

ENVIRONMENTAL COMPLIANCE PLAN
For
Cocoplum Resort and Residences Development
on the Placencia Peninsula
Stann Creek District
Belize, Central America

The following are the terms and conditions of the Compliance Plan entered into between **Great Belize Productions Limited**, hereinafter referred to as **THE DEVELOPER**, and the **DEPARTMENT OF THE ENVIRONMENT (DOE)** in respect to a resort and residences development comprising of 224 acres.

It is agreed by the Developer that the terms and conditions of this compliance plan shall be binding upon **Great Belize Productions Limited** its servants or agents, successors, or assigns. The terms and conditions embodied in this compliance plan are made pursuant to section 20 (7) of the Environmental Protection Act, Chapter 328 of the Laws of Belize, Revised Edition 2003, and all other relevant provisions of the Act. Environmental Clearance is being granted under these conditions.

PURPOSE

The purpose of this document is to officially institute best practice measures that would prevent, control and mitigate the environmental degradation that may arise from the project. The specific actions proposed have been made only after careful analysis by the Department of the Environment of the information contained in the Environmental Impact Assessment for Cocoplum Resort and Residences Development, and identification of potential negative environmental impacts associated with this type of project. It must be borne in mind that this Environmental Compliance Plan was prepared based on the best available information in the Environmental Impact Assessment prepared for this project. The Department of the Environment (DOE) reserves the right to make modifications to this compliance plan, with prior notification to the Developer, as the project develops and more information becomes available.

The Developer agrees to strictly adhere to this document during all stages of the development of the project. The Department of the Environment and other relevant agencies will conduct compliance monitoring. Disregard of the terms and conditions of the compliance plan specified herein may result in the Developer's permits being revoked.

This compliance plan does not absolve the Developer from compliance with other relevant regulations and laws of Belize.

1.0 SPECIFIC ACTIVITIES FOR WHICH CLEARANCE IS BEING GRANTED

Clearance is being granted for the following activities contained within the EIA:

- 1. Subdivision of 56.5 acres into one hundred and ten (110) single family home sites (approximately 0.5 acres each.)**
- 2. Construction of a 48 suite boutique hotel on approximately 13 acres of land, inclusive of plunge & swimming pools, a fitness center, two tennis courts, a spa, four treatment rooms, a sports facility, beach palapa, 200 ft pier, and parking area.**
- 3. Construction of a 100 unit condominium development on approximately 12 acres of land at the southern margin of the development site on Barrier Reef Lagoon shore. This development will include two swimming pools and a 200 ft pier.**
- 4. Construction of a 5-room dormitory on approximately 5 acres of land.**
- 5. Construction of approximately 4.2 km of feeder roads.**
- 6. Construction of two canal networks each having independent access points on the western, Placencia lagoon.**
- 7. Construction of a non-navigable lagoon complex on the eastern side of the development.**
- 8. Designation of a 10-acre park at the northwest corner of the site bordering the Placencia Lagoon.**

The proposal to have a marina within the canal system in the lagoon will be dealt with through an addendum to the EIA when the details of such a component are available.

No further development whatsoever shall take place outside of what has been agreed to and described in this compliance plan, without the prior written permission of the Department of the Environment. The marina component of this proposal will be screened through an addendum to the EIA report. This is necessary due to the lack of details surrounding this specific component at the time of reviewing this EIA report.

2.0 ENVIRONMENTAL RISK ANALYSIS

The Department of the Environment has prepared this environmental risk analysis based on the information contained in the Environmental Impact Assessment and other relevant information gathered by the DOE. This Environmental Compliance Plan (ECP) was then developed to mitigate the potentially negative environmental impacts associated with this type of development.

POTENTIAL SOURCES OF ENVIRONMENTAL IMPACT DURING DEVELOPMENT OF THE PROJECT:

- Contamination of ground and surface water resources during all stages of development from the following: siltation, fuel/oil spills, sewage, and solid waste production.
- Potential risk of erosion with subsequent siltation of water resources due to construction of the required infrastructure.
- Land use changes;
- Changes in population dynamics arising from the development and its consequential environmental effects.

This list is by no means an exhaustive list of potential environmental problems that could arise from the said proposed project.

3.0 ENVIRONMENTAL COMPLIANCE PLAN

Recognizing the project could have adverse environmental impacts, the Developer agrees to take the necessary measures as described in the following actions, to mitigate these impacts.

The Department of the Environment (DOE) and Great Belize Productions Limited (Developer) agree to the following:

3.01 LAND ALTERATION AND LAND USE CHANGES

In an effort to mitigate the significant negative impacts associated with clearance of the land, the Developer agrees to take the following measures:

- 3.01.1 Considering that this area is a coastal development and is prone to erosion, only enough vegetation will be removed to the extent possible, to allow for surveying, construction of buildings and canal, necessary filling of low lying areas, and laying of necessary infrastructure.
- 3.01.2 Prior to embarking on any mangrove clearance the Developer shall obtain a permit from the Forest Department.
- 3.01.3 Survey and development are to be done in accordance with alterations and requirements as requested by the Land Utilization Authority.
- 3.01.4 All newly elevated lands, particularly those comprised of quartz sands, will require stabilization with vegetation and/or other appropriate practices such as cementation or use of geo-grids, to prevent their erosion and degradation.

3.02 ROADS AND DRAINAGE

- 3.02.1 All roads and walkways will be developed in such a way as to minimize potential erosion. In addition, all necessary measures will be taken to ensure that drainage along walkways and accesses are of adequate dimensions to avoid water logging and excessive erosion.
- 3.02.2 All drainage will be designed to accommodate the lower flow and percolation rates likely to accommodate spring tide peaks.
- 3.02.3 Culverts will be of adequate size that allows for proper flushing and water circulation but minimizes erosion of the canal systems.
- 3.02.4 In an effort to prevent the creation of low poorly drained areas during canal excavation and land filling, all drainage and wastewater treatment/sewage facilities will be placed on elevated, well-drained quartz sands.
- 3.02.5 Household drainage pipes will not be allowed to empty directly into any water body nor the lagoon and any other water resource and surrounding environs. These pipes shall lead to adequately design gray water capture facility installed at each home for distribution to a garden or ornamental plants.

3.03 CONSTRUCTION OF BUILDINGS

The Developer will pay careful attention to the quality of the overall design of the buildings including house type, community facilities and landscaping of the lots. The Developer agrees to abide by the following practices:

- 3.03.1 Construction setback will be 50ft from the Placencia Lagoon and 100 feet from the high water mark on the sea side.
- 3.03.2 Topsoil should not be permanently removed from any land to be subdivided and/or developed. Topsoil should be stockpiled, re-spread and seeded and maintained to ensure that a good vegetative cover can be established to protect against erosion.
- 3.03.3 Construction of buildings will be carried out in accordance to the standards of the Ministry of Housing or other relevant local authority.
- 3.03.4 All buildings will have an elevation of a minimum of five (5) feet above mean sea level and built to withstand low hurricane storm surges and a minimum of Category 4 hurricane force winds.

3.04 CONSTRUCTION AND USE OF CANAL NETWORKS

The Developer agrees to the following:

3.04.1 Prior to the commencement of any earth movement activity, the Developer shall obtain a mining permit from the Geology and Petroleum Department.

3.04.2 The construction of the canal network will be as follows:

- (i) The lagoon complex will encompass approximately 35 acres and will have an approximate depth of 4 meters.
- (ii) The canal networks will be excavated using a hydraulic excavator.
- (iii) The only seafloor dredging will be at the locations where inlet canals meet the lagoon.

3.04.3 All excavation will begin at the points farthest inland and will maintain a minimum distance of 50 feet from the Placencia Road.

3.04.4 Sediment curtains will be installed where the canal exits into the lagoon throughout all excavation activities.

3.04.5 Excavated material will be used as fill where applicable.

3.04.6 The sides of the canal system will have a slope of 1:3 (vertical : horizontal) to prevent their erosion.

3.04.7 Re-vegetation along the edges of the canal network will be encouraged for aesthetic purposes and to prevent erosion.

3.04.8 To reduce the impacts caused by wave action, speed limits will be restricted to 5 mph when traveling through the canal system on the lagoon side.

3.04.9 There will be no vessel with engines allowed within the canal system on the reef side of the road.

3.04.10 To install and maintain adequate signs in place in an effort to make boat owners aware of the importance of the Placencia Lagoon's role as manatee habitat, and about the need for responsible navigation practices and slow operating speeds inside the Placencia Lagoon.

3.04.11 Boat access will be limited to the west lagoon home owners and the two piers on the sea side.

3.04.12 To educate boat owners and operators about the advantages of a 4-cycle engine and the benefits of using shrouded safety propellers as a means of preventing harm to manatees.

- 3.04.13 To educate boat owners and operators about the advantages of a 4-cycle engine and the benefits of using shrouded safety propellers as a means of preventing harm to manatees.
- 3.04.14 To submit, within 6 months of the signing of this ECP, the detailed plans of the marina in an addendum, which could include information of dredging requirements, fuel dispensing and storage components.
- 3.04.15 Prior to commencing construction of facilities for boat docking purposes, including a marina, the Developer shall obtain any required licence/permit from the Lands and Survey Department. The public shall have access for the temporary use of designated slip(s) during reasonable times.
- 3.04.16 Any fuel stored on site will be in above ground fuel storage tanks and will comply with the guidelines of the Department of the Environment and National Fire Service.
- 3.04.17 Any spill shall be contained and cleaned-up immediately and if such spill is major then the Department of the Environment shall be informed immediately. The Developer shall bare all cost associated with the clean-up of any spills.

3.05 FRESH WATER RESOURCES

- 3.05.1 The Developer will ensure that potable water is made available to the entire project by means of the existing Seine Bight Village Water System.
- 3.05.2 Potable water supply can be supplemented by rainwater catchments. For this purpose, the Developer will encourage individual property owners to construct cisterns.
- 3.05.3 Consideration should be given to the demand for water for fire protection purposes.
- 3.05.4 Should an alternate potable water source become necessary to supply this project area, a separate proposal for this purpose will be submitted to the Department of the Environment for approval prior to any construction or implementation thereof.

3.06 WATER QUALITY MONITORING

- 3.06.1 As there is the possibility for increased risk of pathogenic coliform or vibrio bacteria blooms in the low salinity canal system, the Developer will ensure that routine water quality monitoring of the canal water is conducted for microbial population blooms. Analyses of these, conducted by an independent laboratory, should be submitted to the DOE on a quarterly basis.
- 3.06.2 In an effort to minimize the alteration of canal water quality from swimming pool water chlorination and soak-a-ways, the Developer will use the canal systems as photo-oxidation ponds for chlorinated effluent and flush with seawater from the sea side to maintain

salinities comparable to the Placencia Lagoon. Such analyses to be conducted by an independent laboratory should be submitted to the DOE on a quarterly basis.

3.06.3 As soon as commencement of construction activities the developer will conduct water quality tests the surrounding environment (at key sites) in order to establish a baseline data. Water Quality Monitoring of key agreed sites (reef and lagoon sides) will there after be conducted on a quarterly basis, with a minimum of four sampling points. The results of these tests are to be submitted to the Department no later than two weeks after the samples have been taken.

3.07 WASTE DISPOSAL

In an effort to control, reduce and prevent the potential negative environmental impacts associated with waste generation and disposal, the Developer agrees to take the following measures.

3.07.1 Liquid Waste

3.07.1.1 The following wastewater treatment systems will service the development as follows in accordance with the EIA:

Facility	Number of Units	Batch Plants Model
Single family homes	Individual units/home	Klargester Af1
Marina area	1	Klargester Af5
Boutique Hotel	2	Klargester Af9
Condominiums	3	Klargester Af10

The Developer will ensure that the aforementioned wastewater treatment system or a similar system approved by the DOE is utilized for the development and installation, as per specifications submitted.

3.07.1.2 Regular maintenance of all wastewater facilities will be performed by individual property owners to ensure proper functioning of the facilities for environmental and other reasons. Special care must be taken in order to avoid contamination of the surface and ground water, and the surrounding environment. In order for this to take place, the following measures will be taken:

- (i) Property owners will not dispose of grease and oils into any drain, as this could be a potential source of soil and water contamination. Grease traps are to be installed on each kitchen sink.
- (ii) Chemical wastes (such as paints, thinners, acids, etc.) will be disposed at a designated site.

- (iii) No domestic gray water from any household drainage pipes will be allowed to drain into any public or natural drainage system.

3.07.2 Solid Waste

To address the problems associated with solid waste disposal, the Developer will develop and implement a comprehensive **Solid Waste Management Plan** for the entire project site. This plan will include, but should not be limited, to the following:

3.07.2.1 The Developer will ensure that services are provided for the adequate collection, transportation and disposal of solid waste as necessary, at the approved site in Riversdale.

3.07.2.2 Hazardous waste including tires, batteries, and used oil will be stored in special containment areas for transportation to appropriate sites designated by the Department.

3.07.2.3 The Developer will:

1. Encourage residents to separate garbage into organic and inorganic waste for use of organic wastes as possible sources of composting.
2. Encourage residents to practice reuse and recycling of products.

3.08 ENERGY GENERATION

3.08.1 Since the existing power lines are available on site, the primary source of energy will be from Belize Electricity Limited power lines/main grid. Back-up energy requirements may be by means of diesel-electric plant or propane gas turbine. If back-up generators are used, they will be installed on a concrete pad within a containment area and in a soundproof facility where it will not affect guests/residents of the area. Proper measures will be taken in order to avoid fuel and oil spills during operations and maintenance. If these occur accidentally, they will be cleaned as early as possible and the matter reported to the DOE as soon as possible.

3.08.2 The storage of any fuel (butane, diesel, gasoline, etc) will comply with the guidelines of the Department of the Environment and the National Fire Service.

3.08.3 Special receptacles will also be provided for the collection of fuel/oil filters and empty containers.

3.09 CULTURAL AND SOCIAL ISSUES

It is important that cultural and social issues be addressed so as to assist decision-makers in achieving sustainable development.

- 3.09.1 The Developer will make arrangements with the Institute of Archaeology to ensure that an archaeological observer is present during excavation activities to evaluate the significance of any finds and to make recommendations as to an appropriate course of action regarding its preservation.
- 3.09.2 All natural features of national significance within the property (i.e. caves/sinkhole, valuable or endangered flora) will not be altered during or after the entire development. Should any find be made/uncovered during construction, it will be reported to the Institute of Archaeology and the Conservation Unit of the Forest Department, respectively, and work in the immediate area will stop until the Developer presents to the DOE evidence that approval has been granted by the relevant agency to resume its activities.
- 3.09.3 As long as there are qualified, available and willing Belizean workers, no labor force will be imported. If this labour force is not sufficient, then only resident aliens with a valid Belize work permit will be employed.
- 3.09.4 All safety and health measures will be observed for all workers. Potable water, rest-room facilities and adequate accommodations will be provided during the construction phase.
- 3.09.5 At full development, the developer will have provided land space for the establishment of a park/play ground and a convenience store, as these are required for projects of this size.

The Developer will apply to the Department of the Environment for Environmental Clearance for all developmental activities taking place outside of what is agreed upon in this compliance plan, which has been based on the information submitted in the EIA and those gathered by the DOE. Furthermore, it is understood, as described elsewhere in this document, that restrictions to this proposal will apply.

3.10 CODE OF RESTRICTIVE COVENANTS

- 3.10.1 The Developer will ensure that the Code of Restrictive Covenants submitted in the EIA is signed and adhered to by each lot owner in the Cocoplum development. Any proposed amendments to the code of covenants will be submitted to the DOE for vetting and approval prior to its application.
- 3.10.2 The Developer will ensure that the Disaster Management Plan presented in the EIA is also adhered to.

4.0 IMPLEMENTATION AND MONITORING OF THE ENVIRONMENTAL COMPLIANCE PLAN

The implementation of this Environmental Compliance Plan (ECP) will be the direct responsibility of the Developer of Cocoplum Resort and Residences Development, Great Belize Productions Ltd.. Periodic monitoring will be conducted by the Department of the Environment in conjunction with other relevant agencies to ensure that this Environmental Compliance Plan is being adhered to as closely as possible.

During development, measures taken to mitigate negative environmental impacts will be reviewed to assure compliance with the objectives of the plan. As development continues, the adequacy of mitigatory measures will be assessed and perhaps revised.

To ensure that compliance monitoring is conducted with respect to this environmental compliance plan, the Developer will cover the incremental costs of expenses associated with such activities, payable to the Department of the Environment upon presentation of invoices.

REPORTING REQUIREMENTS

The Developer will comply with all of the reporting requirements specified in this Environmental Compliance Plan.

The Developer will also hold periodic meetings with its supervisors regarding the implementation of ongoing environmental considerations.

Updated licences and permits for all relevant activities will be kept at all times. The Developer will assist duly authorized officers of the Department of the Environment in the performance of their duties during site visits in connection with the project's development.

It is the responsibility of the Developer to immediately report any activity that has the potential to negatively impact or damage or has damaged the environment, whether accidentally or intentionally, to the Department of the Environment and all other relevant agencies.

POST DEVELOPMENT REVIEW

After the construction period, the exercising of sound environmental ethics shall not end, but rather provisions shall be made for the monitoring of all facilities in the post-construction period. A system shall be put in place for reporting negative impacts, as well as a means of continually implementing corrective mitigation measures where the need arises.

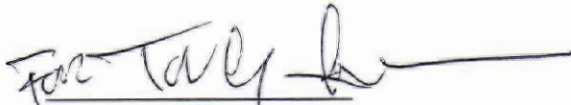
Additional monitoring will be carried out to ensure that the various pollution control features and facilities installed are functioning and maintained properly.

As previously mentioned, wanton disregard for the conditions agreed upon in this document will result in the withdrawal of this Environmental Clearance and perhaps the revocation of all permits and licenses issued for the implementation of this project.

The Developer (Great Belize Productions Limited) herein agrees to comply with this Environmental Compliance Plan (ECP) and to commence operation of this project within one year from the date of signing this ECP. If this project does not commence within one year from the date of signing this ECP, this agreement will be null and void. Should this happen, the Developer will need to re-apply for a separate Environmental Clearance.

SIGNED on behalf of)

COCOPLUM RESORT AND)
RESIDENCES DEVELOPMENT)


STEWART KROHN
OWNER
COCOPLUM RESORT AND RESIDENCES
DEVELOPMENT

SIGNED on behalf of the)

DEPARTMENT OF THE ENVIRONMENT)


MARTIN ALEGRIA
CHIEF ENVIRONMENTAL OFFICER

I, Albert James, am the attesting witness to the due execution of the said instrument and the signature hereto subscribed as that of such attesting witness is in proper handwriting of the said deponent.

Sworn at the Department of the Environment, Belmopan,

the 26th day of November, 2005.


WITNESS