SECTION FOUR

DEVELOPMENT ALTERNATIVES

4.1 Introduction

Belize, like most of the developing world is undergoing dramatic changes which are transforming it socially and economically. The government is under pressure to improve the standard of living of the people. To this end tourism development has been earmarked as one of the promising avenues to growth. As always the more relevant issue is how to steer this growth in a sustainable direction so that it will do the most good for all the national stakeholders. The question then becomes whether the approach to the project is sustainable socially, economically and environmentally and if not how could it fulfill these higher principles.

In considering the overall project concept and its potential environmental impacts, there are usually two or more important developmental alternatives for each proposed activity to think about. The alternatives may encompass a wide range of consideration and can represent a choice between the different developmental activities for the proposed project.

4.2 The 'No Action Alternative'

In the analysis of the development alternatives, the option with the highest cost benefit, the most technical feasible and with the least residual impact is usually identified as the preferred option. Of course, these options should also consider the environmental, technical and economic grounds of the chosen alternative.

Therefore, the "No-action" alternative or non development option is usually discussed as an option in the EIA process. However, this alternative is difficult to consider as a viable option due to the pre-existing investments which have been incurred by the developers. One of the most costly investments that are normally incurred prior to project approval is land purchase.

The initial investments already incurred were the primary reason for the no action alternative not to be found economically feasible. This option would result in the loss of investment capital, and the loss of economic opportunities such as employment generation, revenue and foreign exchange generation etc. However, the EIA as a planning tool is considered critical for the determination of potential negative impacts, mitigation measures and as an important part of the process of identification of best technology for the project.

However, beneficial results of non-development options cannot be ignored. These benefits include ecological and environmental preservation, and the reduction of stress to existing flora and faunal assemblages. One of the primary habitats that continue to be degraded and lose its ecological characteristics is the mangrove forests, which are an important vegetation type of the coastal plains of Belize. Mitigation measures addressed elsewhere, call for the clearing of this

vegetation by selectively identifying important plants within the zone of impact and ensuring their preservation.

4.3 Technical and Economical Analysis

For a proposed undertaking to be feasible it must ensure that the development is technically, economically and financially realistic. Cost Benefit Analysis (CBA) of projects of this nature often compares the economic feasibility of all options. CBA is concerned with an analysis of cost and benefits for the economy as a whole. The objective is to know the difference between social benefits and social costs.

During the analysis, financiers also looked at the need to develop the site using the most practical technology bearing in mind the objective of maintaining as much as possible, the ecological integrity of the area and the habitats it supports. That is why the proposed development plans to utilize different minimization strategies along with present day technology.

The technical and economic feasibility is then weighted against environmental and ecological degradation the proposed project might incur. Consideration of technical and economic analysis included consideration for population density, suitability of site, accessibility, and protection against natural disasters, construction costs, recreational benefits, job creation and revenue generation.

4.4 Conceptual Strategy for Alternative Analysis

The Development Alternatives outlined in regards to the proposed Chrysalis project is based on an articulation of those alternatives, where they exist, to demonstrate the first and second options that may be adopted in the best interest of the project and the integrity of the environment. This new approach is delineated by the different options that are available for discussion and the magnitude and scope of the related impact. The following sections summarize the different development alternatives and their related impacts to the receiving environment.

4.4.1 Potable Water Alternatives

As stated previously, the anticipated project plans to harvest potable water from the seasonal rains. This option is considered as the project's primary source to meet the daily water demand of the proposed project. As is customary with the sourcing of potable water, the developer has also examined and investigated other water sources that could be used to meet or to supplement the primary source. In all, three alternative sources were analyzed from all angles including their related residual impact, feasibility, and sustainability.

Table 4.1 summarizes the options evaluated for the proposed Chrysalis development. Incorporated into the options are also the associated components that will be required to be installed. In addition, the several treatment methods that will be implemented by each option will be explored. These alternatives are in response to the sourcing of potable water as defined in Section 3.2.3.1 and Table 3.1.

Potable Water Alternatives

These alternatives are in response to the fact that the primary source must always have a secondary or supplementary source. Considering the primary source of the proposed project, the following developmental alternatives relating to water supply were examined.

- *Water Desalinization*

The proposed project will make use of a water desalinization plant (Reverse Osmosis) capable of producing 10,000 gallons of freshwater per day. The plant will be installed in the Utility Area and the desalted water will be pumped to the 12,000 gallon reservoir where it will be redistributed by a series of transmission mains. Only one plant would be acquired to accommodate the demand of the proposed undertaking. The input source will be extracted from an abstraction well and the brine will be disposed into an injection well and into the receiving environment. This volume should be miniscule and will instantaneously be dispersed into the deep injection well where it will be safely disposed.

- Importation

Although considered an excellent source of potable water for any project, the concept of importing portable water from BWS to the project site is quite costly. Thus the importation of water to the site is considered as a last resort only if the other sources are not viable or absent. Imported water would be pumped into the reservoir system that will serve as catchment for the rainwater. This method would be restricted and limited to important areas of the method development only. Only the required volume of water will be transported to the site as this method is expensive and time consuming.

Table 4.1 Summary of Alternative Potable Water Sources

Option	Source	Rationale	Strategy	Impacts
1.0 Water Desalinization	Sea, brackish water from perforated wells	This is a very good option. The concerns are that the initial cost is expensive, the energy consumption is high, thus resulting in a high operating and maintenance cost.	Perforated well(s) along with sea abstraction, use of membrane filters, deep well injection for brine, mechanized pumping system with distribution mains and valves.	Generation of brine. High over-head expenses at first – use of pressurized systems may require careful maintenance. Excellent secondary source of water.

Option	Source	Rationale	Strategy	Impacts
2.0 Importing water to the project site from Placencia Village	BWS,	Importing almost five thousand gallons of water on a regular basis requires a dedicated service boat for this purpose.	Importing water from a dock to dock location, employing a pumping mechanism for loading and unloading along with storage tanks on project site	Barging to project is too far and would be expensive considering fuel and transportation costs. This method is prone to accidents at sea, especially with the faros

4.4.2 Wastewater Treatment Alternatives

As mentioned previously, the project chose a package system with tertiary treatment capacity such as the BESST or its equivalent for its development. Based on this, various alternatives were sought and therefore the project will consider the different criteria that will be influencing the proposed alternatives. The various options considered made the following assumptions:

Option # 1 "Individual Treatment Systems." This system assumed that each separate infrastructure unit would consider installing individual units with the same secondary and tertiary treatment capacities. However, these systems would be individually owned instead of owned collectively.

Option # 2 "Household Systems." This option considered using Individual Septic Tank Systems, with appropriate leach fields.

Table 4.2 Generic Evaluation of Wastewater Disposal Alternatives

Option	Rationale	Strategy	Impacts
Individual Treatment Systems	Individual treatment units in the buildings would treat waste more effectively and efficiently, lower impacts to receiving environment by means of secondary and tertiary treatment	Individual connections with mechanized pressure systems. Individual reservoir for treated wastewater and subsequent disposal	Low to medium impact considering the number of buildings. This would magnify the need to carry out frequent periodic monitoring, especially considering the project site. In other words, the installation of excessive force mains would make the option vulnerable to leaks and system malfunction.

Option	Rationale	Strategy	Impacts
Household Systems	Individually operated system can collect building's waste water and offer moderate treatment – Dimensions would vary according to number of wastewater generating sources	Gravity feed system involving leach or tile field disposal. Plumbing and gradient considerations.	Moderate to high environmental impacts especially considering the existing soil conditions and project site. The soil conditions would limit the functionality of the 'soak- away' to reduce nutrients and fecal pathogens…Possible leaching of effluents into sea which threatens both human health as well as the environment from eutrophic or nutrient enrichment influences.

4.4.3 Disposal of Treated Wastewater

Every project once in operation will generate wastewater that will require some form of treatment. Once treated, this effluent is not considered potable but reusable considering the different demands. Thus the projected treated and post chlorinated effluent will be reused and injected back into the system to reduce the overall water demand. In considering the magnitude and scope of the proposed project, two disposal alternatives were considered for the development.

Table 4.3 Evaluation of Treated Wastewater Disposal

Option	Rationale	Strategy	Impacts
1.0 Wastewater Recycling (Treated and Post Chlorinated effluent)	Recycling of treated wastewater for flushing of toilets only will reduce the overall water demand on the primary source.	Dedicated color coded line will be used for flushing of toilets.	Possible cross contamination due to improper valve setup. Possible contamination of soil and water due to leaks, and plant malfunction.
2.0 Diffusion in a deep injection well	Safe and rapid dispersal of treated wastewater.	Collection and subsequent diffusion of the treated and post chlorinated effluent by deep well injection.	Minimal impact considering the quality of the treated wastewater and quantity. Safe dosing time for residual chlorine to dissipate.

Option	Rationale	Strategy	Impacts
3.0 Irrigation purposes only	Rapid recycling of treated wastewater and subsequent dispersal of wastewater volumes.	Install irrigation mechanisms in most residential and 'green' areas of the proposed development.	Treated wastewater volume is too low for intended use.
4.0 Diffusion into the sea	To discard the treated wastewater generated by the proposed project.	Install the necessary infrastructure for the diffusion of the treated wastewater into the sea. Discharge pipes would convey the effluent from the package plants to a diffuser that will disperse the effluent.	The treated wastewater stream may have elevated levels of chlorine that is toxic to most aquatic organisms. Erosion problems may occur at diffusion site.

4.4.4 Solid Waste Disposal Alternatives

The intended development will generate about 207 lbs/day of solid waste without waste minimization strategies. It is estimated that most of this waste will be generated during the operational activities of the intended development. Considering this volume, several disposal alternatives were developed to adequately address the solid waste disposal. As described earlier, the proposed project opted to address the solid waste issue by separating the waste into organic and inorganic components (See Section 3.4.3.1).

This approach is deemed the most appropriate considering the project location and existing environment. This option however, was based on several other disposal options. This approach is important in considering that this action would eliminate the dependency of having a single disposal method.

Disposal Alternatives

The development has explored several other viable disposal options considering the projected volume of solid waste. With this in mind, the following section outlines the alternative options for solid waste disposal taking into account the project location and its impact on the surrounding environment.

- **Option # 1** - Separation of solid waste (organic and inorganic) with onsite burial of inorganic waste and composting of the organic portion.
- **Option # 2** - No separation of solid waste with onsite burial of both organic and inorganic waste.

Table 4.4 Domestic Waste Disposal Option

Option	Source	Rationale	Strategy	Impacts
Domestic Waste				
1.0 Separation of solid waste with onsite burial of inorganics.	Waste generated as a result of the construction and operation of the project.	Rapid disposal of inorganic waste, as well as the utilization of such to fill low lying area of the project site.	Selection of the low lying areas within project site. Rapid collection and disposal mechanisms for solid waste.	Minimal impact at first but as volume increases and accumulates; the prevalence of waste would be exponential. This in turn would magnify the impact and contaminate the site with pests and diseases.
2.0 Onsite burning and burial of waste without separation	Same as above, except with both organic and inorganic waste	Elimination of solid waste imploring the least costly method. Reduce overhead expenditures involving environmental management.	Selection of low lying areas on the project site conducive for burning and burial of solid waste.	Moderate to high environmental impact especially considering the project site. This action would also propagate the prevalence of pests and diseases on the area.
				Water contamination can also occur given the nature of the project location. Moreover, impacting a new site on the property would threaten the receiving environment.

4.4.5 Energy Generation Alternatives

As mentioned earlier, the proposed project will generate its energy by it's primarily by wind turbine, which is an alternative source of energy. As part of the energy generation alternatives, the proposed project plans to explore every available option including those of the eventual development of the area. This approach is essential considering that this is a premium commodity given the project location. With this in mind, the following section summarizes the source description along with their respective potential impacts.

Table 4.5 Alternative Analysis for Energy Generation

Option	Rationale	Strategy	Impacts
1.0 Commissioning of the Diesel Generators	Expansion of Diesel Generators – practically feasible considering the size of the project and development density. Transportation of fuel would be problematic along with the high environmental impact associated with diesel generating systems.	The developer will therefore utilize diesel generators to produce and supplement the wind energy. Considering this, the project plans to utilize one to two diesel generators capable of generating 500 KW a day. Generators will be purchased according to the project's energy demand.	Generators tend to create excessive noise pollution as a result of their operation. Pollution risk due to accidental spill from fuel and oil storage tanks can also occur. In addition, air pollution and combustion fumes can pose serious health risks to humans and contaminate the air over prolonged operation.
2.0 Expansion of Alternative Sources	This would be a positive venture but high initial cost and limited output considering the climatological factors of Belize.	Install additional wind turbines and solar panels to meet and exceed the project's energy demand.	This venture would be too costly and would not be recommended since 'development' areas are limited and the footprint is a valuable commodity.

4.4.6 Dredging and Land Reclamation

The proposed development will require dredging for land reclamation process. The dredging activities will generate adequate volume of calcareous and coralgal sand spoils that will be needed to reclaim the areas where the proposed units/buildings (foot print) will be placed. In considering the development alternatives for the fill material, the following table summarizes the siting and placement of the alternative burrow sites that will be utilized for land reclamation processes and other infrastructural development.

Table 4.6 Dredging Activities

Option	Rationale	Strategy	Impacts
Obtaining fill from another area just south of the proposed location (See 'OS' in Fig. 2.13).	Alternative source of material to carry out the land reclamation activities.	Use of augur/cutter head type suction dredge to remove sediments from the sand flats. Use of pontoons to support pipeline network, construction of spoils containment areas.	Primary need for the dredging is to source material for reclamation purposes. Anticipated impacts would require successful mitigation measures to be in place as described in Section 6.3.1.
Extending the proposed dredged area to better allow for the easy access to the service pier and thus obtain additional fill materials.	Primary needs for dredging is to further widen the access channel for safe transiting of vessels while at the same time to obtain additional fill material for the land reclamation process.	Use of suction dredging machine along with a 'cutter head' to remove sediments from the sea floor. Use of pontoons to support pipeline network, construction of spoils containment areas.	A wider area may expose the vessels to risk and collision. Furthermore, it would generate more material that would be required for land reclamation.
Transportation of fill material from inland or other sources	Reduce overall area to be dredged and related impacts generated by this alternative.	Selection of inland source with transportation of material by barge to the site.	Minimal impact, however the venture would be extremely expensive and would not be of native materials that are required for project development.

4.4.7 Ecological Development Alternatives

In considering the ecological importance of the 'Non Development' option, the development intends to conserve and protect the project's natural vegetation as much as possible with minimal residual impact to the receiving environment including the greater South Water Caye Marine Reserve. This approach can only be accomplished by evaluating the development concepts (low density), project footprint (areas of buildings and amenities) and population density (resident and visiting) of the anticipated development.

Therefore, the proposed option was derived at taking into consideration several other development alternatives to the ecological alterations (See Table 4.7). These alternatives were evaluated based on the 'worst' case scenarios as well as the 'Non Development' option. With

this in mind, the following table summarizes the ecological option chosen and its development alternatives.

Table 4.7 Ecological Alternatives

Development Issue	**Option #1 & Justifications (Chosen Option)**	**Option #2 & Justifications (Alternative Option)**	**Discussion and Potential Impacts of the Options**
Land Clearance Policy	Trimming and pruning only the areas necessary for the placement of the buildings (nodes) along with the related infrastructure.	Clear cutting other areas in order to improve the vista from the different residential units. This would require additional loss of prime vegetation and potential cumulative impacts.	No-Action alternative would conserve the cayes but would not allow for any economic and social development thus loss of about $75-90 million bz in potential investment and tourism spinoffs.
Land Reclamation	Carry out the reclamation activities within the scope of the EIA and development concept in order to reduce and limit potential environmental impacts related to this activity. Thus the project will reclaim land where infrastructure and building footprint will be placed. The remaining vegetation will remain in its natural state as a sign of good stewardship.	Deviating from this option could be detrimental to the project needs, especially when considering the maximum investment returns and tidal rise influences.	No-Action alternative would be detrimental to the project especially considering the tidal influences which would pose a serious risk to the placement of buildings, especially considering global warming and the effect of tidal rise.
Open Space	Capitalize on the availability of ‘natural open spaces’ within the confines of the project to facilitate development without adversely impacting the project site.	Lack of the ‘open spaces’ would increase the human carrying capacity and increase the associated anticipated impacts related to domestic and tourism activities.	No-Action alternative would jeopardize the investor’s development policy in that there would be no buffer zone and no protection scheme in promoting ecotourism.

4.4.8 Shoreline Protection

The anticipated project will employ soft engineering controls to delineate the natural contour of the project site in some areas. Considering the wide array of shoreline protection in today's market, the anticipated project plans to explore three alternatives that would cause the minimum impact to the receiving environment (See Table 4.8 and Section 3.7). These shoreline structures must be durable and dependable, especially considering the oceanic environment as well as the potential for strong waves. It is important to note that all three alternatives can be employed by the proposed project. With this in mind, the following table describes the protection alternatives.

Table 4.8 Shoreline Protection Alternatives

Option	Rationale	Strategy	Impacts
Sheet Piling with Bulk Head	Offer durable and weather resistant coastal protection for the area where it will be used	Install sheet piles at least seven feet below the surface with 3 feet exposed. The exposed area is where the fill material will be placed.	Must be of composite material considering the salinity of the receiving environment. Activity prone to may pollution risks including spills, injury and alteration of the coastline.
Geo-textile Tube	Obtain a material that can be molded to suit the project's coastline where the land reclamation activity will take place.	Tubes will be filled with the dredged materials and molded around the areas that will be reclaimed.	Tubes may sink below the level that is required to be reclaimed. Bulky and must use native sediments for which dredging is a conditioned activity.
Geo-textile Matting	Initial clearing of the area where the matt will be placed. This matt is limited in scope and use.	Stakes will be used to 'shape' the areas that will be developed.	Mats may be easier to handle but stakes may weather away and fall thus requiring annual replacement.

4.4.9 Siting and Placement

The eventual siting and placement of the overall development and its associated infrastructural components will play an integral part in the decision making process. This approach is not without extended evaluations of the placement and siting of the different project components. Thus the notion of displaying two alternative options for each infrastructure is for the general audience to foresee the different justifications. The anticipated siting and placement of the related infrastructure will play a vital role in the construction of the proposed project. The following table summarizes the development component and its development options.

Table 4.9 Summary of Development Alternatives

Development Issue	Option #1 & Justifications (Chosen Option)	Option #2 & Justifications (Alternative Option)	Discussion and Potential Impacts of the Options
Development Concept	Lower Density Development – *A lower density would be indicative of a low impact venture and 'exclusive' in terms of product development - which there is a growing market demand*	High Density Development – *a higher density would be economically beneficial, however, the footprint would be greater and the project would lose that exclusivity.*	*Both options are extreme cases. A higher density would implore additional potential impacts while a lower density would have less of an impact on the site.*
Siting of Overall Development	Localized nodes of development – *this option would conserve the exclusivity and expound on the visitor experience relationship.*	Centralized Nodes – *a centralized location would detract from the 'exclusivity' concept that the developers intend to portray.*	*Both options are extremes with both economical and environmental potential impacts.*
Siting of the Service Pier	Mid lower Latitudes of Big Channel Caye – *the placement of the pier in this location is ideal considering the depth, wave action, water current and area of the Utility Zone. Furthermore, the pier would 'nestle' small vessels in case of small storms.*	Northern portion of Big Channel Caye – *placement of pier in this area would pose additional navigational hazards and would interfere with the project development slated for this area.*	*The second option would be too dangerous considering the wave action and currents of the northern portion of the Big Channel Caye.*
Siting of Marina Pier	Mid latitude of the leeward portion of Big Channel Caye – *ideal considering the accessibility and depth of the area as well as the linkage of the structure with the overall development concept.*	Northern portion of Big Channel Caye – *shallow for intended purpose. Site would be impacted by wind and wave. Area is extremely sensitive.*	*Increase potential impacts for the second option considering that it would require the dredging of a sensitive environment.*

Development Issue	Option #1 & Justifications (Chosen Option)	Option #2 & Justifications (Alternative Option)	Discussion and Potential Impacts of the Options
Siting of Overwater Cabañas	Windward portion of Little Channel Caye – *Better appreciate the wind/wave/sunrise experience from this location. This would further add to the marketability of the final product. Furthermore, the depth of the area is ideal for this type of venture.*	Northwestern portion of Big Channel Caye - *proposed site would be in conflict with the placement of the worker's quarters. Moreover, the general ambience (wind/wave/sunrise) would not be appreciative from this location.*	*The second option would incur additional environmental impacts, especially considering the transiting of boats in the area.*
Boardwalk construction	Boardwalks – *the project plans to elevate and meander its boardwalk to suite and fit the natural contour of the vegetation.*	Pathways – *ground level walkways instead of elevated walkways.*	*The first option would reduce the impact on the site by reducing the footprint. Also the elevated boardwalk would not interfere with the natural drainage pattern of the area. This also applies for the biological migration (if any). Also, the utilities can be placed under the boardwalk.*
Siting of Utility Zone	Proposed Placement – *utility would be in line with the service pier. Location is ideal considering the utilities and its 'cabling' to the different localized nodes (buildings). Impacts if any would be isolated.*	Western portion of Big Channel Cayes – *noise generation would be a problem along with the cabling of water, energy and wastewater. Moreover, the zone will be utilized to store fuel for the generators.*	*Both options must consider that fuel will be stored at the Utility zone and therefore will require the use of offloading hoses. Increased risk of potential fuel leaks and spill into the sensitive environment.*

Development Issue	Option #1 & Justifications (Chosen Option)	Option #2 & Justifications (Alternative Option)	Discussion and Potential Impacts of the Options
Siting of Beach	Northeastern portion of Big Channel Caye – *proposed area is 'nestled' within the natural contours of Big Channel Caye. This area has a strip of natural beach that will be further develop to suite the project needs.*	Upper northeastern quadrant of Big Channel Caye – *this area would be ideal but is subjected to erosion due to strong wind and wave action. This would require constant sand nourishment practices and incur further environmental cost.*	*Land suitability and wind and wave actions are primordial factors in the placement of a beach. The impacts can be farfetched if not appropriately addressed.*
Siting of Helipad	Southern extreme end of Big Channel Caye *– less noise in terms of its operation and higher health and safety conditions regarding the regular transiting of persons and marine vessels.*	Center of Big Channel Caye – *adequate location but the site would be conducive of excessive noise when landing and departing. Additional health and safety concerns regarding this location.*	*Health and safety concerns are primordial factors in the placement of the helipad as well as the available land space to accommodate such a task.*
Siting of Wind Turbine	Extreme northeast quadrant of Big Channel Caye *–this site is ideal considering the lower noise and bird migration impacts. As well as the placement of the tripods of the turbine would be in areas devoid of sensitive habitats.*	Center of Big Channel Caye - *this option can be considered, however, due to the dimension of the caye and the placement of the buildings, there would be too much conflict in terms of noise and bird impacts.*	*Alternative energy comes with its own associated impacts which include noise, shadowing and impact on bird migration.*
Siting of Channel to access Service Pier	Just south of Big channel Caye *–take advantage of the natural channel that has been silted up. This would reduce 'piping' materials necessary to transport the spoils to the dewatering site.*	Further south at the alternative site – *this would be feasible but would require additional pontoons and dredging equipment to transport the sediments to the containment areas to be reclaimed.*	*Both options have their associated degree of impacts. The first would incur the least impact since it is closer and will make use of an old access channel*

4.5 Other Alternatives for Development

Tourism is dependent on the natural resources but is non-extractive and can actually provide the impetus for serious and sustained conservation efforts as has been the case wherever it has taken root on a responsible footing in Belize. From a dynamic efficiency standpoint, it should be apparent that a conscientious tourism project would maximize on the use of the resources at the site without comprising on long term benefits. A resort facility offers the best opportunity to capitalize on the area's unique attraction while keeping important environmental parameters intact.

This stress on environmental wholesomeness is not accidental. Unlike other development projects, which are expected to trade some degree of environmental quality consideration of benefits in other categories, in resort development this is not the case. For such projects it is essential that the quality of natural resources be maintained at the highest possible level. This is to say that the environment is the basic resource and careful development can lead to its enhancement rather than its destruction, which can create a more marketable product.

The impact of the tourism sector on the national economic outlook is well known and needs no further elaboration. More to the point is the sustainability of the sector over the long haul bearing in mind the unfortunate experiences of other similar tourism projects around the world. The focus of the Belize Tourism Strategy is to produce a quality product that contributes to the country's development socially, economically and culturally while maintaining sound environmental values (A Tourism Strategy Plan for Belize, 1998). The justification for this project as a tourism venture within the local context can be found within The Belize Tourism Policy, 2005, the Blackstone Report (1998), the Cayes Development Policy and the Ambergris Caye Development Guidelines which speaks to preferred types of tourism development in the Ambergris region.

The scope, scale and approach of the development is justified under the following areas of the Blackstone Report:

- *Niche Market* - The document advocates that Belize remain committed to attracting visitors from the high end of the tourism market. These visitors demand a high quality product and are willing to pay the price providing it represents a good value for the dollar. These visitors are in the main, mature, experienced travellers, who seek unique vacation experiences that promise authenticity and the opportunity to learn more about the natural environment and new cultures.

- *Development Strategy* - The document makes the point that there has been a necessary shift away from "straight ecotourism" to one that embodies the concept of "responsible tourism". This is the new and innovative approach to nature based tourism that embraces the ethics of ecotourism while avoiding the pitfalls of being too restricted in formulating marketing approaches. Essentially this approach stresses a way of doing tourism rather than a type of tourism. Size of the facility now takes a backseat to the overall quality of the services and the use of innovative environmentally friendly technologies.

- Service Category - Research in the study showed that hotels with the highest and most expensive services had a higher occupancy rate than hotels at lower price levels. It found for example that Ambergris Caye (which has the best quality of service and charges the highest price) has the highest occupancy rate of all tourism areas in Belize. Unfortunately the report found that most of Belize's so called "upscale" resorts do not yet meet international standards. The focus on service and environmental integrity reinforced by appropriate low impact technologies does not fall into this category.

Since the Blackstone Report other favourable factors have emerged to support the development of tourism facilities on the cayes including a survey which showed that 74% of all visitors who come to Belize plan to engage in some water sport, while the majority (46.4%) rated marine attractions as a very important motivating factor for visiting Belize. Visitors also showed a high frequency of participation in marine and coastal activities and cited these as the main places of interest visited.

4.6 Conclusion

In analyzing the different alternatives for development for the proposed Chrysalis project, the development clearly intends to steer its growth towards a sustainable direction so that it will do the most good for the national stakeholders. In considering the context of the alternatives, the comparative evaluation presented falls within the scope of the overall environmental performance of the chosen 'alternative' and its associated impacts to the receiving environment.

In any event, it is necessary to lay out the different options that are available in order to safe guard the environment and its interconnected elements – thus the preposition of a low key and low impact development. In considering the different development alternatives presented, the comparative process stems from both the rationale and strategy approach that was devised to discuss the alternative. Therefore, it is in the best interest of the governing body to 'compare and evaluate' the options described.