

6.0 Analysis of Alternatives

The discussion and analysis of alternatives in Environmental Impact Assessments should consider other practicable strategies that will promote the elimination of negative environmental impacts identified. This section is a requirement of the EMA and is critical in consideration of the ideal development with minimal environmental disturbance.

The following project alternatives have been identified and are discussed in further detail below:

- Alternative 1 - The “No-Action” Alternative
- Alternative 2 - The Project as Proposed in the EIA
- Alternative 3 – The Project as Proposed in the EIA, but without the private villas and reduced mangrove boardwalk footprint

6.1 Alternative 1 – The “No-Action” Alternative

Under the No-Action Alternative, the existing property and mangrove forest at Kilgwyn Bay would remain as is.

The advantages of the No-Action Alternative include:

Physical

- No nuisance from construction activities (dust, noise etc.).
- No increased turbidity/TSS in the marine environment.
- No potential spillage of fuel/oil/lubricants in the nearshore marine and terrestrial environment.

Biological

- Mangrove forest and associated fauna remain undisturbed
- No increased turbidity/TSS or oil and grease in the mangrove forest.
- No permanent seagrass habitat loss

- No smothering and sedimentation of seagrass, coral and associated macrofauna
- No disturbance of possible turtle nesting by obstacles in water, increased noise and lighting

Human/Social

- No increased maritime accident potential in the form of vessel collision with tourist sea bathers
- No increased water usage, electricity and solid waste generation.

The disadvantages of the No-Action Alternative include:

Biological

- No provision of improved drainage; persistent flooding continues and terrestrial erosion
- No connectivity with marine environment; nutrient poor recharge of marine environment will persist

Human/Social

- No additional economic benefits to the community and economy.
- No increased employment and creation of indirect and induced job opportunities
- No broadening of the tourism client base and overall diversified and enhanced Tobago tourism product
- No further increase the room offerings of the island
- No further improvement of infrastructure; roads, lighting and project supported beach facilities

6.2 Alternative 2 – The Project as Proposed in the EIA

Apple Leisure Group (Secrets and Dreams Resorts) has acquired approximately 18.725 hectares (180 acres) of land in Kilgwyn Bay area, southwest Tobago and is desirous of constructing a 500-room eco-resort on approximately 11.15 hectares ($\approx 60\%$) of the land space inclusive of landscaping and paved areas.

Secrets and Dreams Resorts will create a combination of two (2) separate hotel blocks. Each hotel will serve a different clientele, one for adults only and the other for families.

The Resort's two hotels will be in the "5 STARS GRAND LUXURY" category and will be built within the coastal inland area of Kilgwyn Bay, south western area of Tobago. In each case, the two hotels will share the service areas, making the plot ratio of the land and its environmental impact much lower, because operationally they will work as a single hotel. This means that for each phase (2 hotels) there will be one centralized kitchen, one industrial area, one warehouse area, one personnel area etc. In each phase, one of the two hotels will be "Adults Only", with the objective of differentiating and diversifying the product.

The Resort, with a total of 500 rooms can be broken down as shown in **Table 6-1** below. Refer to **Section 3.0 – Project Description** for further details on project description.

Table 58 - 6-1: Breakdown of Phases and Associated Number of Rooms.

Phase	Number of Rooms
Phase 1 – Hotel 1	300
Phase 2 – Hotel 2	200

The biological, physical and socioeconomic impacts and mitigation measures for the project as proposed are discussed in detail throughout this report.

The advantages to this Alternative include:

Biological

- Provision of more environmental monitoring (terrestrial and nearshore) via approved CEC terms
- Provision of more baseline environmental data by way of the EIA and follow-up research
- Improved nutrient output to nearshore environment

Human/Social

- Additional economic benefits to the community and economy.
- Increased employment and creation of indirect and direct job opportunities
- Increase of the tourism client base, international marketing exposure and overall diversified and enhanced Tobago tourism product
- Further increase the room offerings of the island

The disadvantages to this alternative include:

Physical

- Noise and dust nuisance to surrounding residential communities from construction activities
- Increased turbidity/TSS in the marine environment.
- Potential spillage of fuel/oil/lubricants in the terrestrial environment.

Biological

- Loss of Mangrove Forest and disturbance of associated fauna within
- Increased turbidity/TSS and/or oil and grease in the mangrove forest.as a result of drainage

- Smothering and sedimentation of coral and associated macrofauna
- Disturbance of possible turtle nesting by obstacles/people in water, increased noise and lighting.

Human/Social

- Increased maritime accident potential in the form of vessels via tour boat operators etc.
- Increased water and electricity usage
- Increased solid waste generation

6.3 Alternative 3 – The Project as Proposed in the EIA, but Without Villas on the Fringes of Mangrove and Reduced Mangrove Boardwalk Footprint

The project as proposed in the EIA involves a combination of two (2) separate hotel blocks and twelve (12) private villas over the fringes of the existing mangrove and board walks on stilts with observation towers extending mid-way into the mangrove. Alternative 3 would opt to omit the private villas and replaced with natural landscaping and reducing the board walk infringement into the mangrove by 40% (**Figure 114 - 6.1**).

Advantages and disadvantages would be similar to Alternative 2 – The Project as Proposed in the EIA, however, there are a few differences that would occur. These are:

Advantages:

- Reduced mangrove habitat loss in the southern area of the mangrove swamp. The total area that would remain unaffected is in excess of 2,512 m² (both villas and reduced mangrove boardwalk footprint)
- No sedimentation in water column in this area as a result of natural landscaping and no other activities
- No sedimentation of nearby terrestrial water communities
- Nesting sea turtles will not be deterred by added lighting and noise

Disadvantages:

- Decreased tourism room numbers (450 across both Dreams and Secrets Hotels), client base and less diversified and enhanced Tobago tourism product
- Decreased revenue for hotel
- Reduced access to mangrove from reduced boardwalk and observation towers to support ecological monitoring

6.4 The Preferred Alternative

Of the alternatives presented in previous sections, Alternative 2 – The Project as Proposed in the EIA, is the preferred alternative. Indeed, the adverse potential impacts must be mitigated, and the various management and monitoring programs adhered to during all project phases.