TERMS OF REFERENCE FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT ASSESSMENT (EIA) STATEMENT UNDER THE ENVIRONMENT PROTECTION (IMPACT ASSESSMENT) REGULATIONS, 1996

PROPOSED TOURISM DEVELOPMENT ON ASSOMPTION ISLAND

MINISTRY OF AGRICULTURE, CLIMATE CHANGE & ENVIRONMENT
WASTE ENFORCEMENT AND PERMITS DIVISION
ENVIRONMENTAL ASSESSMENT AND PERMITS SECTION
BOTANICAL GARDENS
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TERMS OF REFERENCE FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT ASSESSMENT (EIA) STATEMENT FOR PROPOSED TOURISM DEVELOPMENT ON ASSOMPTION ISLAND

APPLICANT: OCEAN BREEZE INVESTMENTS LIMITED

PROPOSED DEVELOPMENT: TOURISM DEVELOPMENT

LOCATION: ASSOMPTION ISLAND

PREAMBLE:

Pursuant to Section 44(1) of the Environment Protection Act 2016 (EPA), a person shall before carrying out a development as provided under the said Act or a prescribed project or activity specified in Schedule 1 of the Environment Protection (Impact Assessment) Regulations 1996, or a project or activity in a protected or ecologically sensitive area as prescribed under Schedule 2 of the Environment Protection (Impact Assessment) Regulations 1996, needs to obtain an environmental authorisation from the Ministry responsible for the environment.

In addition, prior to obtaining environmental authorisation from the Ministry, Section 45 (1) of the said Act requires an Environment Impact Assessment (EIA) to be carried out.

DEGREE OF DETAIL:

In preparing the EIA, it is the applicant's responsibility to address the impacts of the proposal to the degree necessary to enable the Authority to be informed of all relevant impacts of the proposal. The level and nature of investigations should reflect the type and scale of impacts.

It should be noted that the preparation of Terms of Reference for an EIA does not indicate approval or support in any way, nor does it indicate approval in principle.

CONSULTATION:

In preparing the EIA, the consultant should consult affected and interest groups. The EIA should detail any public comment sought from any consultation conducted with any affected groups (e.g. community, environmental, industry) in developing the proposal and preparing the EIA.

An early consultation is beneficial in helping to ensure that development will cause a minimum of undesirable effects and in reducing delays in the latter stages of planning and design.

COPIES OF REPORT:

Upon completion of the environmental impact assessment statement, a total of three (3) hard copies and one (1) digital copy (preferably in Acrobat PDF format) of the report is to be submitted to the Authority – Environmental Assessment and Permits Section.

CONTENTS OF THE REPORT:

The EIA produced to accompany the application is to address the issues set out below and should generally follow the format as suggested in this document. The report shall be written in English.

1. Executive Summary

An executive summary of no more than five pages must be included. This should be written as a non-technical summary, which provides an overview of the EIA report in simplified layman's terms. The aim

of the Executive Summary is the listing of crucial impacts, strategies to be employed to manage the impacts and performance indications for auditing purposes.

A section of the Executive Summary should include a **Public Impact Assessment**.

A section of the Executive Summary should address concerns raised regarding the potential conflict of interest between the Island Conservation Society (ICS) and Island Development Company (IDC).

As a result of the findings of the EIA, and addressing issues raised in the stakeholder consultations, all the measures to be taken by the developer to mitigate impacts that will have direct a bearing on the public should be summarized in this section.

2. Alternative to the project

Describe any prudent and **feasible alternatives** to the proposed tourism development investigated during the planning process with an overview of consequences in each case. The discussion should include the reason for the choice of the preferred option and the likely situation and use of the site if the project does not proceed.

3. Terms of Reference

The Terms of Reference and accompanying letter of transmission provided by the Ministry of Agriculture, Climate Change and Environment must be included in the EIA documentation.

4. Description of the Proposal

State the objectives of the proposal and why it is needed. Describe the type of development proposed, including information on:

4.1. Provide details on the location, including:

1. Location and boundaries of the project footprint, including easement widths and access requirements;
2. Location and width (including dimensions) of any proposed buffers surrounding the working areas (for construction and operation) especially at the beachfront and around the wetlands;
3. Location of infrastructure relevant to the project, including, easement width and access requirements, the road network on the island, and other infrastructures and utilities, and the location and identification of all other facilities on the site;
4. Location of natural features such as waterways (e.g. wetlands), high water mark, shorelines and significant vegetation;
5. Location of any proposed site offices and workers' accommodation for both construction and daily workers;
6. Location of the stockpiling areas for construction materials and waste materials;
7. Location of areas of scenic/aesthetic value.

4.2 Provide details of the development, including:

1. An overall masterplan and site plans for the different development zones, showing the proposed development as was originally submitted, and clearly distinguishing between the existing and proposed features;
2. An overall masterplan and site plans for the different development zones showing any proposed changes to the concept following the Environment Impact Assessment;

3. Detailed concept and staging proposed, with regards to the construction phase;
4. The percentage of the island that the project will cover including, areas for landscaping, roads, pathways, and utilities (PV farm, STP etc.,);
5. Quantities, nature and sources of materials required for the construction, and methods of transporting materials to the island and around the island;
6. Types of machinery and equipment to be used for construction;
7. The capacity of existing ecosystems and existing infrastructures to withstand the scale of the development;
8. Quantities, nature and sources of materials required for fill, aggregate for construction, and transportation methods;
9. Landing areas for unloading and loading of construction materials both on Assomption and Mahe;
10. Landing areas for unloading and loading of waste materials both on Assomption and Mahe
11. Extent and methods of excavation, the extent of earthmoving, sites of spoil disposal and containment, machinery and equipment to be used;
12. Details of site levelling/re-profiling/backfilling being proposed and the machinery and equipment to be used;
13. Details on the extension of the jetty;
14. The impacts of the extraction and transportation of all the construction materials to the site;
15. Details on whether sand extraction from Assomption will be required (location for extraction and quantity to be extracted);
16. Building design limitations and standards (e.g. height, elevations, materials, architectural criteria, structural improvement to minimize earthworks);
17. A management plan that highlights the workforce accommodation during the construction phase of the development.
18. Details of the infrastructure required to cater for increased flights and international flights.

4.4. The following details relevant to the proposed site and surrounding areas should also be described:

1. Government planning controls, regulations, and policies applying to such development;
2. An analysis on whether the proposed development, and the activities required to implement it, may violate any obligations Seychelles may have as a signatory to several international environmental conventions;
3. Approvals required for the project and expected program for approval applications;
4. Past and current usage of the site and surrounding area;
5. Existing infrastructure and facilities available on the site.

5. Description of Environment

5.1. Provide details of the immediate physical environment of the project site surrounding the area. The information required should include:

1. A description of the area surrounding the proposed site including information on buffer distances; aesthetic and landscape values; structures of social importance;
2. A Biodiversity assessment (including both flora and fauna distribution maps, and status of populations).
    a. The assessment must identify and clearly illustrate areas of high and low biodiversity value.

b. Information including a detailed inventory of commercially viable trees at the project site;
c. A vegetation map at a site-specific scale with particular attention paid to populations of significance should be provided.
d. Major species and communities present (terrestrial and aquatic)
e. The conservation status of the area;
f. The presence and habitat requirements of any rare or endangered species;
g. Any seasonal changes to biodiversity and use of habitats;

3. A description of the marine and coastal environment should be provided;
4. A description of the wetlands and sinkhole habitats and species present should be provided;
5. The geographical characteristics of the site, including the composition of the underlying or adjacent strata at the site;
6. A description of the climate and air quality;
7. A description of the overall topography of the site must be provided. A detailed elevation map of the project site, including the degree of slopes, flood hazard, drainage patterns around the project site and the effect of rainfall average in these conditions. This includes topographical maps that show the location of sensitive areas.
8. Description of the hydrology of the island, including a description of existing surface drainage patterns, flows, the likelihood of flooding and present water uses.

5.2. Provide details on the social environment including details on the following:

1. Land uses for development site and adjacent properties;
2. Community's demographic;
3. Socioeconomic and cultural aspects;
4. Employment and economic activities in the community on the island.

6. Assessment of Environmental and Social Impacts

Provide details on overall environmental protection measures incorporated in the design, sitting, layout, landscaping, and rehabilitation and associated works to minimize impacts on the environment. Taking into account the adequacy of controls and safeguards, assess the impacts of the development during the construction and occupancy phases. Measures should be proposed to address impacts. This should include the use of proven techniques and the report should assess the likely effectiveness of the mitigation measures proposed and any residual impacts remaining.

6.1. Flora

The following information should be provided

1. A comprehensive assessment of the significance of native vegetation and a statement of the potential impacts of the proposal on the terrestrial and freshwater flora;
2. The degree of disturbance to the landscape, the stage of the regeneration of the vegetation, and the level of exotic plant infestation should be outlined.
3. Details on site clearing (which is to be in accordance with guidance and consultation with the Authority) must be provided taking into consideration breeding of animals, roosting as well as nesting.

In addition, the following information should be provided:

1. A complete list of vegetation to be cleared on site (list of plants and distribution in relation to the proposed development) should be included;
2. An overlay of sensitive species distribution in relation to the proposed development should be provided;
3. The extent of disturbance to the natural vegetation;
4. The number of trees most likely to be removed as a result of the development;
5. The proportion of the existing natural vegetation to remain untouched;
6. A biosecurity plan must be submitted so as to ensure that IAS (Invasive Alien Species) are not introduced on-site and in surrounding areas; especially during the construction phase;
7. Corridors connecting fragmented habitats should be provided. Those must include stepping stones (patches of habitat to allow movement through the landscape);
8. Any rare or endangered species, their habitat requirements and sensitivity to changes;
9. A rehabilitation/re-vegetation/landscaping plan should be submitted with detailed information on the source from where the plants will be sought.
10. Any recommended restoration plans for vegetation on the island that may be implemented by the developer.
11. The location of the nursery during construction phases should be indicated on a site plan submitted with the report.

6.2. Fauna

This should include:

1. A determination and comprehensive assessment of fauna occurring in the area, on the site and adjacent and a statement of the potential impacts of the proposal on the terrestrial and aquatic fauna;
2. A map of all sensitive area such as nesting sites for sea birds, tortoises, sea turtles and other fragile ecosystems;
3. Define the measures for the management of sensitive species populations during construction and operation;
4. Details the proposed buffer zones to facilitate the movement of animals must be provided;
5. Details on any capture and release programs;
6. Provide details of any proposed/required translocation of species (including proposed translocation plans);
7. Details on any noise minimization measures to be put in place taking into consideration that noise may have a direct impact on the animals;
8. Details on measures to minimise impact from increased artificial lights;
9. Any rare or endangered species, their habitat requirements and sensitivity to changes;
10. Occurrence, distribution and requirements of migratory species;
11. Define measures to minimize the risk of introduction of fauna through transportation of materials;
12. Highlight, measures that could be taken to enhance the habitat value of the project area;
13. Describe fishing activities that will take place because of the development, including the impact that the increased population on the island will have. This should also include an analysis of how proposed activities may or may not align with the Seychelles Marine Spatial Plan Initiative.
14. Details on how species are currently being affected by human activity (current activities on the island and extension of the airstrip) and how they may be affected during the construction and operational phases.

6.3. Biosecurity

The proposed development together with the expansion of the runway and international flights directly to the island pose a significant biosecurity risk not only to Assomption, but also to Aldabra and other islands within the Aldabra Group. Therefore, details on the following should be provided:

1. A biosecurity management plan must be developed for the proposed project. This should cover both construction and operational phases and all modes of transportation (barges, cargo, passenger vessels and aircrafts).
2. The EIA report should clearly outline the potential biosecurity risks associated with the development, how the proposed biosecurity protocols will be effective and potential lapses in biosecurity.
3. The biosecurity infrastructures that will be required as part of the development and the organization which will be responsible for implementing biosecurity measures on the island.
4. The organisations responsible for implementing biosecurity measures during construction and operational phases should be identified.

6.4. Aldabra Atoll

The EIA report should assess all potential impacts that the proposed development will have on the nearby UNESCO World Heritage Site (Aldabra Atoll). This should include:

1. An assessment of all potential risks that the proposed tourism development and increased flights to Assomption may have to Aldabra;
2. Details on the biosecurity protocols necessary to prevent any impacts on the biodiversity of Aldabra;
3. The role of Seychelles Islands Foundation (SIF) in implementing the biosecurity protocols and any facilities that they may have on Assomption to facilitate the implementation of biosecurity measures;
4. Details on the effects on helicopters accessing Aldabra;
5. Details on the effects of increased visitors to Aldabra;
6. Details on the impact the development may have on the cultural and scientific value of Aldabra.

6.5. Describe the climatic conditions that may affect the management of the project.

This includes a description of the vulnerability of the project area to seasonal conditions, extremes of climate and natural or induced hazards.

Provide a risk assessment and management plan detailing these potential threats to the construction and operational phases of the project.

Include an assessment of climate change risks and possible adaptation strategies, as well as:

1. A risk assessment of changing climate patterns that may affect the viability and environmental management of the project;
2. The preferred and alternative adaptation strategies to be implemented, including nature-based solutions;
3. Commitments to undertaking, where practicable, a cooperative approach with government, other industry and other sectors to address adaptation to climate change;
4. Identify energy sources and required energy for the site and the ability to use renewable energy sources and technology. Identify the ability to substitute energy/fuels for low emission sources.

6.6. Hydrology

1. Provide detailed information on the site drainage and erosion controls; particular attention should be placed on the construction phase of the development, to ensure that all materials and waste are contained and cause no potential impacts;
2. Details on the likely flow path of an unlikely event/incident must be provided;
3. Describe impacts on water quality associated with stormwater run-off and other critical conditions taking into account the measures proposed to mitigate such impacts; Specific references should be given to the processes of siltation and the effects of these on the marine environment around Assomption and the sinkholes and wetland habitats on the island;
4. The consultant should describe the existing surface drainage patterns, flows, the likelihood of flooding and present water uses;
5. Assess the impacts that will be generated by erosion induced by stormwater run-off and sediment wash down to the wetlands, sinkholes and the sea, and proposed mitigation measures;
6. Provide an erosion and sedimentation control plan as part of the management plans for the proposal;
7. The details for runoff management once construction has started should be provided.
8. A Storm Water Pollution Prevention Plan with a description of the measures to be used for erosion and sediment controls throughout the construction project should be provided. These controls include structural controls to divert runoff and remove sediment.

6.7. Marine and Coastal Environment

Details on the following should be provided:

1. A coastal zone management plan should be incorporated in the EIA report, including beach monitoring programmes;
2. Identify the areas of coastal erosion and proposed methods for monitoring and measures required for rehabilitation;
3. Potential impacts that the development may have on beach dynamics;
4. The report should make provision for beach safety and measures to address risk and safety;
5. Details on sand extraction and its impact on the sand dunes;
6. Details on the impact that the proposed dune activities and wellness spa may have on the sand dunes.

6.8. Wetland and Sinkhole habitats

1. A management plan for these habitats should be provided for the area with an inventory of the species and methodology for their protection and rehabilitation if required;
2. If required, a capture and release program should be provided to protect any aquatic or terrestrial species found in any waterbodies or around its surroundings during the construction phases.
3. Details of mitigation measures to address potential impacts during both construction and operational phases should be provided.

6.9. Geology

1. A description of the areas to be disturbed with particular reference to the physical and chemical properties of the materials which may influence erosion potential or the quality of water leaving the site;
2. The geographical characteristics of the site must be assessed; this must include the composition of the underlying or adjacent strata (such as rock, gravel, silt, sand, clay) at the site;
3. Likely influences of the geological features on water quality in the area, particularly while disturbed during construction;
4. A description of the soil profile, classification, fertility and the potential of flooding on the project site;

6.10. Visual Impact

Predict the visual impacts (particularly from the beachfront) that might be generated by the development and propose ways to minimize such impacts. Submit the proposed colour scheme and artistic impression of the resort in line with integrating it with the vegetation.

6.11. Generator/Fuel

1. Describe the likely impact of the increased population on the existing electricity supply to the area and the general provisions proposed to accommodate the impacts;
2. Details of the design proposed including manufacturer/supplier and all technical specifications; site location, details of the generator; storage tanks, loading and transfer to generator site, containment/spill prevention of the generator room. Details of any other fuel storage areas (location, elevations etc…)
3. Describe measures against possible accidental spills from the fuel storage tanks, generator sets and transfer points. Emergency containment measures, oil/water separators, perimeter drains and bunding systems at those facilities should be defined.

6.12. Energy consumption

The report should provide information on energy savings; the type of devices to be used, and water conservation practices by incorporating water savings devices, power etc. The site plan should indicate the location of the proposed Photovoltaic (PV) farm.

6.13. Water Supply

The report should include details on the provision of water through the proposed seawater desalination plant and any other methods identified. The report should also include details on:

1. The impact the increased population will have on the existing water supply.
2. The location of the proposed desalination plant and outfall point (this should be indicated on the site plan as well).
3. The impact of the proposed desalination plant on the marine environment.

6.14. Waste Water Management

1. Details of the proposed sewerage treatment plants and ancillaries, details of the design of the plant locations, manufacturer/supplier, effluent quality, design assumptions, describe management of wastewater and sludge for the development.
2. Provide details with any proposed sanitary facilities to be provided, especially during the construction and occupancy phases of the development, including the location on the site.

3. The consultant to prepare the contingency plan for the plants and equipment failures. Emergency outflow should be indicated, and the point of discharge clearly defined.
4. Describe the Sewerage treatment plants' provisions for desludging, and methods of securing wastes from the treatment plants before transportation.

6.15. Solid Waste Management

1. Describe the management of solid waste during the construction and operational phases of the development.
2. Describes the expected integrated waste types, quantities, methods and frequency of collection and disposal as well as the location of disposal sites.
3. Include details of any proposed recycling/sorting program.
4. Details of any hazardous substances/materials to be used, transportation and storage, handling and disposal procedures for the substances.
5. Designate areas for waste on site should be indicated on the site plan and submitted with the report.
6. Details on the proposed incinerator, its impacts and proposed mitigation measures.

6.16. Transportation

1. Describe the methods of transporting materials to the island and any adverse effects this may have and measures to minimize any effects.
2. Describe any adverse effect of transporting construction waste from the island and measures to minimize any effects.
3. Any impacts of transporting materials and waste on the existing roads. Any proposed new roads or measures to improve the roads and the impacts that these may have should also be included;

6.17. Health and Safety Issues

1. State the procedures required for expatriates if they will be working on the project, this should include screening for any illnesses such as typhoid and other communicable illnesses that could trigger an epidemic.
2. Define health and safety measures that should be put into place by contractors on-site.
3. Develop a Hazard Preparedness and Emergency Evacuation Plan, which should include contingencies to be in place during construction and during the occupancy phase of the development.

6.18. Air and Noise

1. Define the areas of impact and measure and discuss ambient noise levels in all areas likely to be affected by the development and the increase in flights to the island and proposed helicopter arrivals to Aldabra;
2. Provide details of methods to measure noise levels and the proposed mitigation measures to be undertaken to minimize noise impacts on the surrounding environment;
3. Information on existing air quality should be provided for those air pollutants expected to be emitted by the proposed development, in particular, the impacts of dust nuisance should be detailed, emissions from the generator and incinerator etc.;

4. Provide details of methods of measuring impacts on air quality and the proposed mitigation measures to be undertaken to minimise dust emissions during the construction phase and operation phase.

6.19. Socio-Economic Impacts

Discuss and provide details on the following:

1. The impacts of the proposal on various individuals and social groups, including measures to mitigate and accommodate any adverse effects of the proposal;
2. Evaluate the socio-economic impacts including costs and benefits to local economies;
3. Effects on employment; and implications for future developments on the island;
4. The nature of any residential communities to be displaced as a result of the proposed;
5. The visual intrusion of the proposed on surrounding areas;
6. Expected demographic characteristics of the workforce, source of recruitment of workforce, for example, external, existing, contracted workforce and the impact of these workforce characteristics on the existing levels of service provision by Local Authority and Government agencies;
7. The economic impact, including costs and benefits to local economies;
8. The effect on public access to Assomption and the beaches on the island;
9. Any historic structures and ruins which are of heritage value should be identified and shown on the site plan;
10. Details of the potential impacts on these historic structures and ruins should be provided, together with measures to preserve them;
11. Details on historic buildings that may be enhanced or preserved and how they will be incorporated into the development;
12. Describe opportunities for increasing access for Seychellois to Assomption (e.g. through guesthouses for locals);

7. Stakeholder Engagement

A summary of the stakeholder engagement undertaken as part of the EIA process should be described including details on the following:

1. Identification of stakeholders;
2. Summary of scoping activities (e.g. meetings and visits) with the different stakeholder groups;
3. Comments raised during scoping;
4. Post-EIA stakeholder engagement.

8. Environmental Management

In respect of impacts identified and which need to be controlled, an environmental management program incorporating an Environmental Management Plan, monitoring and reporting should be provided. Where practicable the costs of monitoring programs should be estimated, and responsibility for monitoring programs specified. References should be made to relevant legislation and standards.

An Environmental Management Plan (EMP) should detail any:

1. Habitat enhancement projects or rehabilitation measures;
2. Construction schedules;

3. Maintenance schedules;
4. Safeguard measures relating to access on the site during construction/operation phase;
5. Erosion and sediment management strategies, including coastal and wetlands mitigation measures;
6. Runoff management strategies;
7. Pollution control and waste management methods;
8. A management and administration plan outlining strategies and procedures in the event of an emergency.
9. Biosecurity measures to be implemented.
10. An oil spill contingency plan.

Construction and Operational phases

Provide the following information on the construction and commissioning of the project, including detailed plans, drawings and maps.

Pre-construction activities

1. Approvals required for this stage
2. Nature, scale and timing for vegetation and site clearing
3. Equipment to be used

Earthworks

1. interference with waterbodies;
2. upgrade, relocation, re-alignment, deviation of, or impediment of internal road access and other infrastructure
3. site establishment requirements for construction facilities, including access
4. areas requiring backfilling or levelling
5. restriction measures and expected size, source and control of the construction

Temporary works

1. Estimated numbers and roles of persons to be employed during the construction phase of the project
2. A detailed staging plan and approximate timeframes.

Describe the construction elements of the project, including:

1. An indicative construction timetable, including expected commissioning and startup dates and hours of operation,
2. Major work programs for the construction phases,
3. Construction methodologies,
4. Construction equipment to be used,
5. Construction inputs, handling and storage, including an outline of potential locations for source of construction materials,
6. A designated area for the stockpiling of construction materials should be identified and away from any water bodies or sensitive areas,
7. A designated area for the stockpiling of waste materials should be identified and away from any water bodies or sensitive areas,
8. Major hazardous materials to be transported, stored and/or used on-site,

9. Clean-up and restoration of areas used during construction, including storage areas,
10. Estimated numbers and roles of persons to be employed during construction,
11. Location of workers accommodation during construction,
12. Decommissioning plan for any workers accommodation.

Occupancy Phase

Provide full details of the operation for all elements of the project, including drawings, maps and detailed plans, describing:

1. The project site, including concept and layout plans of buildings, plant and equipment to be employed;
2. Nature of all critical operational activities;
3. The capacity of the project equipment and operations;
4. Staging plan for works over the site throughout the life of the operations;
5. Estimated numbers and roles of persons to be employed during the operation phase of the project.

The Environment Management Plan (EMP) should cover the construction and operation phases of the project. It should specifically detail all proposed environment monitoring to be undertaken in liaison with respective authorities. It should also provide the necessary auditing methods/template of forms for this as part of the Environmental Impact monitoring to be done.

The EMP should provide details on all mitigation measures being proposed. These should include the use of proven techniques and the environmental assessment should assess the likely effectiveness of the mitigation proposed and any residual impacts remaining.

The EMP should make provision for the monitoring process to be conducted on a regular basis and should provide the necessary auditing methods/template of forms for this as part of the environment impact reporting of monitoring to be done.

9. Conclusions and Recommendations

As a result of the findings, the EIA must present a balanced overview of the proposal's net impact and provide recommendations on the proposal. This should include the identification of any alterations to the proposal considered to further mitigate environmental impacts.