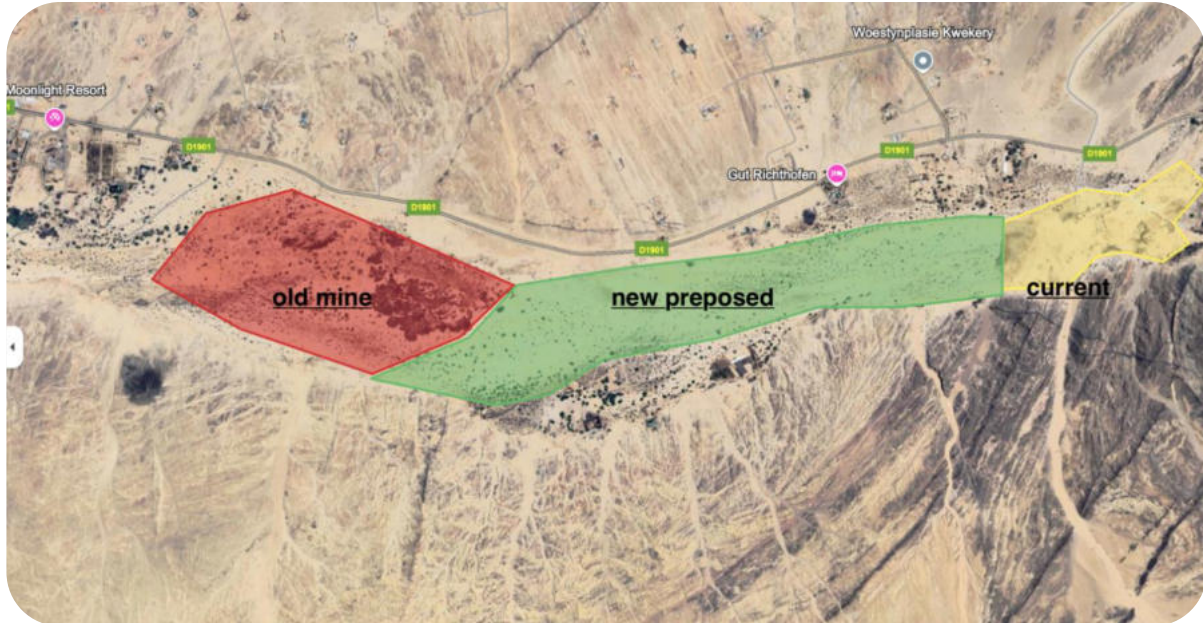


ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED SAND MINING ACTIVITIES IN THE SWAKOP RIVER, SWAKOPMUND DISTRICT, ERONGO REGION



BACKGROUND INFORMATION DOCUMENT (BID)



PROPONENT

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March 2026

“Through a mining-for-rehabilitation approach”

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

Swakop Sand Miners Association (SSMA), hereinafter referred to as proponent, is a non-profit association established in terms of Section 21 by Sand Mining operators based along the coast in 2012. The SSMA members are engaged in the supply of building sand to the coastal towns of Henties Bay, Swakopmund and Walvis Bay.

Sand mining activities in the Swakop River has been ongoing for several decades, resulting in two mining hotspots: a historical site and an active one. Over the years, these historic sand mining activities have drawn significant criticisms due to the lack of control which led to severe environmental degradation and recurring conflicts with local property owners and authorities.

Despite these challenges, sand remains a vital construction material for the development of any town. The coastal towns face unique challenges due to the limited local availability of sand. Consequently, the high demand for building materials has rendered sand mining "inevitable" and difficult to prohibit entirely.

Since 2023, SSMA has been engaging with relevant authorities to secure new sand mining locations, prompted by the depletion of existing sites and rising environmental concerns. However, due to sensitive environmental conditions and protected areas surrounding Swakopmund and Walvis Bay, few viable options remain. As a result, the SSMA identified a site between the old and the current mining spot in the Swakop River as a suitable location for controlled sand mining operations.

The identification of this new spot is crucial for mitigating the impact of extraction while addressing the high demand for construction material in the Swakopmund area. The new approach is aimed at redressing environmental damage caused by previous sand mining operations as far as possible. In the new approach, the extraction of sand is directly linked to restoring the river's ecological and physical integrity.

1.2 Purpose of the EIA?

In terms of the Environmental Management Act No. 07 of 2007 and Environmental Impact Assessment Regulations of February 2012, an Environmental Clearance Certificate (ECC) is mandatory for any activities which requires a license, right or other form of authorization, and the renewal of a license, right or other form of authorization, in terms of the Minerals (Prospecting and Mining act), 1992 as well as any other forms of mining or extraction of any natural resources whether regulated by law or not.

The purpose of the EIA study is as follows:

- i. Identify suitable spots for sand mining operations in consultation with relevant stakeholders.
- ii. Identify, investigate, and evaluate the potential impacts of the proposed activities on the physical environment, social, cultural, and economic environment.
- iii. Review relevant and applicable legislation.
- iv. Consult relevant stakeholders and Interested and Affected Parties (IAPs).
- v. Prepare Environmental Scoping report and Environmental Management Plan (EMP)
- vi. Apply for the Environmental Clearance Certificate (ECC) in a prescribed manner as per EMA Regulations of 2012.

2. DESCRIPTION OF THE SAND MINING ACTIVITIES

2.1 Locality

The proposed new sand mining area (in red) is located within the Swakop River, behind the Swakop River Plots, between the old and the current sand mining spots, approximately 30km upstream, within the Swakopmund Town and Townlands.

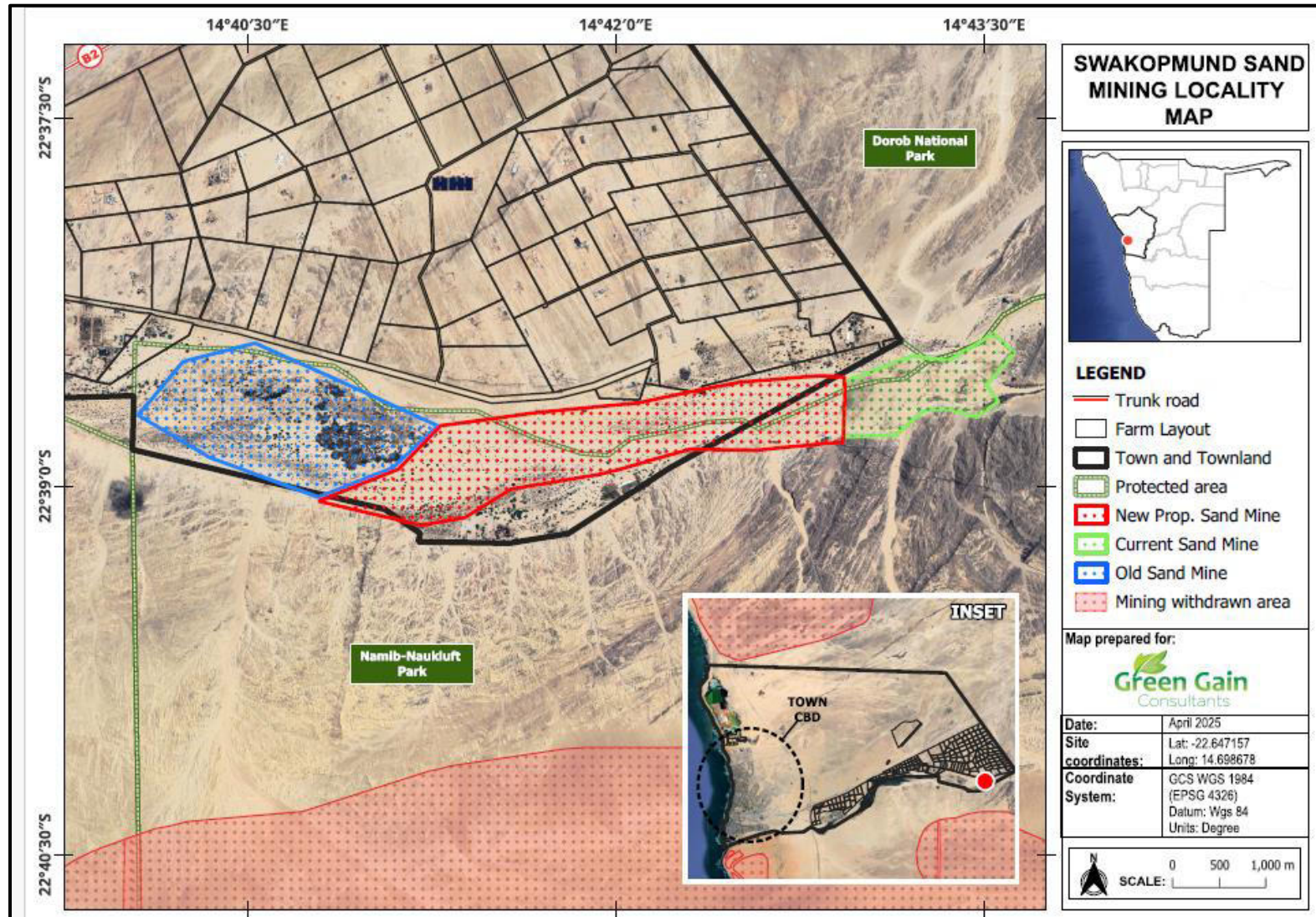


Figure 1: Locality map

2.2 Old and Current mining site

Sand mining in the Swakop River near Swakopmund has been an ongoing issue for over two decades, leading to significant environmental, social, and structural changes to the riverbed. This activity, which provides vital materials for construction in Swakopmund and Walvis Bay, has created distinct "hotspots" (the "old site" before 2015 and the "current site" from 2015 onwards) marked by deep pits that alter the natural flow of this ephemeral river. It is noted that the historic uncontrolled mining was conducted by individual operators/miners without strict control and regulatory oversight from authorities.



Figure 2: Scenic view of the old Sand mining operation sites

The historic sand mining activities has led to conflicts with local farmers and property owners near the riverbank, who have reported issues of concern such as dust, noise, and the disruption of access to properties. The other environmental concerns noted are isolation of trees into small islands, changes of the vegetation composition and damages to the ecosystem attributed to lack or insufficient rehabilitation.



Figure 3: Sand mining pit at current site

The current sand mining spot, which was opened in 2015, is operating under the management of SSMA. Access to the current site is via a privately developed and maintained road, and there is traffic control at the entrance of the site. The site operations involve mechanized equipment (such as Front-End Loaders or TLBs) to extract sand. Sand is loaded into dump trucks and transported to delivery sites.

2.3 The proposed new Sand Mining Activities

2.3.1 Need and Desirability

Despite the environmental damage, sand mining remains an essential aggregate for the construction industry at the coast, making it difficult to prohibit the activity entirely. The two hot spots stated are part of a larger, ongoing effort to balance the high demand for construction materials and the need to protect the fragile ecology of the ephemeral Swakop River. The need and desirability of the proposed new sand mining activities is based on the following objectives.

- Ensure progressive rehabilitation and redress environmental impacts caused by historic activities
- Providing controlled sand supply to support the regional construction industry
- Reduce illegal and uncontrolled sand mining in the district
- Create employment opportunities

2.3.2 Site selection

As of 2022, the SSMA sought new, accessible sand mining locations for the Swakopmund and Walvis Bay areas. A 2023 proposal (Alternative 1) for a site within the sensitive Namib-Naukluft Park was rejected by the Ministry of Environment, Forestry and Tourism (MEFT).

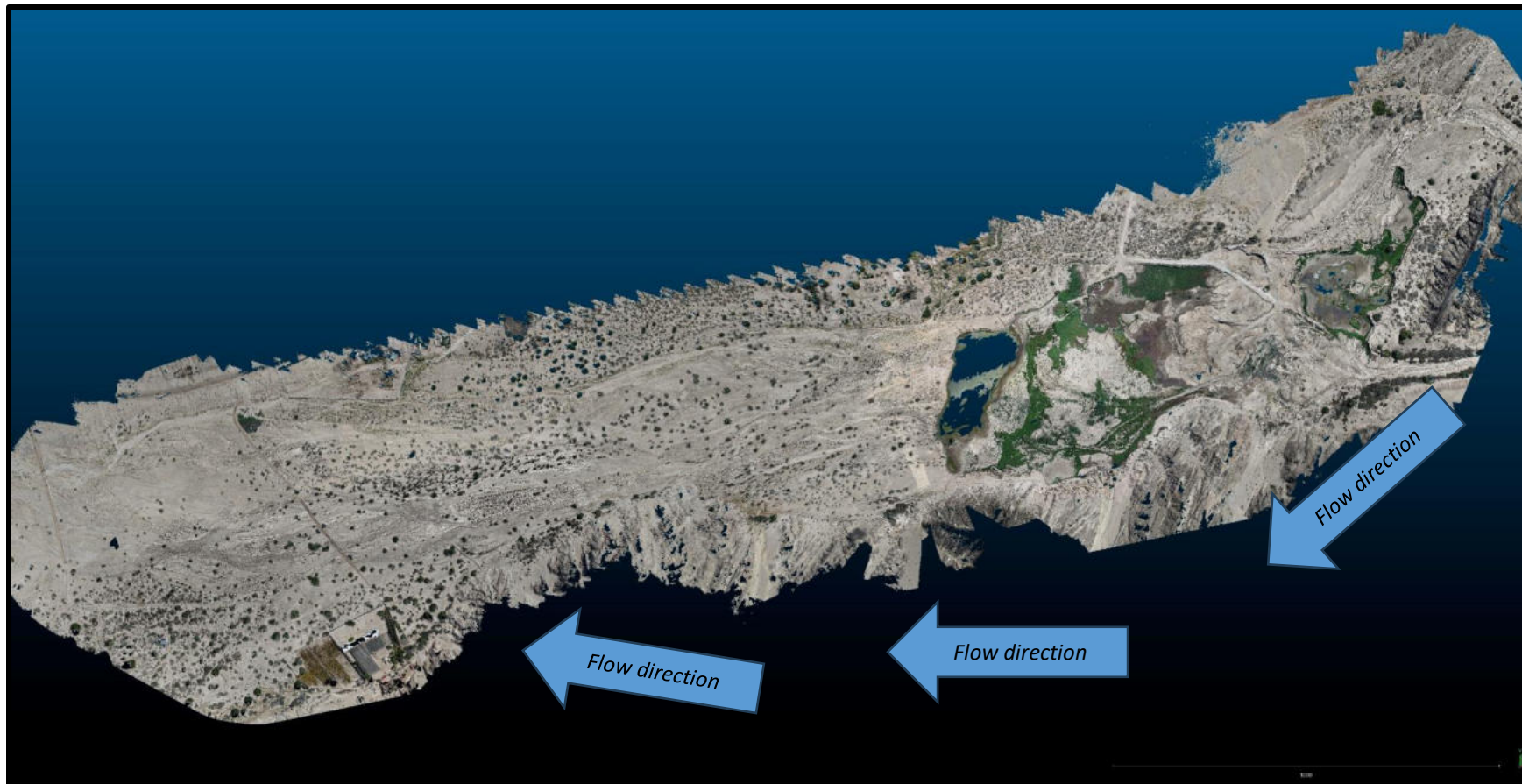


Figure 4: Sand Mining Alternatives sites

In 2025, the SSMA identified a new site (Alternative 2) located approximately 30km upstream from Swakopmund town. The sand mining operations in the upstream created deep, artificial pits that acts as a barrier to the river's flow, trapping water and creating a hydraulic barrier.

2.3.3 Proposed new sand mining site (study area)

The proposed new sand mining site covers an area of approximately 180ha in extent. The river flows from east to west towards the river mouth which is about 30km downstream. The vegetation structure along the riverbank varies considerably, mostly as a result of the variety of habitats and diverse geomorphology. As mentioned before, there are some man-made ponds on the upstream of the site created by previous mining activities.



Site description

- Overlapping the Protected Areas (National Parks) and Swakopmund Municipal townlands, and some private properties (Swakop River Plots).
- Private properties on the upper zone and some portion of the marginal zone
- Informal touristic roads/scenic paths
- Broader marginal zones with mixture of vegetation
- Some invasive species (*Prosopis*, *Nicotiana*)
- Lateral streams/drainage lines flowing into the main river

Figure 5: Aerial view of the study area (Source: SSMA, 2025)

2.4 Proposed new approach to sand mining

The SSMA plans to employ a new sustainable approach termed “mining for rehabilitation” on the new proposed site. As indicated above, the proposed new site is located between the old and the current mining spots and somehow appears as hydraulic barrier to the river's flow. The intention is therefore to remove existing pits & islands and rehabilitate the riverbed to restore the natural hydraulic flows of the river system. This initiative will help to address environmental damage from previous operations through a structured, rehabilitation-focused method.

The proposed sand mining operations will take place under strict control of the SSMA new management and in line with the Environmental Management Act, 07 of 2007, as amended and the new Sand Mining Regulations that is being developed by the MEFT. The primary objectives of the proposed sand mining operation will be as follows.

- Remove man-made barriers (pits/islands) that currently obstruct the river flow, effectively re-establishing the natural hydraulic gradient.
- Restore the natural gradient and flows of Swakop River to reach the downstream
- Improve drainage and reduce ponding effects through sustainable sediment management
- Removal of invasive species *Prosopis* trees (*mesquite*) along the riparian zones of the mining area
- Enhance groundwater rechargeability

Moreover, the SSMA commits to appoint an independent Environmental Control Officer (ECO) who will ensure compliance monitoring, attend to grievances and provide biannual reports to the competent authority. The new sand mining activities will be under strict control from the competent authority (MEFT) as per the new Sand Mining Regulations.

Lastly it is believed that the proposed sustainable sand mining approach will provide controlled sand supply for the regional construction industry, create local employment, reduce incidence of illegal mining and support the long-term environmental rehabilitation of the Swakop River.

3. ASSESSMENT PROCESS

The scope of the EIA is to determine the potential environmental impacts associated with the proposed activities. The study will be conducted in a multidisciplinary approach as outlined in the EIA Regulations (Government Notice No. 30 of 2012). The methods used in the collection of information and assessment are explained below.

3.1 Baseline study

Baseline information will be collected as follows

- Site screening
- Spatial analysis
- Use of existing information from relevant literature
- Consultation with relevant stakeholders and I&APs.
- Specialist study (if identified)

3.2 Scoping study

The scoping phase of the study will culminate into the preparation of the Scoping report. The Scoping report will include a description of the intended activity, the affected environment, and input from public consultation process as well as an assessment on how each environmental component is affected by the proposed activities.

3.3 Public Participation Process

In line with Section 21 to 24 of the EIA Regulations, public consultations will form an integral part of the EIA study and will be ensured as follows.

a) Stakeholder consultation

All relevant stakeholders will be identified and consulted to provide input and consent to the proposed activities. Some of the identified stakeholders are as follows:

- Swakopmund Municipality
- MEFT -Directorate of Parks & Wildlife
- Swakop River Basin
- MAWLR
- NamPower, Erongo Red
- Roads Authority
- NamWater

The consultation process is an ongoing process; thus, more stakeholders will be identified throughout the study.

b) Notifications of I&APs

Public notices providing information about the proposed activities and the EIA study were published in two local newspapers (Confidante and Namib Times newspapers for 27 February and 03 06 March 2026. Public notices were also placed on various public notice boards and around the project site. I&APs are given 21 days to submit comments and input on the EIA study in line with Section 21 -24 of the EIA Regulations. Moreover, a public meeting is scheduled to take place as follows.

Venue: Multipurpose Center, Mondesa, Swakopmund

Date: Thursday, 12 March 2026

Time: 18H00 to 19: 30

The Scoping report and EMP will be shared with all identified stakeholders for input before submitted to the Environmental Commissioner.

4. ASSESSMENT OF POTENTIAL ENVIRONMENTAL IMPACTS

4.1 Assessment method

The significance of each identified potential impact will be assessed using different matrices in terms of *extent, duration, intensity and probability*. The scoping report will identify the gap of information and the need for any additional specialist study.

CRITERIA	DESCRIPTION			
EXTENT	National (4) The whole country	Regional (3) Erongo region and neighbouring regions	Local (2) Within a radius of 2 km of the proposed site	Site (1) Within the proposed site
DURATION	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue/last for the entire operational life of the development but will be mitigated by direct human action or by natural processes thereafter.	Medium-term (2) The impact will last for the period of the construction phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
INTENSITY	Very High (4) Natural, cultural, and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural, and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural, and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural, and social functions and processes are not affected
PROBABILITY	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low
SIGNIFICANCE	Is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.			

4.2 Environmental Impacts

The proposed sand mining operations are expected to be associated with several environmental impacts as follows.

Anticipated impact	Proposed Mitigation measures
Impact on local flora Locally occurring trees, shrubs, grass will be cleared during the process of mining	-Remove invasive species i.e. prosopis trees -Only vegetation directly affected by the mining activities will be cleared, replace topsoil where possible
Impact on local fauna Disturbance to natural habitats and removal of trees and	-Only vegetation directly affected by the mining activities will be cleared -Operations will be limited to the mining area -Ensure good relationship with MEFT -Adhere to speed limit (40km.hr) within the park
Alteration to the natural flows In-channel sand mining operations often create deep, artificial, and in-stream pits that function as barriers to the natural river flow	-Rehabilitate existing ponds -Avoid creation of artificial ponds
Erosion and sedimentation Mining of sand in the main channel may cause sediment to get trapped in the pits, causing downstream reaches to become "starved" of sand, leading to increased bank erosion and channel instability	-Sediment management through re-contouring the riverbed to re-establish the natural sediment transport, reducing erosion on banks and restoring a more stable, natural morphology.
Safety hazards	-Avoid creation ponds/dams -Safety signs to be installed -Existing tourist roads should be avoided
Pollution (littering)	-Provide litter bins, ensure litter picking
Traffic Impact	-Use designated access routes (existing road) as far as possible -Speed limits and only a limited number of authorized vehicles will be allowed at a time.
Nuisance (noise and dust)	-Limited operating hrs -Avoid working during strong wind conditions
Land use conflicts with neighbouring properties, residents and authorities	-Sufficient buffer zone will be ensured from properties -Obtain consent from relevant authorities -Existing scenic roads should be spared from mining activities -Processing area should be far from properties
Other potential impacts of sand mining - Occupational health and safety - Damage to infrastructure	-Standard Operating Procedures to be developed as part of the operational EMP -Ensure sufficient buffer zones from infrastructure i.e. powerlines

The list above is not exhaust, more impacts will be identified throughout the EIA study and through public participation process. Possible mitigation measures will be developed and discussed with the stakeholders, authorities as well as registered I&APs and will be included in the final Environmental Management Plan (EMP).

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