

**UPDATE OF THE ENVIRONMENTAL MANAGEMENT PLAN  
FOR THE MAINTENANCE AND OPERATIONS OF THE  
LÜDERITZ SPEED CHALLENGE CHANNEL IN LÜDERITZ  
SECOND LAGOON**

**ENVIRONMENTAL MANAGEMENT PLAN**



**Assessed by:**



**Assessed for:**

**Surf'n'Curve  
(Pty) Ltd**

**May 2020**



<b>Project:</b>	<b>UPDATE OF THE ENVIRONMENTAL MANAGEMENT PLAN FOR THE MAINTENANCE AND OPERATIONS OF THE LÜDERITZ SPEED CHALLENGE CHANNEL IN LÜDERITZ SECOND LAGOON</b>
<b>Report Version/Date</b>	Revision 3 19 May 2020
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<b>Cite this document as:</b>	<b>Faul A, Botha P. 2020. Update of the Environmental Management Plan for the Maintenance and Operations of the Lüderitz Speed Challenge Channel in Lüderitz Second Lagoon</b>
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## 1 INTRODUCTION AND BACKGROUND

The Lüderitz Speed Challenge is an international kite- and wind-surfing event, held in Lüderitz, with the main aim of setting world records in speed sailing. It commenced in 2007 and since then became an annual event taking place mainly in October and November of each year.

The event takes place at the southern end of the Second Lagoon at Lüderitz (Figure 1). An environmental impact assessment and environmental management plan (EMP) for the new channel and its operations were completed in 2011 (LM Environmental Consulting, 2011) and an environmental clearance certificate (ECC) was issued by the Ministry of Environment and Tourism. The ECC was subsequently renewed in the name of Surf'n'Curve (Pty) Ltd in 2017 (Faul & Botha 2017) (see Appendix A for a copy of the certificate). Surf'n'Curve once again requires the renewal of the ECC and has requested Geo Pollution Technologies (Pty) Ltd to assist with the process.

The existing channel consist of three main areas: 1) an entry of approximately 150 m; 2) the main channel for speed sailing of approximately 650 m; and the slow down area of 260 m. The channel is approximately 6 m wide and 1 m deep. The project area is within the Tsau //Khaeb National Park (previously Sperrgebiet) and is under the jurisdiction of the Ministry of Environment, Forestry and Tourism.

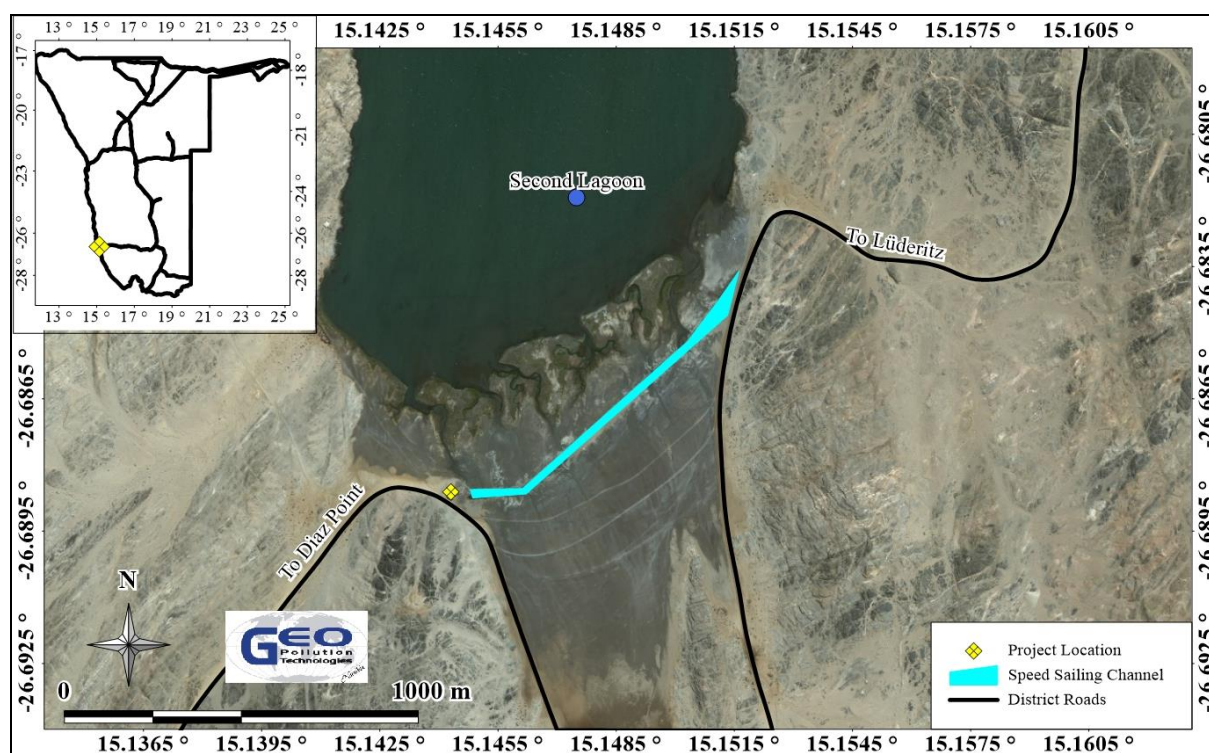


Figure 1. Project location

## 2 OPERATIONAL ACTIVITIES

The next speed challenge event is expected to take place October/November 2020 and continues annually thereafter. Preparations for, and execution of the event remains the same as previous years. This entails the performance of some maintenance on the channel in months preceding the event. Maintenance is mainly necessary to ensure the dimensions of the channel remains adequate, notably the depth, as during the months after the event some erosion of the channel occurs. Manual labour and the use of a backhoe digger (or similar) are employed to prepare the channel and insure the sand barrier is intact. Few days before the event, the necessary preparations are made and includes setting up danger tape around restricted areas, shaded areas for participants, ablution facilities, etc. After the event, all equipment and material are removed and it is ensured that no waste is left behind.

The event itself entails the participants either kite surfing or wind sailing along the channel with the aim of setting personal best or record speeds (Photo 1). Participants start at the western end of the

channel and stop at the eastern end. Here they are picked up by a vehicle who returns them to the start end. Some spectators attend the event at varying times and some social events are held, especially to get the youth interested in the sport (Photo 2).



**Photo 1. Lüderitz Speed Challenge in action channel**



**Photo 2. Social interaction**

### 3 PROJECT JUSTIFICATION

The Lüderitz Speed Challenge has become one of the main international events on the speed sailing calendar. It attracts participants from all over the world. Since its inception numerous world and national records have been set. The majority of the participants are from European and other international countries. There is thus a significant economic benefit for Namibia and Lüderitz specifically. Some employment opportunities also exist prior to and during the event, to provide support services.

### 4 ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programmes and policies deemed to have adverse impacts on the environment require an EIA, as per the Namibian legislation. The legislation and standards provided in Table 1 and Table 2 governs the EIA process in Namibia and/or are relevant to the speed sailing channel.

**Table 1. Namibian Law Applicable to the Development**

Law	Key Aspects
<b>The Namibian Constitution</b>	<ul style="list-style-type: none"> <li>◆ Promote the welfare of people</li> <li>◆ Incorporates a high level of environmental protection</li> <li>◆ Incorporates international agreements as part of Namibian law</li> </ul>
<b>Environmental Management Act</b> Act No. 7 of 2007, Government Notice No. 232 of 2007	<ul style="list-style-type: none"> <li>◆ Defines the environment</li> <li>◆ Promote sustainable management of the environment and the use of natural resources</li> <li>◆ Provide a process of assessment and control of activities with possible significant effects on the environment</li> </ul>



<b>Environmental Management Act Regulations</b> Government Notice No. 28-30 of 2012	<ul style="list-style-type: none"> <li>◆ Commencement of the Environmental Management Act</li> <li>◆ List activities that requires an ECC</li> <li>◆ Provide Environmental Impact Assessment Regulations</li> </ul>
<b>Sports Act</b> Act No. 12 of 2003	<ul style="list-style-type: none"> <li>◆ Provide for the establishment of the Namibia Sports Commission and to provide for its powers and functions</li> </ul>
<b>Sports Regulations: Namibia Sports Act</b> Government Notice No. 243 - 244 of 2003	<ul style="list-style-type: none"> <li>◆ Commencement of the Sports Act</li> <li>◆ Provides for regulations related to sport</li> <li>◆ Provides for obtaining of approval form the sports commission to host an international event</li> </ul>
<b>The Water Act</b> Act No. 54 of 1956	<ul style="list-style-type: none"> <li>◆ Remains in force until the new Water Resources Management Act comes into force</li> <li>◆ Defines the interests of the state in protecting water resources</li> <li>◆ Prohibits pollution of the sea</li> <li>◆ Controls the disposal of effluent</li> <li>◆ Numerous amendments</li> </ul>
<b>Water Resources Management Act</b> Act No. 11 of 2013	<ul style="list-style-type: none"> <li>◆ Provide for management, protection, development, use and conservation of water resources</li> <li>◆ Prevention of water pollution and assignment of liability</li> <li>◆ Not in force yet</li> </ul>
<b>Soil Conservation Act</b> Act No. 76 of 1969	<ul style="list-style-type: none"> <li>◆ Law relating to the combating and prevention of soil erosion, the conservation, improvement and manner of use of the soil and vegetation and the protection of the water sources Namibia</li> </ul>
<b>Dumping At Sea Control Act</b> Act No. 73 of 1980	<ul style="list-style-type: none"> <li>◆ Provide for the control of dumping of substances in the sea</li> <li>◆ Provides for permits to be issued to allow dumping at sea of scheduled substances</li> </ul>
<b>Marine Resources Act</b> Act No. 27 of 2000	<ul style="list-style-type: none"> <li>◆ Provide for the conservation of the marine ecosystem and the responsible administration, conservation, protection and promotion of marine resources on a sustainable basis</li> <li>◆ Prevents the discharge of anything that may be injurious to marine resources or may disturb ecological balance in any area of the sea or which may detrimentally affect the marketability of marine resources, or which may hinder their harvesting</li> </ul>
<b>Regulations Relating to Namibian Islands' Marine Protected Area: Marine Resources Act, 2000</b> Government Notice No. 316 of 2012	<ul style="list-style-type: none"> <li>◆ Delineates the Namibian Islands' Marine Protected Area</li> <li>◆ Zones the Namibian Islands' Marine Protected Area into an all-encompassing buffer zone further divided into four zones of increasing protection status as islands and shorelines are approached.</li> <li>◆ Declares that a person may not land on or access any island, islet or rock in the Namibian Islands'</li> </ul>

	<p>Marine Protected Area unless the person is in possession of a valid permit obtained from the regional office of the Ministry of Fisheries and Marine Resources in Lüderitz.</p> <ul style="list-style-type: none"> <li>◆ Provides for the option of mariculture in permitted areas and under certain conditions.</li> </ul>
<p><b>The Namibian Ports Authority Act</b> Act No. 2 of 1994</p>	<ul style="list-style-type: none"> <li>◆ Provide for the establishment of the Namibian Ports Authority and its functions</li> <li>◆ Responsible to protect the environment within its areas of jurisdiction</li> </ul>
<p><b>Diamond Act</b> Act No. 13 of 1999</p>	<ul style="list-style-type: none"> <li>◆ Provide for control measures in respect of the possession, the purchase and sale, the processing and the import and export of diamonds</li> </ul>
<p><b>Local Authorities Act</b> Act No. 23 of 1992, Government Notice No. 116 of 1992</p>	<ul style="list-style-type: none"> <li>◆ Define the powers, duties and functions of local authority councils</li> <li>◆ Regulates discharges into sewers</li> </ul>
<p><b>Public Health Act</b> Act No. 36 of 1919</p>	<ul style="list-style-type: none"> <li>◆ Provides for the protection of health of all people</li> </ul>
<p><b>Public and Environmental Health Act</b> Act No. 1 of 2015, Government Notice No. 86 of 2015</p>	<ul style="list-style-type: none"> <li>◆ Provides a framework for a structured more uniform public and environmental health system, and for incidental matters</li> <li>◆ Not in force yet</li> </ul>
<p><b>Labour Act</b> Act No 11 of 2007, Government Notice No. 236 of 2007</p>	<ul style="list-style-type: none"> <li>◆ Provides for Labour Law and the protection and safety of employees</li> <li>◆ Labour Act, 1992: Regulations relating to the health and safety of employees at work (Government Notice No. 156 of 1997)</li> </ul>
<p><b>Nature Conservation Ordinance</b> Ordinance 4 of 1975</p>	<ul style="list-style-type: none"> <li>◆ Sets restrictions on the right to enter game parks and nature reserves and prohibition of certain acts therein</li> <li>◆ Provides for purposes for which permission to enter game parks and nature reserves may be granted.</li> </ul>
<p><b>Pollution Control and Waste Management Bill (draft document)</b></p>	<ul style="list-style-type: none"> <li>◆ Provides for prevention and control of pollution and waste</li> <li>◆ Provides for procedures to be followed for licence applications</li> <li>◆ Not in force yet</li> </ul>
<p><b>National Marine Pollution Contingency Plan of 2017</b></p>	<ul style="list-style-type: none"> <li>◆ Coordinated and integrated national system for dealing with pollution in Namibian waters.</li> </ul>

**Table 2. International Conventions and Standards**

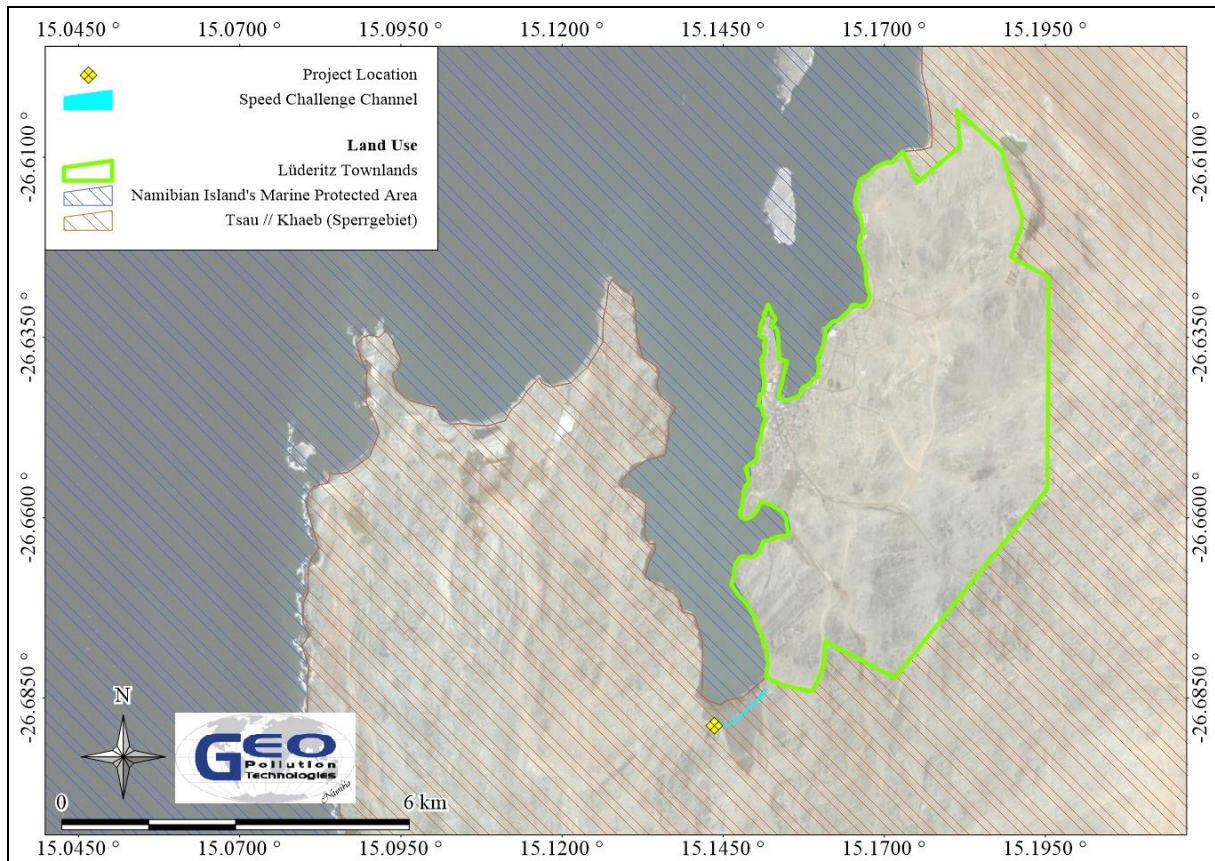
Standard or Code	Key Aspects
<b>Benguela Current Commission</b>	<ul style="list-style-type: none"> <li>◆ Interim Agreement between Namibia, South Africa and Angola to establish a permanent mechanism for the sustainable management the marine environment and its resources, the Benguela Current Large Marine Ecosystem (BCLME)</li> </ul>

	<ul style="list-style-type: none"> <li>◆ Propose a set of sediment and water quality guidelines.</li> </ul>
<b>Convention on Biological Diversity</b>	<ul style="list-style-type: none"> <li>◆ Primary goal is the conservation of biodiversity</li> <li>◆ Prescribes the precautionary principle</li> <li>◆ Parties to the convention are obliged to:</li> <li>◆ Establish a network of protected areas;</li> <li>○ Create buffer areas adjacent to these protected areas using environmentally sound and sustainable development practices.</li> <li>○ Rehabilitate degraded habitats and populations of species.</li> </ul>
<b>UN Convention for the Prevention of Marine Pollution from Land-based Sources</b>	<ul style="list-style-type: none"> <li>◆ Concerns itself with the protection of marine fauna and flora by preventing marine pollution from land-based sources.</li> <li>◆ Contracted parties, are committed to take all possible steps to prevent pollution of the sea as well as the direct or indirect introduction of substances or energy by humans into the marine environment resulting in such adverse effects as harm to living resources and to marine ecosystems, hazards to human health, damage to services/ facilities or interference with other legitimate uses of the area.</li> </ul>
<b>Stockholm Declaration on the Human Environment, Stockholm 1972.</b>	<ul style="list-style-type: none"> <li>◆ Recognizes the need for a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment</li> </ul>

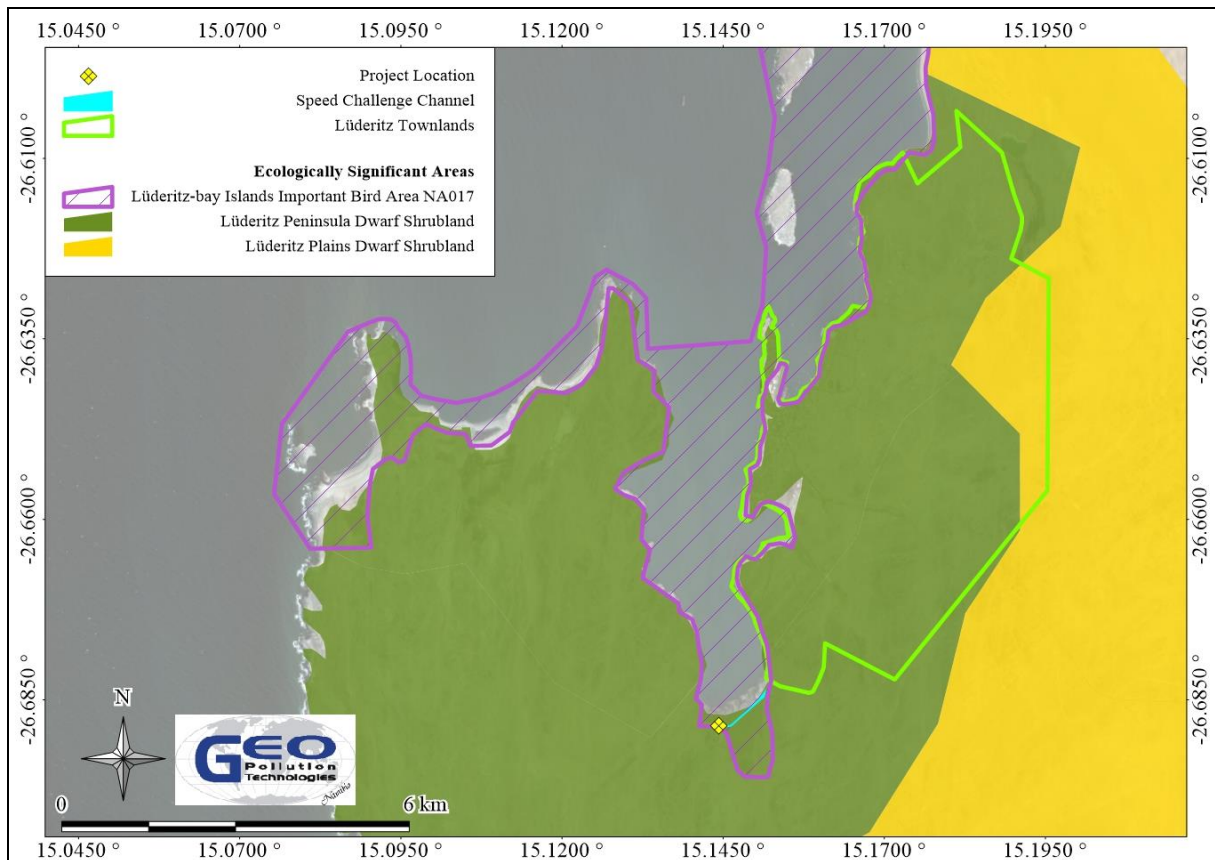
## 5 BRIEF ENVIRONMENTAL DESCRIPTION

The Lüderitz Speed Challenge channel and event is on the western border of the Tsau //Khaeb National Park and is surrounded by ecologically important areas. It is inside the park and just outside of the Lüderitz townlands. A Tourism Development Plan for the Tsau //Khaeb National Park is in its final stages of drafting and will allow for certain concession rights in the park.

On the marine side is the Namibia's Islands Marine Protected Area (NIMPA). The NIMPA includes all islands and the shoreline up to the high water mark on its eastern border. The channel is within Important Bird Area NA017. The site of the channel is however not particularly frequented by birds, but some do at times utilize the channel for feeding. The vegetation of the area is classified as the Lüderitz Peninsula Dwarf Shrubland, a vegetation type with high endemism which is sensitive to disturbance.



**Figure 2. Land use**



**Figure 3. Ecologically significant features of the area**

## 6 OBJECTIVES OF THE EMP

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The EMP provides management options to ensure impacts related to the channel maintenance and speed sailing event in general are minimised. An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included if necessary. The EMP acts as a stand-alone document, which can be used during the various phases (planning, construction, operational and decommissioning) of any proposed activity or development.

All contractors, sub-contractors and event organizers should be made aware of the contents of the EMP so as to plan the relevant activities accordingly and in an environmentally sound manner.

The objectives of the EMP are:

- ◆ to include all components of the various activities;
- ◆ to prescribe the best practicable control methods to lessen the environmental impacts;
- ◆ to monitor and audit the performance of the construction / maintenance and operational personnel in applying such controls; and
- ◆ to ensure that appropriate environmental training is provided.

## 7 THE IMPLEMENTATION OF THE EMP

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Table 3 to Table 5 outline the management of the environmental elements that may be affected by the different activities, grouped in each phase of development. These groups are as follows:

- ◆ Planning Phase
- ◆ Channel Maintenance Phase
- ◆ Operational Phase

The EMP is a living document that must be prepared in detail, and regularly updated, by the proponent as the project progress and evolve. The tables below act as a guideline for the EMP to be established by Surf'n'Curve. Impacts addressed and mitigation measures proposed are seen as minimum requirements which have to be elaborated on. Delegation of mitigation and reporting activities should be determined by Surf'n'Curve and included in the EMP.

All monitoring results must be reported on as indicated. These are important for submission to the Ministry of Environment, Forestry and Tourism on a bi-annual basis and to allow for future renewals of the ECC.

Table 3. Planning for Development, Operations and Future Decommissioning of the Project

Activity	Objective	Action	Timing	Proof of Compliance	Responsible Body
<b>Compliance</b>	To comply with all legal requirements in Namibia.	Apply for the necessary permits and authorisations from the various ministries, local authorities and any other bodies that governs the activities related to the channel maintenance and the speed challenge event itself. This includes permits for hosting the event in the Tsau //Khaeb National Park.	Prior to commencement of maintenance activities and event	All relevant contracts, permits, certificates and other legal documents on file.	Proponent
<b>Appointments</b>	To appoint reputable contractors and operational personnel and establish the EMP, a legal requirement that forms part of the contract with the contractor and employees.	Finalise negotiations and resolve any outstanding issues, if any, over the allocation of user rights of the land on which the channel is located and the event is hosted.	Prior to commencement of maintenance activities and event	Contracts on file	Proponent; Contractor
<b>Management</b>	Establish a management system to implement and monitor Health, Safety and Environment.	Appoint contractors and employees and enter into an agreement which includes the EMP. Ensure that the contents of the EMP are understood by the contractor, sub-contractors, employees and all personnel who will be present on site.	Prior to commencement of maintenance activities and event	Documentation on file Personal Protective Equipment (PPE) on site Signage related to restricted areas, dangerous areas, and PPE requirements on site Emergency response material on site	Proponent; Contractor
		Make provisions to have a Health, Safety and Environmental Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site. Have the following emergency plans, equipment and personnel in place to deal with all emergencies: Risk Management / Mitigation / Environmental Management Plan/ Emergency Response Plan and HSE Manuals	Prior to commencement of maintenance activities and event		

Activity	Objective	Action	Timing	Proof of Compliance	Responsible Body
<b>Restoration Fund/Insurance</b>	To establish a fund/insurance for future environmental restoration or pollution remediation if ever required.	Adequate protection and indemnity insurance cover for incidents; Comply with the provisions of all relevant safety standards; Procedures, equipment and materials required for emergencies. To establish a fund for immediate or future ecological restoration of the project site should pollution or environmental damage take place or project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.	Prior to commencement of maintenance activities and event	Financial statements of restoration fund/insurance	Proponent; Independent Specialist Consultant
<b>Community Liaison &amp; EMP Compliance</b>	To appoint a community liaison officer as link between the proponent and the public. To appoint an independent environmental consultant to monitor compliance of the client to the EMP.	<b>Community Liaison Officer:</b> Communicate contact details of community liaison officer to all authorities, registered Interested and Affected Parties and stakeholders. Erect a permanent sign at a suitable and clearly visible location at the channel, which communicates the contact details and purpose of the community liaison officer. <b>Receive</b> complaints directly related to the development and act upon complaints. Communicate any action taken regarding complaints to the relevant authorities, registered Interested and Affected Parties and stakeholders. <b>Environmental Consultant:</b> Monitor whether the proponent complies in full to the EMP. Non-compliance must be	Prior to commencement of maintenance activities, during event and for the period between annual events.	Complaints and monitoring reports EMP compliance reports	Proponent Independent Specialist Consultant (One person/organisation can be both the community liaison officer and the EMP compliance consultant)

Activity	Objective	Action	Timing	Proof of Compliance	Responsible Body
<b>Reporting</b>	To establish a reporting system to report on monitoring aspects of construction, operations and decommissioning as outlined in the EMP.	Establish a reporting system to report on aspects of maintenance, operations and decommissioning as outlined in the EMP. Submit bi-annual monitoring reports to the Ministry of Environment, Forestry and Tourism to allow for future ECC renewals.	Prior to commencement of maintenance activities, during event and for the period between annual events.	Monitoring Reports	Proponent; Contractor
<b>Environmental Clearance Renewal</b>	To renew the ECC every three years.	Appoint a specialist environmental consultant to update the EIA and EMP, based on monitoring results and apply for renewal of the ECC.	Prior to expiry of ECC	Renewed ECC	Proponent; Independent Specialist Consultant

**Table 4. Channel Maintenance**

Criteria	Nature	Mitigation	Monitoring	Responsible Body
<b>Employment</b>	Maintenance activities provide employment	If skills exist locally Namibians must be employed. Alternately training must be provided to Namibians to ultimately employ a predominantly Namibian workforce. Deviations from this practice should be justified appropriately.	Reporting based on employee records. All information and reporting to be included in a <b>bi-annual</b> report.	Proponent
<b>Health and Safety</b>	Risks to maintenance personnel include work related injuries especially with the use of excavation equipment	All Health and Safety standards specified in the Labour Act and other applicable legislation should be complied with. All staff members must be briefed about potential health risks and injuries on site. All staff involved in construction must at all times wear personal protective equipment (PPE). The contact details of all emergency services must be readily available.	Inventory of necessary health and safety information and administrative documentation to be kept on file. Any incidents must be recorded with action taken to prevent future occurrences. A report should be compiled of all incidents reported. The report should contain dates when training were	Contractor; Proponent



Criteria	Nature	Mitigation	Monitoring	Responsible Body
			<p>conducted and when safety equipment and structures were inspected and maintained.</p> <p>All information and reporting to be included in a <b>bi-annual</b> report.</p>	Contractor; Proponent
<b>Noise</b>	Noise due to presence of heavy machinery on site. This is mainly restricted to operators of excavators.	Hearing protectors must be issued to construction personnel as part of PPE, where needed.	N/A	Contractor; Proponent
<b>Waste Production</b>	Waste produced, if any, as a result of the construction and maintenance processes.	All waste produced must be collected and sent to an appropriate disposal facility which include the disposal of hazardous waste at a hazardous waste disposal facility and the disposal of recyclable material at an approved recycler.	<p>A register of hazardous waste disposal should be kept. This should include type of waste, volume as well as disposal method/facility.</p> <p>Any complaints received regarding waste should be recorded with notes on action taken.</p> <p>All information and reporting to be included in a <b>bi-annual</b> report.</p>	Contractor; Proponent
<b>Ecological Impact</b>	Impacts on the surrounding vegetation and ecosystem as a whole. Largely related to habitat destruction.	<p>Two of the most important mitigation measures prior to the commencement of channel maintenance are 1) proper planning; and 2) the education of all construction personnel with regard to the value and protection of biodiversity.</p> <p>Construction impacts and laydown areas should be restricted to the low sensitivity areas within the proposed site (e.g. outside of hammock dunes and sensitive wetland area).</p> <p>Any significant sightings of wild animals, e.g. brown</p>	<p>Regular inspection must be performed to monitor for any irregularities.</p> <p>Any complaints received regarding environmental damage must be investigated and recorded with notes on action taken to prevent similar future incidences as well as actions performed to restore these</p>	Contractor, Proponent, Independent Specialist Consultant (Restoration Ecologist)

Criteria	Nature	Mitigation	Monitoring	Responsible Body
		<p>hyenas, water birds, etc., must be recorded and reported to the Ministry of Environment, Forestry and Tourism or other specialists in the area.</p> <p>Maintenance personnel must not be allowed to harvest any plant or animal products from the environment.</p> <p>No form of waste may be discarded in the area.</p> <p>Restoration actions must be implemented where environmental damage has occurred.</p>	<p>areas.</p> <p>All information and reporting to be included in a <b>bi-annual</b> report.</p>	
<b>Illegal Hunting and Poaching of Wild Animals and Plant Material</b>	<p>Illegal hunting and poaching of wild animals and collection of plant material</p>	<p>All employees should be educated about the value of biodiversity.</p> <p>Strict conditions prohibiting harvesting and poaching of fauna and flora should be part of employment contracts.</p> <p>Disciplinary actions to be taken against all employees failing to comply with contractual conditions in this regard.</p>	<p>Regular inspection must be performed to monitor for any irregularities.</p> <p>Any complaints received regarding poaching or illegal harvesting of plants must be investigated and recorded with notes on action taken to prevent similar future incidences.</p> <p>All information and reporting to be included in a <b>bi-annual</b> report.</p>	Contractor, Proponent
<b>Groundwater, Surface Water and Soil Contamination</b>	<p>Hydrocarbons from spills or leaks from excavators used for construction purposes may cause pollution in cases where the leaks and spills are not controlled and left to seep into the ground.</p>	<p>Regular inspections and maintenance of all vehicles to ensure no leaks are present.</p> <p>Excavators may not be serviced on site.</p> <p>If required, a dedicated vehicle refuelling area with proper temporary spill control must be used.</p> <p>Proper ablution facilities must be provided for workers on site and all sewage waste must be disposed of at an approved sewage treatment plant.</p> <p>Any spill must be cleaned up immediately.</p>	<p>A register of all incidents must be maintained on a <b>daily</b> basis. This should include measures taken to ensure that such incidents do not repeat themselves.</p> <p>All spills or leaks must be reported on and cleaned up immediately.</p> <p>All information and reporting to be included in a</p>	Contractor, Proponent

Criteria	Nature	Mitigation	Monitoring	Responsible Body
<b>Visual Impact</b>	This is an impact that affects the aesthetic appearance of the area and is typically related to presence of uncontained waste and untidy construction sites.	Regular upkeep of the maintenance area and disposal of waste will ensure continuous low visual impact.	A register of all complaints must be maintained on a <b>daily</b> basis. This should include measures taken to ensure that such incidents do not repeat themselves. All information and reporting to be included in a <b>bi-annual</b> report.	Contractor; Proponent
<b>Heritage Impact</b>	The discovery of archaeologically or culturally important sites.	If such a site or any other archaeologically important artefact is found during the development phase any work in that area must be halted and the relevant authorities must be informed. Firstly, the Namibian Police must be informed. Secondly, the National Monuments Council dealing with heritage should be informed. Construction may only continue at that location once permission has been granted.	Record of any discoveries and proof of notifications to authorities on file. All information and reporting to be included in a <b>bi-annual</b> report.	Contractor; Proponent
<b>Discovery of Diamond Bearing Sediment</b>	The discovery of diamond bearing sediment during excavations	Cease excavations and inform the Ministry of Mines and Energy	Record of any discoveries and proof of notifications to authorities on file. All information and reporting to be included in a <b>bi-annual</b> report.	Contractor; Proponent

Table 5. The Operational Phase

Criteria	Nature	Mitigation	Monitoring	Responsible Body
<b>Skills &amp; Development</b>	Exposure of locals to speed sailing as a sport and development of local talent.	Arrange sailing and speed sailing workshops as appropriate for local schools and individuals.	Summary report based on actual training and the enhancement of skills and should be compiled <b>bi-annually</b> .	Proponent
<b>Employment</b>	Employment opportunities created prior to, during and after speed challenge events.	If skills exist locally Namibians must be employed. Alternatively training must be provided to Namibians to ultimately employ a predominantly Namibian workforce.	<b>Bi-annually</b> summary report based on employee records.	Proponent
<b>Health, Safety &amp; Security</b>	Health, security and safety risks related to the speed challenge event. This include injuries to participants and risks to spectators.	All applicable health and safety standards and legislation should be complied with. Appropriately qualified and registered medical emergency personnel and services must be available at all times. Ensure that security measures are in place and that access to the premises is strictly controlled. Areas not accessible to spectators and/or participants must be clearly demarcated.	Any related incidents must be recorded with action taken to prevent future occurrences. A report should be compiled <b>bi-annually</b> of all incidents reported.	Proponent
<b>Ecological Impact</b>	The major ecological impact will be related to: <ul style="list-style-type: none"> <li>Animals falling into the channel and drowning;</li> <li>Spectators, participants and organizers entering sensitive areas and trampling vegetation.</li> </ul>	Regular inspection of the channel for any drownings or other significant sightings of wildlife. If any, additional mitigation measures to be implemented. Sensitive areas must be clearly demarcated as prohibited areas during events. Permanently installed signage to indicate restricted areas and the presence of security detail during the event to prevent people from entering sensitive areas.	A register of all complaints must be maintained on a <b>daily</b> basis for the duration of the event. This should include measures taken to ensure that such incidents do not repeat themselves. Monthly inspection of channel area. Any irregularities and incidents must be recorded with action taken to prevent future occurrences. This must be reported to the Ministry Environment, Forestry and	Proponent

Criteria	Nature	Mitigation	Monitoring	Responsible Body
			Tourism. A report should be compiled <b>bi-annually</b> of all incidents, complaints and monitoring results.	
<b>Soil Erosion</b>	Erosion of the channel that may increase its footprint.	Regular inspections and mitigation measures to be implemented if required.	Monthly inspection of channel area. Any erosion must be recorded with action taken to prevent future occurrences. A report should be compiled <b>bi-annually</b> of all monitoring results.	Proponent
<b>Road Degradation</b>	Increased use of the road to the second lagoon, especially during events, may deteriorate the road.	Regular inspections and maintenance on the road during event periods. Liaise with Roads Authority for additional road maintenance.	Any complaints must be recorded with action taken to prevent future occurrences. A report should be compiled <b>bi-annually</b> of all incidents reported.	Proponent
<b>Waste Production</b>	Any waste produced during the speed challenge event or use of the channel outside of this event. Waste includes sanitary waste	All waste produced must be collected and sent to the appropriate disposal facility or recycled where possible. Ensure sufficient supply of portable chemical toilets, the contents of which must be disposed of at an approved sewage treatment plant. Waste must be disposed of timeously. This includes removal of waste, if any, originating from the use of the channel outside of event times. Provision of waste disposal containers that can be closed to prevent waste being blown out of the containers.	Any complaints received regarding waste should be recorded with notes on action taken. All data to be compiled in an <b>bi-annual</b> report.	Proponent
<b>Visual Impact</b>	This is an impact that affects the aesthetic appearance.	Regular maintenance and general upkeep of the channel area will ensure continuous low visual impact.	Any complaints received should be recorded with notes on action taken.	Proponent

Criteria	Nature	Mitigation	Monitoring	Responsible Body
			All data to be compiled in an annual report.	

## **8 DECOMMISSIONING**

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Decommissioning of the speed sailing channel would occur if the speed challenge event in Lüderitz is cancelled and the channel serves no useful future purpose. Decommissioning would require rehabilitation of the channel to return the environment back to as close as possible to its historic condition. This rehabilitation process would entail the filling and shaping of the channel. Soil excavated during channel construction and maintenance should be used for this purpose. If not enough sediment is available to fill the channel completely, it should be shaped to have no steep sides and allowed to naturally rehabilitate over time. This process should be monitored closely and additional restoration methods employed if deemed necessary. Restoration or rehabilitation of the channel area should be supervised by a restoration ecologist and the EMP updated with his/her input to include a decommissioning phase at such time.

## **9 CONCLUSIONS**

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The above EMP, if properly implemented will help minimise adverse impacts on the environment. Where impacts occur, immediate action must be taken to reduce the escalation of effects associated with these impacts. To ensure the relevance of this document to the specific stage of the project, it needs to be reviewed throughout all phases.

The EMP should be used as an on-site reference document during all phases of the proposed project, and auditing should take place in order to determine compliance with the EMP for the proposed site, and Parties responsible for transgression of the EMP should be held responsible for any rehabilitation that may need to be undertaken.

The design or execution of projects like the speed challenge channel may change after clearance approval. Therefore, the EMP is a living document that must be updated in consultation with a specialist independent consultant in order to take into account such changes. This way the proposed preventative and mitigation measures will continue to be relevant and project specific.

Monitoring reports must be submitted to the Ministry of Environment, Forestry and Tourism every six months to allow for the future renewal of the ECC.

## **10 REFERENCES**

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- Faul A, Botha P. 2017. Environmental Management Plan for the Construction, Maintenance and Operations of the Lüderitz Speed Challenge Channel in Lüderitz Second Lagoon
- LM Environmental Consulting. 2011. Environmental Assessment and Management Plan for the Excavation of a Channel for the Annual Lüderitz Speed Challenge, Karas Region, Namibia





## **Appendix A: Existing Environmental Clearance Certificate**





REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT AND TOURISM

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29 May 2017

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

The Managing Director  
Surf and Curve t/a Surf 'n Curve  
419 Albert Road  
1<sup>st</sup> floor, Salt River  
7925, Cape Town

Dear Sir/Madam

**SUBJECT: ENVIRONMENTAL CLEARANCE CERTIFICATE FOR THE ARTIFICIAL CHANNEL FOR THE ANNUAL LUDERITZ SPEED CHALLENGE, LUDERITZ, KARAS REGION**

The Environmental Management Plan submitted is sufficient as it made provisions of the environmental management concerning the proposed activities. From this perspective, regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

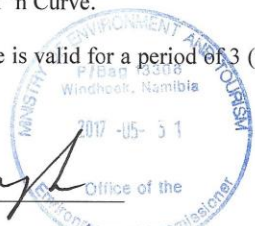
This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project.

On the basis of the above, this letter serves as an environmental clearance for the project to continue. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for any misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with Surf 'n Curve.

This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

Yours sincerely,

  
Teofilus Nghitila  
ENVIRONMENTAL COMMISSIONER



**"Stop the poaching of our rhinos"**

All official correspondence must be addressed to the Permanent Secretary