



Version 1.4

## ENVIRONMENTAL MANAGEMENT PROGRAMME

In terms of  
Regulation 24 (n) of Government Notice No. R385 in terms of Chapter 5 of the  
National Environmental Management Act, 1998 (Act 107 of 1998), July 2006 as  
amended 2008 and the Environmental Impact Assessment Regulations 2014 (as  
amended)

**For the proposed**

**CAIRNBROGIE RESORT CAMPS, REMAINDER OF THE FARM KRANSHOEK  
NO. 432, PLETTENBERG BAY**



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**ENVIRONMENTAL MANAGEMENT PROGRAMME**

**FOR**

**THE PROPOSED CAIRNBROGIE RESORT CAMPS, REMAINDER OF THE FARM KRANSHOEK NO. 432,  
PLETTENBERG BAY**

**Submitted for DEA&DP review and decision making**

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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- (i) the EAP who prepared the EMPr; and (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;	<b>Section 3</b> <b>Annexure I</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- (i) planning and design; (ii) pre-construction activities; (iii) construction activities; (iv) rehabilitation of the environment after construction and where applicable post closure; and (v) where relevant, operation activities;	<b>Section 5</b>
(e) a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);	<b>Section 5</b>

<p>(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 –</p> <ul style="list-style-type: none"> <li>(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;</li> <li>(ii) comply with any prescribed environmental management standards or practices;</li> <li>(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and</li> <li>(iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;</li> </ul>	<b>Section 5</b>
<p>(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);</p>	<b>Section 5 &amp; 6</b>
<p>(h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f)</p>	<b>Section 3.1.2 &amp; 6</b>
<p>(i) an indication of the persons who will be responsible for the implementation of the impact management actions;</p>	<b>Section 3 and 5</b>
<p>(j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;</p>	<b>Section 5 &amp; 6</b>
<p>(k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);</p>	<b>Section 5 &amp; 6</b>
<p>(l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;</p>	<b>Section 6 &amp; 7</b>
<p>(m) an environmental awareness plan describing the manner in which-</p> <ul style="list-style-type: none"> <li>(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and</li> <li>(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and</li> </ul>	<b>Section 3.1.3</b>
<p>(n) any specific information that may be required by the competent authority.</p>	<b>N/A</b>
<p>1. Where a government notice gazetted by the Minister provides for a generic EMPr, such generic EMPr as indicated in such notice will apply.</p>	<b>N/A</b>

## 1 INTRODUCTION

**HillLand Environmental** has been appointed as the Environmental Assessment Practitioners (EAPs) by the Applicant, **Cairnbrogie Farms (Pty) Ltd**, represented by **Mr. Andrew Hill**, to ensure compliance with the regulations contained in the National Environmental Management Act (NEMA, No 107 of 1998) and Environmental Impact Assessment Regulations (2014, as amended) for the proposed construction of two camp areas and rezoning of associated tourism infrastructure to allow for consent use.

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

This EMPr **must** be included in the tender documents of all prospective contractors and must also be included in the final contract awarded. The EMPr must be regarded as binding on all contractors, sub-contractors, agents, consultants and construction staff on the property.

The full and approved EMPr will be made available to all contractors working on the project. Certain fundamental aspects are therefore of importance:

- J The EMPr and these requirements are binding on all contractors and their sub-contractors.
- J It is the responsibility of the contractor (main contractor) to ensure that any sub-contractor is made aware of the environmental requirements.
- J The contractor will be required to make good any damage caused through their actions or the actions of their sub-contractors (in addition to any penalties for non-compliance issued).

**Please note that this EMPr is a dynamic document, which is subject to change as new information arises or new conditions or recommendations are issued.**

## 2 PROJECT DETAILS

The Remainder of Farm 432 is located within the Kranshoek rural area of Plettenberg Bay and access to the property can be gained via the Plettenberg Airport Road (DR1770) to the north. The Indian Ocean borders the southern boundary of the property and the southern part of the property is a proclaimed protected environment (Robberg Coastal Corridor Protected Environment (RCCPE)).

The development entails the establishment of two (2) camp areas on the Remainder of Farm No. 432, Plettenberg Bay. Please refer to the attached site development plans in Annexure B.

### **Camp area 1 – Dam Camp Area:**

The dam camp development zone is to be located on the northern part of the property, south of the existing farm dam (classified in accordance with NFEPA data as an artificial wetland). The development zone will be approximately 2 800 m<sup>2</sup>, consisting of the installation of six (6) container units (6 m in length), which will be able to accommodate two (2) guests each, and associated infrastructure. Ablutions will be either inside each container or as two separate ablution blocks.

### **Camp area 2 – Coastal Camp Area:**

The development zone of the coastal camp is will be approximately 2 290 m<sup>2</sup>, which entails the installation of container units equipped with en-suite bathrooms or the provisioning of a communal ablution facility(ies), a communal central area, decking areas (viewing deck, boardwalks etc.) and

provision of a communal parking area on the grass. Guest movement will be restricted to boardwalks which connect the units, communal central- and parking area and viewing deck that overlooks the ocean.

The placement of the container units will follow the natural contour lines of the land, positioned below the ridgeline to the north-east of the site. This will allow the visual impact to be minimal. The creation of a communal area with shares amenities (kitchen facilities) will ensure that each unit is as small as possible (The Planet Thing, 2019).

The development zone will allow for the installation of six (6) smaller containers (sleeping approximately two (2) guests each) or three (3) larger containers (each sleeping approximately four (4) guests). Both of the options will be able to accommodate hikers using the planned hiking trail from Robberg to Harkerville (12 guests were the requirement indicated by the Robberg Coastal Corridor (RCC)). The visual specialist confirmed that both options will have a limited visual impact and are equally acceptable options for the applicant to consider. A communal parking area is located behind the existing container with the radar equipment. Guest movement will be restricted to boardwalks which will connect the units and the communal central area. A viewing deck at the existing view site on the coastal trail will be installed to prevent any damage to vegetation by trampling and to restrict users to the viewing area that overlooks the ocean (this is the only use within the Protected Environment other than the existing hiking trails).

**Details on civil services and access to the sites:**

**POTABLE WATER:**

Water for the operation of the units and associated infrastructure will be obtained from the existing supply on the farm and will connect to the existing infrastructure. The proposed units will connect to the existing water network which is located within the existing main road (for the connection to the dam camp area) and planted pastures (for the connection north of the coastal camp area).

Greywater generated from units and associated infrastructure will be used for irrigation in the plantations/pasture areas.

**SEWAGE:**

On-site sanitation services will be provided at each camp area through conservancy tanks which will be connected to each unit. The sewage will be periodically emptied by the Bitou Municipality and service agreements for the removal of sewage from the proposed tanks are in place between the Cairnbrogie and Bitou Municipality. The conservancy tanks will be easily accessed by sewage removal trucks and the placement of the tanks will not require additional roadworks.

Sewage from the dam camp area will be pumped into the existing conservancy tank which currently services the boathouse. The tank has the capacity to accommodate sewage from the proposed units.

**ELECTRICITY:**

The dam camp area (on the northern side of the property) will be connected to Eskom power supply by connecting to existing infrastructure (the capacity to support these units is available).

The coastal camp area (on the southern side of the property) will not connect to Eskom power and power for lighting and heating of water will be obtained by the installation of solar panels and gas.

**ACCESS:**

Access to the dam camp area will be gained via the existing main access road of Cairnbrogie and existing track behind the units (forms part of the development zone for the dam camp area and road width will not exceed NEMA threshold). Parking at each container will be provided and will entail minimal clearance of vegetation and periodically mowing of grass within the footprint of the parking bay. Parking areas can be maintained with woodchip or grass blocks should the need arise.

Access to the coastal camp area will be gained via the main entrance to Cairnbrogie and existing maintenance road around the planted pastures. The road will be maintained to allow access by guests with low ground clearance vehicles but will not exceed 4m in width. The road will end at the proposed communal/central parking area at the coastal camp behind the existing container. The existing grass will be mowed in this area for the parking. The parking area is in an area which is non-visible from the surrounding areas, as such the impact will be low and low-impact footpaths will lead to the units. To further reduce the visual impact of the parking area, the design will be done in a way so that windscreens and metal vehicles (reflecting sunlight) can be screened off from reflecting sun-rays if necessary (The Planet Thing, 2019).

**3 TERMS AND 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 of the camps.

The full and approved EMPr must be made available to all contractors working on the project and must be included in all tender documentation. Certain fundamental aspects are therefore of importance:

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

It is the responsibility of the main contractor to ensure that any sub-contractor is made aware of the environmental requirements.

The applicant / contractor will be required to make good any damage caused through their actions or the actions of their sub-contractors (in addition to any penalties for non-compliance issued).

The EMPr has been drafted by various authors from HillLand Environmental. Cathy Avierinos from HillLand Environmental has over 27 years of experience in Environmental Management & Control in this area. Inge Delpport is a junior environmental practitioner at HillLand Environmental and has a BSc (Hons) degree in Biodiversity and Ecology. Please refer to attach CVs in Annexure I.

**3.1 ENVIRONMENTAL CONTROL OFFICER (ECO)**

An Environmental Control Officer (ECO) must be appointed 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.



It will be the ECO's responsibility to ensure that the mitigation / rehabilitation measures and recommendations referred to in the EA (still to be issued) 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:

- J Previous experience of environmental control of similar sites;
- J Experience or qualifications for the relevant fields;
- J Working experience with contractors; &
- J 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:

- J Ensure compliance with the EMPr at all times during the design and planning-, pre-construction-, construction- and rehabilitation phase;
- J Ensure compliance with relevant management conditions of the EA (to be issued) during the design and planning-, pre-construction-, construction- and rehabilitation phase;
- J Make recommendations regarding the best environmental practice;
- J Meet with the applicant / contractors in order to set out the environmental parameters within which they must work;
- J Provide an Environmental Induction with all contractors, which includes making all staff aware of potential heritage resources and impacts and the process that should be followed if any artefacts are found (to be done in the pre-construction phase and ongoing as new staff works on-site);
- J Indicate where all no-go areas are to be demarcated and to ensure adherence to these delimitations at the induction BEFORE any construction commences on site (please refer to attach No-Go mapping in Annexure C);
- J Determine if any further environmental control measures which may be necessary;
- J The ECO should visit the site **prior** to the commencement of the construction phase to approve the development footprints;
- J The ECO should visit the site **weekly** during the construction phase (installation of the containers and infrastructure). The ECO is to be available at any time as required by the applicant, contractors, or authorities;
- J The ECO is to conduct a **pre-operational site visit** in order to determine if all requirements have been implemented;
- J 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;
- J Indicate where plant rescue may be necessary (pre-construction phase), and what species should be rescued on this site;

- J Indicate where erosion protection and siltation prevention measures are required or need to be supplemented and to ensure correct implementation;
- J Advise on rehabilitation measures according to the different areas;
- J Check up on general environmentally friendly construction practices (e.g. no littering, safe and secure environment, contamination risks, etc.);
- J Ensure that the correct earthworks practices are adhered to;
- J The ECO is to keep a site diary; a photographic record of activities taking place on-site, a schedule of current site activities including the monitoring of such activities and a complaints register of all public complaints and the remedies applied to such complaints;
- J 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 immediate effect and will be communicated through the resident engineer to the contractor responsible;
- J The ECO is to attend construction site meetings where programming issues are discussed to ensure proactive inclusion of the environmental requirements.

### 3.1.2.1 MONITORING REPORTS

The ECO is to provide the following compliance monitoring reports:

- J A compliance monitoring report for the pre- and construction phase of the development;
- J A compliance monitoring report for the rehabilitation and pre-operational phase of the development; &  
If timing allows, the above two reports can be undertaken in one report.
- J Operational compliance monitoring reports as required annually in terms of the EA.

### 3.1.3 ENVIRONMENTAL INDUCTION

All construction staff should be briefed by the ECO in an environmental education programme regarding the environmental status and requirements of the site, **before** any activities commencing on site. This will include providing general guidelines for minimising 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 the Induction Sheet and Register in Annexure D.

### 3.1.4 METHOD STATEMENT

The contractor / his agent or the owner if he is doing the construction and installation shall, at least 5 days **prior to** commencement of such activity involving construction, maintenance or rehabilitation, give the ECO a written plan setting out the following:

- J Location of construction camp or laydown area
- J Storage of construction materials and hazardous substances (if any)
- J Solid waste
- J Wastewater
- J Erosion and sedimentation control
- J Drainage and/ or diversion of water
- J Fire control
- J Protection of natural features
- J Cement and concrete batching

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

**4 CONDITIONS OF AUTHORISATION**

The Environmental Authorisation (EA) will be inserted at this point once issued. It is binding on the contractors, sub-contractors, agents, consultants and construction staff on the property.

**5 SPECIFICALLY REQUIRED ENVIRONMENTAL MANAGEMENT PRACTICES**

**5.1 PLACEMENT OF UNITS AND ASSOCIATED INFRASTRUCTURE**

The placement of the sites for the proposed units and associated infrastructure must be done in accordance with recommendations provided by the aquatic and visual specialists.

Dam camp area – impacts

- ) The placement of the units and all infrastructures must be within the Development Zone.
- ) The placement of the units must be set back behind the planted yellowwood trees;
- ) ECO to arrange with DAFF to undertake a site inspection and agree on the sites for the placement of the units in relation to the setback from the Yellowwood trees;
- ) The footprint of the units and associated infrastructure must be located above the full supply level of the dam;
- ) The units are to be placed on concrete plinths and raised wooden decks will provide access where required.

Description	Compliance checking (✓ / x)
Painting of units – Charcoal	
Slats / cladding with latte / timber which should be left to weather	
Slats / timber must for undulating lines	
Installation of warm-light (as opposed to cool white light)	
DAFF agreement on the site for each unit	

Activities	Size and Scale	Mitigation Measures	Timeframe for Implementation	Method of Monitoring Implementation	Frequency of Monitoring	Responsible Persons	Compliance Monitoring
Placement of units and associated infrastructure at camp area 1	Development Zone of the dam camp area	The units and associated infrastructure must be placed above the full supply level of the dam  Clear demarcation of yellowwood trees – DAFF to confirm	Planning and design phase	Footprint of the units and associated infrastructure to be signed off	One inspection of the footprint areas	Applicant ECO Contractor / land surveyor	ECO to sign off the footprint of the camp area. To be included in monitoring report

		the placement in relation to the trees					
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Coastal camp – impact

- ) The footprint of the units be within the Development Zone
- ) The placement of the units must follow the contour lines of the land and must be placed below the ridgeline to the north-east to ensure that the visual impact is minimal;
- ) Incorporation of visual mitigation measures (as recommended by the visual specialist)
- ) Retain fire break as required by the FPA and DAFF:

Description	Compliance checking (✓ / x)
Painting of units – Charcoal	
Slats / cladding with latte / timber which should be left to weather	
Slats / timber must for undulating lines	
Reflecting windows towards affecting parties to be screened with a simple, narrow pergola-type structure in a natural timber	
Exposed red clay-dominated soil to be covered with vegetation and stone / stone-crush sourced from surrounding natural material	
Placement of central parking area within an area that is non-visible from the surrounding area	
Screening of windscreens and metal vehicles – same architectural recommendations with regards to materials, colours and shapes	
Installation of warm-light (as opposed to cool white light)	
Firebreak maintained	

Activities	Size and Scale	Mitigation Measures	Timeframe for Implementation	Method of Monitoring Implementation	Frequency of Monitoring	Responsible Persons	Compliance Monitoring
Placement of units and associated infrastructure at the coastal camp	Development Zone of the coastal camp	Pegging of the site to confirm the above  Implementation of mitigation measures as described above	Planning and design phase	Footprint of the units and associated infrastructure to be signed off	One inspection of the footprint areas	Applicant ECO Contractor / land surveyor	ECO to sign off the footprint of the camp area. To be included in monitoring report

**5.2 DEMARCATION OF THE DEVELOPMENT ZONE**

Prior to the commencement of any vegetation clearing and/or construction activities, the proposed footprints of the units and associated infrastructure must be surveyed and pegged. Demarcation of the development zone will be required, and methods of demarcation will be agreed with the ECO and may include danger tape, rope, fencing, shade cloth, mulch bags, wire fencing etc. All areas **outside** the Development Zone are regarded as NO-GO.

All people working on site must be made aware of the boundaries in which work is to be done. Those areas, in which no work is required, are to be considered as no-go areas (please refer to the no-go mapping in Annexure C). The following applies:

- ) Civil contractors - all areas outside that of the defined works is deemed a no-go area.
- ) All construction activities must be restricted to the demarcated areas to ensure no disturbance.
- ) No encroachment or activities may take place outside the work areas.
- ) No-Go areas will be required to be demarcated by the contractor to ensure that they are visible at all times, to all personnel.
- ) In light of the above, should access be required through a no-go area, permission must be obtained from the ECO in writing before the use of such an area.
- ) The farm dam is regarded as a strict No-Go area. Clear demarcation and silt fencing/ protection at each plinth must be erected between the construction area and the dam.
- ) The protected environment a strict No-Go. This is to be made clear to the Contractor and all workers on site.
- ) The farm around the construction site may not be entered by any construction staff if permission is not granted by the owner.
- ) The ECO should monitor adherence to the No-Go area policy.
- ) Access into the No-Go areas by personnel is strictly forbidden (i.e. Work breaks such as lunch are not permitted outside the defined work area - no entry into the neighbouring properties or open space areas). A spot fine will be imposed against the contractor in the event of contravention of the no-go policy (up to a maximum of R5 000 per incident).
- ) No access whatsoever into the Robberg Coastal Corridor Protected Environment is permitted unless under the direct guidance of the owner and ECO.

Activities	Size and Scale	Mitigation Measures	Timeframe for Implementation	Method of Monitoring Implementation	Frequency of Monitoring	Responsible Persons	Compliance Monitoring
Demarcation of No-Go areas	Development footprint of camp area 1 & 2	Demarcation as agreed upon with ECO, which will include the use of danger tape, rope, fencing, shade cloth, mulch bags, wire fencing etc.	Pre-construction phase	ECO to check and sign of demarcation	One inspection of demarcation of no-go areas and ongoing monitoring of compliance	ECO to monitor Contractor / applicant to implement	To be included in monitoring report

**5.3 PLANT RESCUE PROGRAMME AND VEGETATION CLEARANCE**

Once the site of the units and associated infrastructure have been pegged, the ECO is to conduct a site visit in order to determine if any plants within the footprints of the concrete plinths / wooden poles and conservancy tank require rescue. This inspection will be done with the Contractor present and any/ all suitable species must be indicated as such by means of tape/ non-toxic marker/ ribbon or other appropriate markers. The contractor is to carefully remove these marked plants and replant them in a suitable pre-determined area on-site OR save these plants in a temporary on-site nursery for later use in rehabilitation of the completed camp area.

A record of each plant is to be maintained (see Annexure F). The bagged plants are to be used to rehabilitate and landscape the area once building activities are completed.

Should any endangered / protected species listed in Schedules 3 and 4 respectively, in terms of the Western Cape Nature Conservation Laws Amendment Act, 2000 (Act No.3 of 2000) (please refer to Annexure G), it may not be picked / removed prior to obtaining the appropriate permit from CapeNature (ECO to assist). Department of Agriculture, Forestry and Fisheries (DAFF) is required to confirm the placement for units in relation to the Yellowwood trees.

Vegetation clearance will be restricted to the footprint of the concrete plinths, wooden poles and conservancy tank. No vegetation located outside of these areas may be cleared.

Activities	Size and Scale	Mitigation Measures	Timeframe for Implementation	Method of Monitoring Implementation	Frequency of Monitoring	Responsible Persons	Compliance Monitoring
Plant rescue	Footprint of concrete plinths, wooden poles and conservancy tank	Rescued plants must be transplanted into open space areas outside of the footprint of the units and / or associated infrastructure or are to be used in the rehabilitation / visual screening	Pre-construction phase	ECO to inspect and identify plants that should be rescued	One inspection to identify plants	ECO to identify plants for rescue Contractor / applicant to rescue identified plants	To be included in monitoring report
Vegetation clearance	Footprint of concrete plinths, wooden poles and conservancy tank	Clearance of demarcated vegetation only	Pre-construction phase	ECO to monitor compliance	Inspection of vegetation clearance as required	ECO to monitor compliance Contractor / applicant to ensure compliance	To be included in monitoring report

**5.4 SOIL MANAGEMENT AND EROSION PROTECTION**

- ) Topsoil in this area is very limited and should be stockpiled separately to ensure it can be reused to plant vegetation.
- ) The top 20 cm of the areas where the plinths/poles are to be situated should be removed and kept aside for use in re-establishment of naturally indigenous vegetation occurring to the area.
- ) Topsoil and subsoil from trenches made for the installation of services should be kept separate. The topsoil should be placed back on top once the installation of all services is complete.
- ) Stringent mitigation measures must be imposed during construction to minimize runoff, possible silt run-off and contamination of water leaving the site, with the use of silt-fencing, rows of onion bags, mulch, brushwood and deflection berms (the choice depending on the situation). These mitigation measures are essential in all exposed areas.
- ) Areas requiring erosion control mechanisms to be identified by the ECO. Instructions to be given to the contractor as required.
- ) In the event of erosion damage, the contractor will be liable for a fine and is responsible for the clean-up and required to reinstate the conditions to normal as determined by the ECO.

- J To decrease the risk of water pollution, all construction materials must be secured (e.g. only stockpiling at a predetermined site, around which there must be a silt protection boundary) so that there is no wash away.
- J It is the responsibility of the contractor working inside any trench at any specific time to ensure that their works are protected from damage which may be caused through runoff of rainwater inside the trench. The use of sandbags, mulch bags or any other appropriate methods of slowing down the flow of water within a trench is required.
- J Access roads are also to be monitored and managed for erosion prevention.

Activities	Size and Scale	Mitigation Measures	Timeframe for Implementation	Method of Monitoring Implementation	Frequency of Monitoring	Responsible Persons	Compliance Monitoring
Stripping of topsoil	Footprint of concrete plinths, wooden poles and associated services	<p>Topsoil and subsoil must be kept separate</p> <p>Topsoil should not be compacted and all compacted topsoil must be loosened</p> <p>Rescued topsoil should be demarcated to prevent contamination</p> <p>Topsoil must be placed back on top following installation of services</p>	Pre-construction phase	ECO to monitor compliance	Ongoing compliance monitoring	ECO to monitor Contractor / applicant to ensure compliance	To be included in monitoring report
Erosion protection	Entire footprint of both camp areas	The contractor 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	Pre-construction-, construction-, and operational phase	<p>ECO to monitor compliance during pre-construction and construction phase</p> <p>Applicant to monitor and ensure compliance during the operational phase</p>	Ongoing monitoring of compliance	ECO to monitor Contractor / applicant to monitor and ensure compliance during the operational phase	To be included in monitoring report

## 5.5 INSTALLATION OF UNITS AND ASSOCIATED INFRASTRUCTURE

### Installation sequence:

Concrete plinths and wooden poles are to be placed in the identified areas. Container units are to be bought on-site and offloaded directly into position. Delivery vehicles are to make use of the existing roads to limit the damage. Services are to be installed at identified areas or attached under boardwalks or decks.

#### 5.5.1 SITE MANAGEMENT

- ) No accommodation with the exception of a night watchman is permitted on-site by contractors or their staff during the construction period unless specifically supplied by the owner.
- ) **No open fires are to be permitted.**
- ) No temporary diesel storage tanks should be brought to the site.
- ) The contract staff must be briefed on the 'no litter policy'. **The site to be kept clean of litter, even if it is not caused by the contractor staff.**
- ) All stockpile sites to be approved by the ECO and/or applicant, before the commencement of stockpiling.
- ) All stockpile sites to be properly demarcated with silt-fences and/or danger tape, where necessary.
- ) Silt protection measures around stockpile sites may be required.
- ) All construction material should be stored within the demarcated area.
- ) No construction material is to be stored outside of the demarcated area.
- ) No hazardous materials to be stored on-site like diesel, petrol etc. without written approval by DEADP.

##### 5.5.1.1 CONSTRUCTION WASTE MANAGEMENT AND STORAGE

Minimal waste will be generated on-site as the containers are manufactured off-site.

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 / Applicant shall ensure that all site personnel are instructed in the proper disposal of all waste. The Contractor / Applicant shall ensure that **sufficient disposal facilities** (at all places of work) are available such as drums / skips with appropriate covers. Disposal of all waste materials must be done at the provided suitable facilities. **No dumping** of any waste material on or off-site is permitted.

The Contractor / Applicant shall ensure that the site is maintained in a neat and tidy condition and kept **free of litter**. Measures must be taken to reduce the potential for litter and negligent behaviour with regard to the disposal of all refuse.

All generated waste must be removed from the site following construction phase and disposed of at the approved waste disposal facility.

**No burning, on-site burying or dumping of waste shall occur.** No illegal dumping of construction material may take place.

Should it be necessary, all hazardous waste shall be disposed of at an approved **hazardous landfill site**.



**5.5.1.2 ABLUTION FACILITIES**

Contractors must provide chemical ablution facilities for all construction personnel working on the site. One facility for every 15 persons on site is required. Toilets shall be of a neat construction and shall be provided with doors and locks and shall be secured to prevent them from blowing over.

Sanitation provision and servicing shall be to the satisfaction of the environmental control officer.

The contractor shall ensure that the toilet(s) are emptied regularly and also before weekends and public holiday periods.

Failure to use the chemical toilet provided and making use of the vegetation either on or off-site will result in maximum penalty fine being awarded in addition to requiring the contractor to clean up.

**5.5.1.3 FIRE PROTECTION**

The applicant / contractor should take all reasonable and active steps to avoid increasing this risk (especially to prevent damage to surrounding properties and vegetation). **No open fires or naked flames for heating or cooking shall be allowed anywhere on the construction site.**

The applicant / contractor shall ensure that all personnel are aware of the fire risk and the need to extinguish cigarettes before disposal. Cigarettes (including butts) may not be disposed of onsite and must be disposed of properly in receptacles for this purpose.

**No burning of waste on ANY PART of the site should be permitted.**

The applicant / contractor shall identify the authorities responsible for fighting fires in the area and shall liaise with them regarding procedures should a fire start. The Contractor shall ensure that his staff are aware of the fire danger at all times and are aware of the procedure to be followed in the event of a fire. The Contractor shall also ensure that all the necessary telephone numbers etc. are posted at conspicuous and relevant locations in the event of an emergency. The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it.

**5.5.1.3.1 OPERATIONAL FIRE MANAGEMENT**

Cairnbrogie is a member of the local Fire Management Unit, please refer to confirmation letter in Annexure H. The following fire management is recommended by DAFF: fire advisor;

- ) A 10-15 m firebreak must be located between the coastal camp and the protected environment to the south (keep area mowed);
- ) A galvanized sprinkler system must be erected on the roof of each unit of both camp areas;
- ) Guests visiting the camp areas must be briefed / provided with an information pamphlet, clearly indicating the evacuation routes in case of a fire; &
- ) Cairnbrogie must remain a member of the SCFPA / Local FMU and must be able to access fire fighting resources at all times.

Renewal of the membership is required annually, and inspections of firebreaks are undertaken by the FMU and FPA. Ongoing fire preparedness or monitoring must comply with the conditions and recommendation provided the attached letter from DAFF: Fire Advisor (please refer to Annexure H) and / or any specific instruction provided at the time of implementation.

#### **5.5.1.4 HERITAGE RESOURCES**

If it is suspected that an item or site of heritage value has been found or uncovered during the course of construction (excavation), all work is to immediately cease until Heritage Western Cape (HWC) and the ECO have been contacted to advise further. Heritage artefacts include but are not limited to; shell middens, human remains (graves or burial sites), ceramics or pottery, stone tools, weapons or instruments.

#### **5.6 REHABILITATION FOLLOWING CONSTRUCTION**

Minimal disturbance will be caused during the construction phase of the development, however, all disturbed area must be rehabilitated following construction. This will include re-planting of rescued vegetation and the introduction of indigenous vegetation for visual screening.

#### **5.7 RESORT OPERATION**

##### **5.7.1 PEDESTRIAN MOVEMENT**

Guests will be provided with an information pamphlet indicating information of the RCCPE and guidelines and rules regarding the hiking/ bicycle track and the restriction of movement to the boardwalks and trails.

##### **5.7.2 WASTE MANAGEMENT**

Sorting of waste must be done at each camp area, the housekeeping staff is to collect waste and take to the central farm waste collection area for collection by the Municipality. Any storage area for waste, no matter how short the storage time may be, MUST be baboon and monkey proof to prevent access.

##### **5.7.3 ROAD AND PARKING MAINTENANCE**

Maintenance of the farm access roads to ensure that vehicles can safely use the road will require periodical mowing of the centre track and placement of gravel in any ruts that form over time. The creation of "bypass" routes is to be avoided at all costs through the regular maintenance of the road. Passing bays must be provided in areas where two vehicles are likely to need to pass each other and cannot safely do this by driving onto the adjacent grass.

#### **5.8 DECOMMISSIONING**

The decommissioning of the camp areas will entail the removal / re-allocation of units from the site and the removal of all visible infrastructures (boardwalks, decking areas etc.). All material foreign to the site must be removed and must be reused elsewhere or be disposed of at an approved waste disposal site. The procedure for the decommissioning of the camps should be the same as that for the construction only in the reverse.

Any material that can be reused or recycled should be reused or recycled.

#### **6 TIME FRAMES and MONITORING**

- J Inspection by the ECO is to be conducted **prior** to the commencement of construction activities (approval of the placement of the units, associated infrastructure etc.).
- J The contractor is to provide a construction programme to the ECO including the environmental management requirements prior to commencement.
- J A method statement is to be provided to the ECO detailing the construction anticipated prior to the commencement of any activities (please refer to the attached form in Annexure E).

- J Environmental induction must be done by the ECO prior to the commencement of pre-construction activities. All contractors / staff working on-site must receive induction.
- J The demarcation of the no-go areas is to take place together with the ECO following induction training session.
- J **Weekly** inspections (by the ECO) of the construction phase (installation of units and associated infrastructure) as required.
- J Inspection of the rehabilitation phase as required (by the ECO).
- J A pre-operational phase inspection is required (by the ECO).
- J Operational phase inspections must be conducted **annually** (by the ECO).
- J Monitoring reports to be submitted by the ECO to the competent authority (DEADP), applicant and/or contractor. It will include the following compliance monitoring reports:
  - o One compliance monitoring report at the completion of the pre- and construction phase of the development;
  - o One compliance monitoring report at the completion of the rehabilitation- and pre-operational phase of the development; &
  - o Annual operational compliance monitoring report.

## 7 AUDITING

- J An audit report must be submitted to the competent authority (DEADP) every 5 years of the operational phase of the camp areas, or at such frequency as determined by the EIA regulations at the time.
- J Audit reports must be compiled by an independent person with relevant environmental auditing expertise and must comply with Appendix 7 of the EIA Regulation (as amended) or any applicable legislation at the time.
- J It is anticipated that the audits will be included in the RCCPE audits or be undertaken by the same responsible person for the RCCPE audits.

## 8 LEGISLATIVE REQUIREMENTS

### 8.1 NOISE

The applicant / contractor must comply with the regulations pertaining to noise. SANS 10400 is applicable. Applicant / contractor and staff are only permitted to work Mondays to Fridays (08:00 – 17:00). No work on public holidays or weekends permitted.

### 8.2 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 (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.

A fund is to be established for the collection of fines and the spending of this fund is to be at the discretion of the ECO for environmental rehabilitation of the area.

**9 CONCLUSION**

This EMPr is binding on all contractors on site and constitutes Best Practice for all activities required. This EMPr may be updated with specific conditions required by the Environmental Authorisation, once issued.