehicles must be restricted to the designated track only – no additional temporary access road may be created.**

### 7.3.2 CONSTRUCTION NUISANCE IMPACTS

- Noise – recommended that construction to be undertaken within normal working hours. Standby generator to be position and operated without causing a nuisance
- Dust – when required, dust suppression measures must be implemented which includes but not limited to spraying of water or placement of wood chips on dust generated areas

### 7.3.3 LOCAL LABOUR

It is recommended that local labour is used for the construction phase of this project. "Local" implies people within the Knysna area.

### 7.3.4 STORAGE OF MATERIALS

The following must be adhered to:

- All stockpile sites are to be agreed to by the ECO with the landowner, prior to commencement of stockpiling.

### 7.3.5 FIRE PROTECTION

The owner and contractor should take all reasonable and active steps to avoid increasing this risk of fire (specially to prevent damage to surrounding properties and vegetation). **No** open fires or naked flames for heating or cooking shall be allowed anywhere on site. The owner and contractor shall ensure that all personnel are aware of the fire risk and the need to extinguish cigarettes before disposal. Cigarettes may **not** be disposed of onsite and must be disposed of properly in receptacles for this purpose.

### 7.3.6 WASTE MANAGEMENT

It is recommended that an integrated waste management approach must be used that is based on waste minimisation and must include reduction, recycling, re-use and disposal where appropriate. Only approved waste disposal methods are allowed. The contractor shall ensure that all site personnel are instructed in the proper disposal of all waste. The contractor shall ensure that **sufficient disposal facilities** are available.

**Recycling** must be encouraged on-site and recycling bins must be provided and clearly marked.

Disposal of all waste materials must be done at suitable facilities. **No dumping** of any waste material on or off-site is permitted.

The owner and contractor shall ensure that the site is maintained in a **neat and tidy** condition and kept **free of litter**

Waste storage **containers** shall be covered, tip-proof, weatherproof and scavenger proof.  
Organic materials should be retained for composting and using within the agricultural areas.

| Activities                                                                 | Size and Scale                                                                                          | Mitigation Measures                                         | Timeframe for Implementation                                         | Method of Monitoring Implementation                                           | Frequency of Monitoring                                                                               | Responsible Persons                                                                                           | Compliance Monitoring                                                                                                        |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction phase</b>                                                  |                                                                                                         |                                                             |                                                                      |                                                                               |                                                                                                       |                                                                                                               |                                                                                                                              |
| Construction of buildings and associated waste<br><br>Creation camp stands | Establishment of small camp resort and associated infrastructure and tourism facilities on the property | Waste management should be done in accordance with the EMPr | During the construction of the structures and creation of the stands | ECO, owner and contractor to continually monitor the site during construction | ECO to conduct inspections of construction and creation of the stands etc (as indicated in this EMPr) | Owner and contractor to implement sound waste management<br><br>ECO, owner and contractor to monitor the site | ECO to monitor during the construction phase (including creation of stands etc).<br>Non-compliance to be reported and owner/ |



|  |  |  |  |  |  |  |                       |
|--|--|--|--|--|--|--|-----------------------|
|  |  |  |  |  |  |  | contractor to rectify |
|--|--|--|--|--|--|--|-----------------------|

### 7.3.7 ABLUTION FACILITIES

Use of the existing ablution only.

### 7.3.8 SOIL EROSION AND STORMWATER MANAGEMENT

- The area around the ablution must be demarcated with silt fencing to prevent any movement of material towards the river in the event of rainfall during construction.

| Activities                              | Size and Scale                                                                                          | Mitigation Measures                                                                                                                                                                                                                                                | Timeframe for Implementation                                           | Method of Monitoring Implementation                                                                          | Frequency of Monitoring                                         | Responsible Persons                           | Compliance Monitoring                         |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| <b>Construction phase</b>               |                                                                                                         |                                                                                                                                                                                                                                                                    |                                                                        |                                                                                                              |                                                                 |                                               |                                               |
| Potential erosion during the activities | Establishment of small camp resort and associated infrastructure and tourism facilities on the property | The owner and contractor are to comply with the EMPr requirements regarding erosion prevention. Emergency erosion protection materials (sandbags, geotextile fabric, shade cloth and/or biddum) are to be kept on-site to treat erosion area as soon as it appears | During the construction phase of structures and creation of the fields | ECO, owner and contractor to continually monitor the site during construction for signs of potential erosion | ECO to conduct inspections of works (as indicated in this EMPr) | ECO, owner and contractor to monitor the site | ECO to monitor during the construction phase. |

### 7.3.9 CONCRETE AND CEMENT WORKS

For the building of structures:

- Mixing areas must be defined on-site and **clearly** demarcated.
- Cement powder has a high alkalinity pH rating, which can contaminate and affect both soil and water pH dramatically. A shift in pH can have serious consequences on the functioning of the soil, water organisms and plants.
- All concrete must be mixed on trays / on thick plastic and not on the soil.
- Bunding** through the use of sandbag walls around any mixing areas is recommended.
- Cement contaminated water may not leave the working area associated with the structure being built and enter any natural or agricultural areas.**

| Activities                | Size and Scale         | Mitigation Measures                                                                                                                     | Timeframe for Implementation  | Method of Monitoring Implementation                                    | Frequency of Monitoring                          | Responsible Persons                                                                                       | Compliance Monitoring                         |
|---------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Construction phase</b> |                        |                                                                                                                                         |                               |                                                                        |                                                  |                                                                                                           |                                               |
| Cement and concrete works | Building of structures | Cement and concrete works are to comply with the EMPr<br><br>Appropriate bunding and mixing on impermeable surfaces must be implemented | During the construction phase | ECO and contractor to continually monitor the site during construction | ECO to conduct inspections of construction works | Contractor to implement mitigation measures as per the EMPr<br><br>ECO and contractor to monitor the site | ECO to monitor during the construction phase. |

### 7.3.10 REHABILITATION REQUIREMENTS

#### Infrastructure completion:

Rehabilitation of disturbed area as a result of construction must be rehabilitated to the satisfaction of the ECO. These areas are to be landscaped using indigenous vegetation. Additional rehabilitation measures will include, but are not limited to the following; use of sandbags, mulchbags as erosion minimisation measures, seeding of bare areas with an indigenous grass seed mixture / the use of indigenous grass sods (ECO to advice) etc.

| Activities                        | Size and Scale      | Mitigation Measures                                                                                                                                               | Timeframe for Implementation                                                                                                       | Method of Monitoring Implementation                                                                                                                                         | Frequency of Monitoring                                                                                                                                                      | Responsible Persons                                                                                                   | Compliance Monitoring                          |
|-----------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Construction phase</b>         |                     |                                                                                                                                                                   |                                                                                                                                    |                                                                                                                                                                             |                                                                                                                                                                              |                                                                                                                       |                                                |
| Rehabilitation of disturbed areas | All disturbed areas | Disturbed areas must be stabilised and protected against erosion with a cover crop as soon as possible<br><br>Alien invasive clearing must continue and follow-up | Rehabilitation phase (following construction and land preparation of vineyards) and within 2 weeks of ground prep being completed. | Contractor to implement rehabilitation measures as required by the ECO<br><br>Landowner to implement the necessary cover crop planting and ECO to advise on any other areas | ECO to monitor bi-monthly during stabilization phase and once within 6 months of completion to monitor the success of the stabilization and follow-up alien clearing success | ECO to sign off rehabilitation measures<br><br>Landowner to monitor cover crop and subsequent planting of crops/trees | ECO to sign off And included into final report |

## 8 MONITORING REQUIREMENTS AND REPORTS

- An **induction** meeting with the ECO and staff to ensure that they are aware of the requirements of this EMPr and the EA before the commencement any activities. Induction registers to be kept for all contractors on site.
- The ECO must inspect work areas prior to commencement of activities and demarcate no-go areas or indicated areas of sensitivity.

- The ECO is to do a site inspection **every month** during the building phase to ensure that work is progressing in an environmentally satisfactory manner.
- The ECO instructions are to advise on any remedial actions or changes that are required to the method statements in order to ensure that the impacts identified and any that may become evident are mitigated and managed.
- On **completion** the build a monitoring report must be submitted by the ECO to sign-off compliance with environmental requirements. The report must be submitted to DFFE, Knysna Municipality in terms of the OSCAE, SANParks and the landowner

## 9 AUDITING REQUIREMENTS

- As the project scale is limited and tourism is an ongoing activity, it is anticipated that external audits will be required every 5<sup>th</sup> year.

**Specific dates referenced in the EA (to be issued and to be filled out once EA has been received)**

|                                                                                                                             |  |
|-----------------------------------------------------------------------------------------------------------------------------|--|
| <b>Date of issue of EA:</b>                                                                                                 |  |
| <b>Commencement and completion of construction must take place before</b> (5 years from the date of issue indicated above): |  |
| <b>Tourism ongoing</b> – there is no end date to the operational phase                                                      |  |

## 10 OPERATIONAL PHASE

In addition to the EA conditions for the operational phase, the landowner is bound by their general Duty of Care, as stated in Section 28 of the National Environmental Management Act, 1998 (as amended).

ECO to provide ad hoc advise during the operational phase as required and an annual report to the competent authority.

ECO to ensure that the external audit required every 5 years is undertaken and submitted to the competent authority.

### 10.1 VISUAL MITIGATION MEASURES

As per the visual specialist, VRM Africa, S Stead, the following mitigation measures need to be implemented:

- No blue, white, red or bright colours should be used for the tenting fabric as this will result in strong colour contrast. Grey, grey-green, grey-brown or dark khaki colours should be used.
- The roof structures for the ablution portions of the fixed campsites should have roof material that is mid-grey or grey-green in colour so as to reduce colour contrast.
- Additional tree plantings around the vehicle parking area, as well as to the west and north of the proposed site, need to be included in the site development plan.
- Light spillage could negatively set a precedent in close proximity to the lagoon. No over-head lighting should be utilised, with campsite lighting downward facing and low to the ground (Refer to Annexure L for generic light mitigations).
- All existing medium to large indigenous trees will need to be retained".

## 10.2 CAMP SITE MANAGEMENT

Proper housekeeping and maintenance must be implemented.

All visitors are to be made aware of the rules of the property (Annexure K) and the landowner/management must ensure that these rules are enforced.

As per GRDM comment: The owner of the two planned food premises on the site must ensure that the food premises have a valid Certificate of Acceptability in terms of Regulation 638 of 2018 as promulgated under Foodstuffs, Cosmetics and Disinfectant Act 1972 (Act 25 of 1972)

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### 10.2.1 PEDESTRIAN MOVEMENT AND ACTIVITIES

The landowner must prevent over utilisation or trampling within the property and estuarine area associated– this will be achieved through regular monitoring, defining the pathways and signage to request that guests remain on the designated pathways. Compliance with SANParks GRNP rules required at all times.

*"The entry into the surrounding GRNP is controlled in terms of the Estuary Management Plan and must be adhered to at all times. Visitors to this site will not have access to the GRNP other than via a canoe which limits access to the tidal channels" (Hoare, 2025).*

Rules must be established for the operation of the camp sites. The rules need to include (but are not limited to the following):

- Guest needs to be provided with guidelines and rules regarding hiking/cycling tracks, restriction to movement on boardwalks and trails and other approved activities and to adhere to the signage provided.
- No plant and/or animals may be removed, cut, destroy or be in possession of.
- No collecting firewood other than the wood provided by the management.
- No feeding of wildlife.
- Vehicles need to remain on existing tracks
- Hikers to remain on designated pathways.
- Littering is prohibited.
- Braai fires only in the areas provided for such use.
- Waste in the designated bins.
- Ground sheet use restrictions (see below)

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### 10.2.2 WASTE MANAGEMENT

The landowner is encouraged to re-use, reduce and recycle at the camp sites.

**No waste may be disposed of on the property.** All waste must be disposed of in appropriate municipal or other authorised dumping sites.

NO Dumping of organic material on any part of the rehabilitation area is permitted.

Sewage spills during servicing of conservancy tanks/ package plant must be avoided –staff to accompany the municipal service truck to ensure that there is no spillage.

### 10.2.3 WATER USE MANAGEMENT

**\*Note this section will be updated based on the final conditions of the Water Use Licence once issued by BOCMA.**

As per the WULA reports "Wastewater intended for irrigation should be analysed regularly according to the wastewater limits for irrigation<sup>1</sup> of any land or property up to 50 cubic meters (m<sup>3</sup>). These limits are listed in Table 5 below:

**Table 2: Wastewater limit values applicable to the irrigation of any land or property up to 50 cubic meters (NWA, 1998)**

| Variable                      | Limit                                                     |
|-------------------------------|-----------------------------------------------------------|
| pH                            | Not less than 6 or more than 9 pH units                   |
| Electrical Conductivity       | Must not exceed 200 milliSiemens per metre (mS/m)         |
| Chemical Oxygen Demand (COD)  | Must not exceed 5000 mg/L after removal of algae          |
| Faecal Coliforms              | Must not exceed 100 000 per 100 ml                        |
| Sodium Adsorption Ratio (SAR) | Must not exceed 5 for biodegradable industrial wastewater |

The following must be adhered to:

- Wastewater limit values applicable to the irrigation of any land or property up to 50 cubic meters;
- Irrigate provided that the irrigated wastewater is not detrimental to the health and safety of the public in the vicinity of the activity.
- Quality of water in the estuary must be protected by not allowing sewerage or irrigation run-off into the estuary. Fertilisers must not be used on the property (David Hoare Consulting (Pty) Ltd, 2024- Terrestrial and Aquatic Biodiversity, and Plant Species and Animal Species Assessment Report)" (, 2026)

Furthermore, mitigation measures for each water use that is being applied for must be implemented as per below:

**"Table 3:Summary of impacts and mitigation measures**

| Water Use activity | Possible causes of the impacts of the activities<br>Impacts to the water resources | Possible Impacts to the water resource and other water users        | Mitigation Measures                                                            |
|--------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Section 21 (a)     | Over abstraction, depletion of aquifer                                             | Deterioration of water quality and quantity downstream unfit to use | Water metering to ensure client does not over abstract. Do not use fertilizers |
|                    |                                                                                    | Dewatering of aquifer                                               | Groundwater level monitoring                                                   |
|                    | Saltwater intrusion                                                                | Salinisation of aquifer                                             | Water quality and level monitoring                                             |

<sup>1</sup> Government Notice 665 in Government Gazette 36820, dated 6 September 2013



|                |                                       |                                |                                                  |
|----------------|---------------------------------------|--------------------------------|--------------------------------------------------|
| Section 21 (e) | Groundwater contamination             | Deterioration of water quality | Water quality monitoring                         |
| Section 21 (g) | Surface and groundwater contamination | Deterioration of water quality | Nutrient leaching risk, water quality monitoring |

**The following mitigations will be used to ensure efficient and non-wasteful water use:**

- The development optimises water use and discourages wasteful water use. The water is used for the low impact luxury tented camps.
- Water is stored in closed tanks and a damask (from rooftops) which minimises evaporation loss. Daily routine water infrastructure inspections and leak assessments will be implemented to ensure that no unnecessary leaks occur.
- The treatment plant will be a Fluidco<sup>2</sup> installed and managed and maintained system. Grey and black water will be treated on-site and re-used as per the Wastewater limit values specified in Government Notice 665 in Government Gazette 36820, dated 6 September 2013 of the NWA.
- As a precaution, any tank will have a sump to ensure that should there be any overflow, this cannot pollute any surrounding water body or ground water.
- Any surplus water from the water treatment plant that is not recycled for toilet flushing must be removed by municipal honey sucker tanker / private honey sucker tanker to the municipal sewage treatment works.
- A separate reticulation will be laid for gardening and toilet flushing using treated effluent from the sewage treatment works.
- Potable water for the project will make use of ONLY the captured rainwater harvesting and existing potable municipal supply until such time as the use of supplementary borehole water has been granted a Water Use Licence.

### **Groundwater Monitoring**

It is recommended that the groundwater levels of the production borehole be monitored using automated monitoring equipment (e.g., data-loggers) to allow for the frequent monitoring of groundwater levels.

Furthermore, it is recommended that groundwater quality monitoring also be conducted on borehole, BC-BH1. The groundwater sample that is collected on site must be submitted to a SANAS accredited laboratory where analyses are carried out in accordance with the methods prescribed by the South African Bureau of Standards.

The sample should be analysed as per Table 10-1. The frequency of laboratory analysis should be bi-annually, while field parameters (pH, TDS and EC) should be conducted monthly to act as early detection of potential saltwater intrusion.

**Table 4: Monitoring Programme**

| Monitoring point             | Frequency   | Analysis                                                                        |
|------------------------------|-------------|---------------------------------------------------------------------------------|
| Proposed production borehole | Bi-annually | SANS 241-1:2015 drinking water quality parameters                               |
|                              | Monthly     | pH, Electrical Conductivity and Total dissolved solids by means of field probe. |

<sup>2</sup> <https://fluidco.africa/sewage/>

Data is to be interpreted by a hydrogeologist in order to establish trends in the groundwater levels and chemical data".

Several general and specific mitigation measures are proposed in order to reduce negative impacts and incorporate some potentially positive impacts from the proposed development. Some of the most pertinent recommendations include:

- Groundwater monitoring on-and off site:
  - Groundwater levels;
  - Groundwater Quality; and
  - Abstraction volumes.
- Increase water-use efficiencies
- Implement water recycling practices, where possible
- Irrigation water should be carefully timed to minimize the risk of nutrients in stormwater runoff. Ideally, irrigation should take place when the soil is not saturated and rain not expected.
- Irrigation should take place when lawn is actively growing to ensure nutrient uptake and to minimise losses of runoff;
- Irrigation should not cause waterlogging or excess drainage below the plant roots zone. If the nutrients within the irrigation water are applied at sustainable rates (i.e., using smaller amounts frequently rather than large volumes occasionally), water logging should not be a problem. This method also helps to maximise nutrient uptake and minimize loss of leaching;
- Vegetative cover in the buffer area between the irrigated area and any watercourse should be maintained wherever possible, particularly riparian vegetation, to minimise the movement of nutrients rich runoff and eroded soil into surface waters" (EnviroSynergy Consulting, 2026).

### 10.3 VEGETATION, BUFFER AREAS AND ESTUARINE MANAGEMENT

As recommended by the specialist, Dr D Hoare, "The planted milkwood hedge along the northern and eastern boundaries of the site should be retained and enhanced. To develop a good thicket microhabitat within this area it will probably be necessary to allow this thicket area to expand into a slightly wider zone. This can be deliberately managed, or else allowed to happen through natural succession of thicket. The objective is to create a self-sustaining canopy with protected (closed) margins. Under the National Forests Act of 1998 (Act No. 84 of 1998) cutting or pruning of milkwoods requires a license, except if less than 25% of the crown is pruned, but not for the topping of such trees, and not for new development or redevelopment" (Hoare, 2025).

On-site buffer areas between activities and the estuarine environment must be created. One possibility is to enhance the entrance and maintain the thicket hedges.

The planting of additional indigenous trees on the property is recommended. Recommended indigenous trees (ECO to be consulted):

- *Sideroxylon inerme* (Milkwood tree)
- *Rapanea melanophloeos* (Cape beech)
- *Vepris lanceolata* (White ironwood)
- *Halleria lucida* (Tree fuchsia)
- *Searsia lucida* (Glossy currant)
- *Pittosporum viridiflorum* (Cheesewood)
- *Grewia occidentalis* (Cross berry)

- *Carissa bispinosa* (Numnum)
- *Diospyros dichrophylla* (Star apple)
- *Scutia myrtina* (Cat-thorn)
- *Gymnosporia buxifolia* (Spike thorn)

"Any landscaping should make use of site-appropriate indigenous species. For example, a suitable tree species on site is obviously the milkwood, although other species may also be appropriate" (Hoare, 2025).

Alien vegetation clearing to continue over the entire property in accordance with the approved ACP. This will include continual follow-up control.

"Ensure no impacts on estuarine areas, especially salt marsh areas and tidal channels. This includes any physical impacts, one of which would be trampling of salt marsh vegetation. Indirect impacts from the site need to be managed, including limiting access to salt marsh areas, and controlling alien invasive species on site. No additional earthworks should be permitted that would expand the existing non-tidal parts of the site.

Control access by pedestrians and machinery into the estuary to limit possible trampling impacts. This does not mean prohibiting access, only controlling it to minimise impacts.

The entry into the surrounding GRNP is controlled in terms of the Estuary Management Plan and must be adhered to at all times. Visitors to this site will not have access to the GRNP other than via a canoe which limits access to the tidal channels"

The tidal pond should be retained and managed as an ecological resource. It also has recreational value, but this is not inconsistent with management of biodiversity and ecosystem processes in the Knysna Estuary.

No modification of the estuarine edges or channels must take place.

Quality of water in the estuary must be protected by not allowing sewerage or irrigation run-off into the estuary. Fertilisers must not be used on the property" (Hoare, 2025).

Where treated raw water is used for irrigation purposes, quality testing will be required due to the presence of visitors.

## 11 EROSION MANAGEMENT

The property must be regularly monitored by the landowner, during the operation, to identify areas susceptible to erosion. The required erosion control measures must be implemented within these areas. The erosion protection measures that are to be implemented must be approved and signed off by the ECO prior to the commencement of the implementation.

| Activities        | Size and Scale | Mitigation Measures | Timeframe for Implementation | Method of Monitoring Implementation | Frequency of Monitoring | Responsible Persons | Compliance Monitoring |
|-------------------|----------------|---------------------|------------------------------|-------------------------------------|-------------------------|---------------------|-----------------------|
| Operational phase |                |                     |                              |                                     |                         |                     |                       |

|                                                                |                           |                                                                                                                                                                                                                                                                                                       |                                                  |                                                                                                                                             |                                                                                                               |                          |                                                                                |
|----------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------|
| Potential erosion during the operational phase of the property | Operation of the property | Management is to comply with the EMPr requirements regarding erosion prevention. Emergency erosion protection materials (sandbags, geotextile fabric, shade cloth and/or biddum) are to be kept on-site to treat erosion area as soon as it appears. Revegetating disturbed areas as soon as possible | During the operation of the proposed development | Landowner to continually monitor the site during operation of the development for signs of potential erosion. ECO is to monitor as required | Landowner is to conduct monthly inspection and ECO to conduct inspections as / when required by the landowner | Landowner ECO to monitor | Management to monitor during the operational phase. ECO to monitor as required |
|----------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------|

### 11.1 FIRE MANAGEMENT

Firebreaks are a legal requirement in terms of the National Veld and Forest Act, 1998 (NVFA), therefore, the firebreaks must be maintained as agreed with the FPA. These will require brush-cutting every 6 months. No disturbance of the soil is to take place along the firebreaks.

It is advised to retain FPA membership for the lifetime of the property.

Within the camping area braai fires are limited to the structures provided for such purposes and strict camping rules will apply.

No "bonfire" type fires are permitted due to the associated fire risk.

### 11.2 MAINTENANCE MANAGEMENT: ALIEN INVASIVE CONTROL

In terms of the Alien and Invasive Species Regulations, NEM:BA, 2014 specific alien plant species are prohibited and should be removed (by implementing approved methods). An approved ACP is in place for the property and must be implemented accordingly.

Any alien invasive species germinating must be removed – it is recommended that a sweep every 6 months is undertaken and more frequently after fire for the life of the development.

## 12 DECOMMISSIONING PHASE

Should there ever be a need for decommissioning, decommissioning activities need to adhere to the applicable legislation at the time. All material foreign to the site must be removed from the site and must be disposed of at an approved waste disposal site. Buildings if no longer required for the current purpose could be repurposed based on the requirements of the local authority.

Any material that can be recycled should be recycled.

## 13 LEGISLATIVE REQUIREMENTS

### 13.1 NATIONAL WATER ACT

A WULA is required for the activities mentioned earlier in this report.

The landowner will need to comply with the conditions contained in the approval.

Ongoing quality testing of irrigation with treated effluent water from the existing treatment facility required due to the presence of visitors.

### 13.2 PENALTIES FOR NON-COMPLIANCE

Penalties in terms of Chapter 9 of the Western Cape Bill on Planning and Development as published in the Extraordinary Provincial Gazette No 5183, 3 October 1997, are applicable for any action, which leads to damage to the natural environment.

In addition to the penalties in terms of the Act (NEMA), spot fines up to a maximum value of R10 000 per offence can be instituted at the discretion of the ECO for any breach or non-compliance in terms of the EMPr and EA (FINES ISSUED WILL INCREASE EXPONENTIALLY FOR REPEAT OFFENCES).

In the event of damage being caused, the contractor will be responsible for the cost of cleanup, repair or rehabilitation as necessary, as well as being liable for the fine.

## 14 CONCLUSION

This EMPr is binding on the landowner, management, staff and all contractors on site and constitutes Best Practice for construction activities.

This EMPr may be updated with specific conditions required by the Environmental Authorisation, once issued.