

# Balam Jungle Estates

2013

PROPERTY OVERVIEW

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## PROPERTY DESCRIPTION

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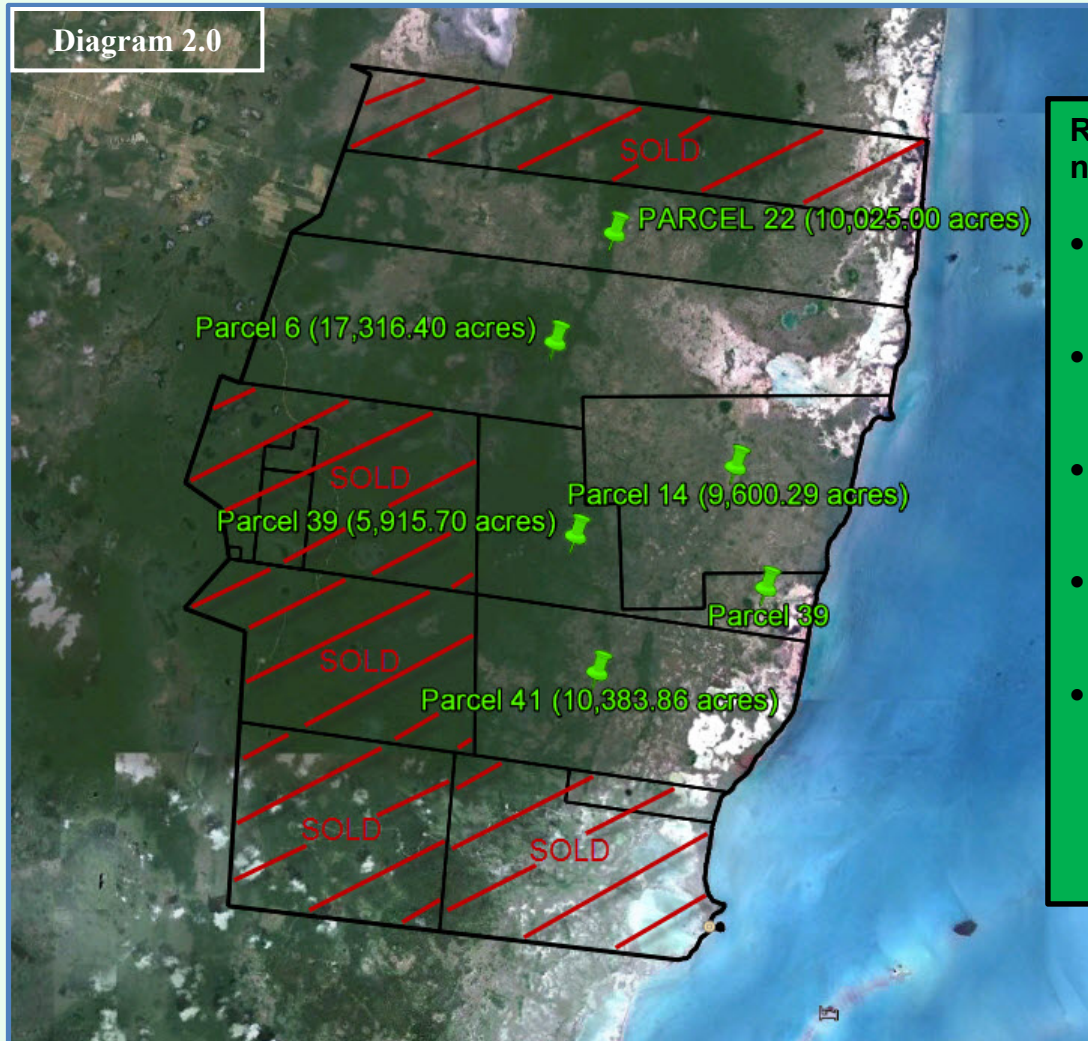
The **Balam Jungle Estates** (“**BJE**”) is situated in the southeast corner of the Corozal District, just south of where the Yucatan Peninsula greets the Caribbean Sea. Both the Northern and Southern Bulkhead areas are located on the property and the coastal waters offshore are often referred to as part of the “Belizean Riviera.”

Originally, BJE was one of the largest privately owned blocks of land in Belize, consisting of five (5) contiguous freehold title parcels, totalling 95, 382 +- acres.

Given recent parcel sales and reconfiguration, BJE now offers five (5) new parcels totalling **53,240.39**+/- acres; from Caribbean beachfront to tropical broadleaf forests.

## LEGAL DESCRIPTION

The property can be verified in the Government of Belize's Land Registry, located in the nation's capital, Belmopan. The Registration Section is: Shipstern / Bulhead. The registered Proprietor is Julian Castillo of 5859 Seashore Drive, Buttonwood Bay Area, Belize City, Belize.



### Remaining Parcels for Sale (in Green, ordered north to south):

- Parcel 22 (10,025.00 acres) -  
Land Register Parcel ID: 6-95-22
- Parcel 6 (17,316.40 acres) -  
Land Register Parcel ID: 6-95-6
- Parcel 14 (9,600.29 acres) -  
Land Register Parcel ID: 6-95-14
- Parcel 39 (5,915.70 acres) -  
Land Register Parcel ID: 6-95-39
- Parcel 41 (10,383.00 acres) -  
Land Register Parcel ID: 6-95-41

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Total Acreage: 53,240.39+- acres

## LOCATION & LANDMARKS -

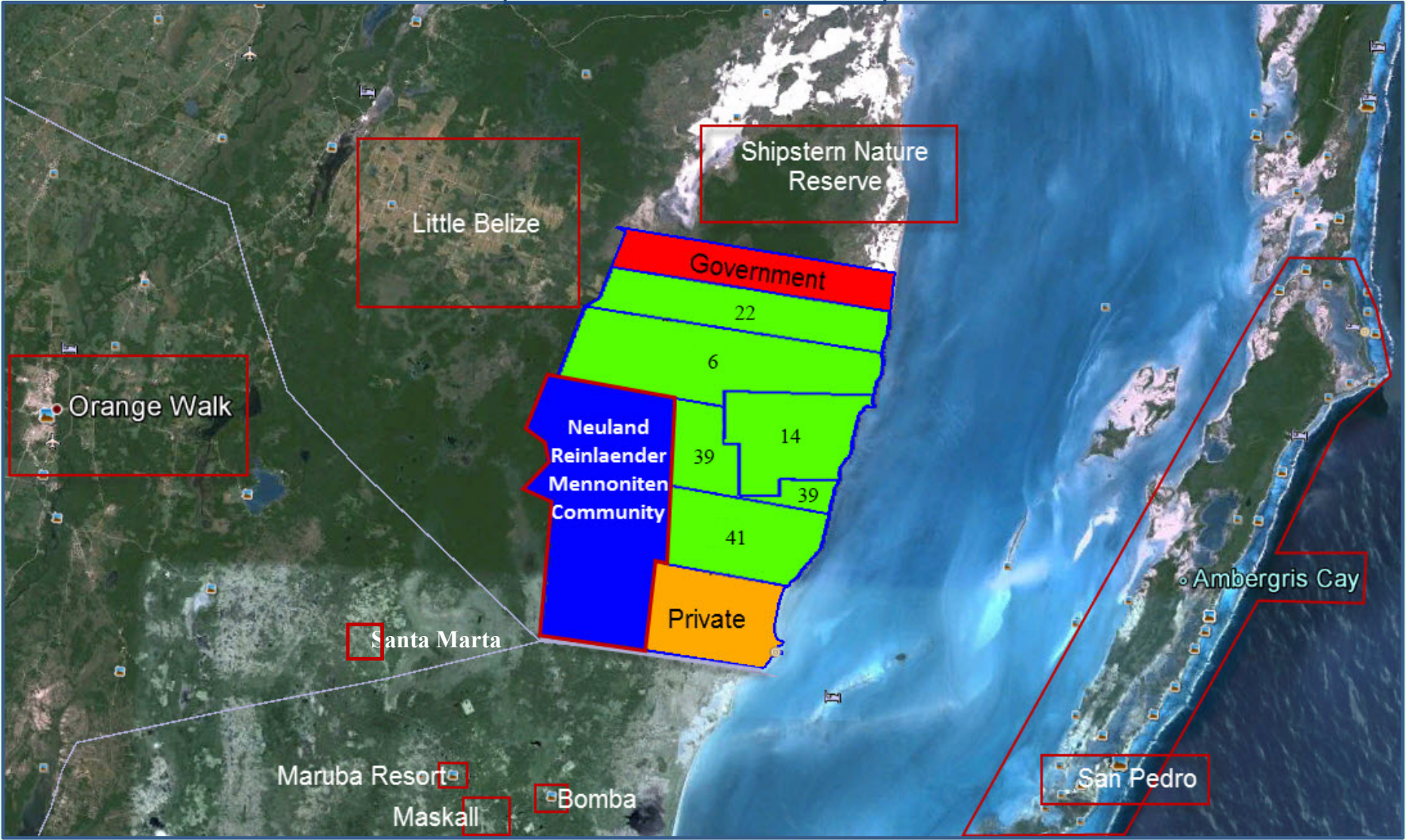
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BJE is situated near a number of communities and other identifiable areas in this region:

- **Shipstern Lagoon & Shipstern Nature Reserve:** Found just a few kilometers north of BJE's northern boundary. Shipstern is connected to BJE through the Corozalito waterways, which are a labyrinth of scenic natural canals. The 22,000 +-acre Shipstern Nature Reserve boasts three different northern hardwood forests, along with savannah and mangrove habitats similar to those found on BJE.
- **Fireburn:** The small community of Fireburn is located approximately 6km (3.7 miles) north of the property's northern boundary. The community will be expanding with the recent nearby discovery of one of the largest Mayan Ruin sites in Northern Belize.
- **Little Belize & Neuland Reinlaender Mennoniten Community:** These two Mennonite communities border the property along its western boundary. The communities have converted their areas into highly productive farmland.
- **Bomba Village:** This small village is located approx. 10km (6.2 miles) south of the southern boundary of the property. The village is connected to the sea by way of the Northern River, which many fisherman and tourism boats use to access the sea/mainland on tours of various attractions in the area (i.e. Altun Ha and Lamanai Mayan ruin sites).

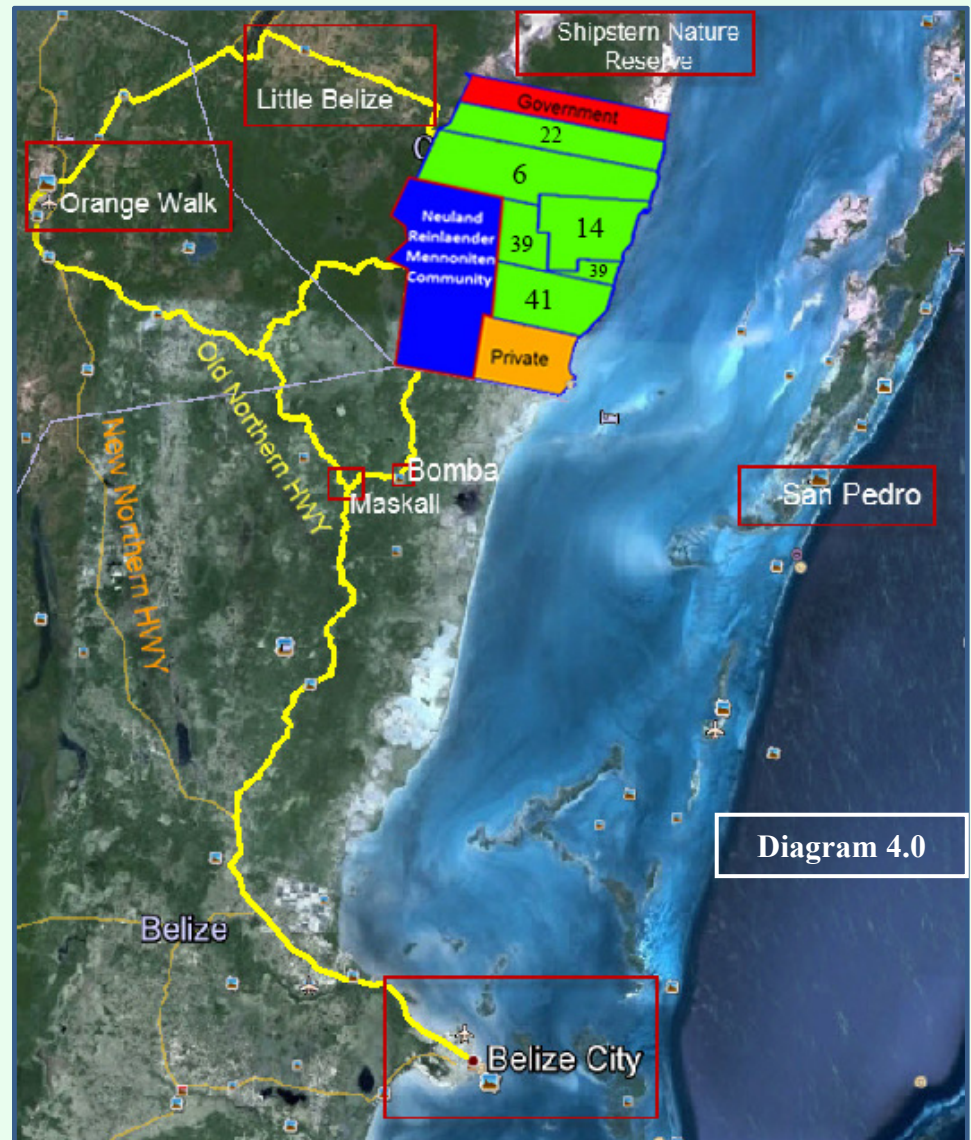
- **Maskall Village:** This a quaint yet well-established village located approx. 15km (9.3 miles) to the southwest of the BJE. Maruba Resort – one of the more exclusive jungle resorts in Belize - is located nearby and offers a range of services and amenities..
- **Santa Marta Village:** This is a very quaint farming village located at Mile 29 of the Old Northern Highway, beyond Maskall Village and Maruba Resort.
- **San Pedro on Ambergris Caye:** From anywhere along BJE’s beachfront it is approximately 18.5km (11.5 miles) or roughly a 15 minute boat ride to Ambergris Caye. The main town, San Pedro, is a Caribbean tourism mecca and one of the most developed areas in Belize. The Belize Barrier Reef parallels the entire length of Ambergris Caye.
- **Orange Walk Town:** This is the second largest town in the nation with a population of about 13,400. It is the capital of the Orange Walk District, located on the left bank of the New River, 28.2km (17.5 miles) west of BJE and 85.3km (53 miles) north of Belize City and the International Airport.

Landmarks Map – Diagram 3.0



## ACCESS

- 1. Boat Access** - Any part of the BJE's coastline and the coastal lagoons can be easily accessed by boat, either from Sarteneja (32 km/19.9 miles) from BJE's northern border), San Pedro (18.5 km /11.5 miles ) Bomba Village (23 km /14.3 miles), or Belize City (64 km /39.8 miles).
- 2. Road Access** - BJE can be accessed by all-weather marl roadway, either from the southwest via the Maskall/Bomba route off the Old Northern Highway or from the northwest via Little Belize. The property can also be accessed using a bush road via Santa Marta Village. All of the major road systems on the property are wide enough for 2 way traffic and provide all-weather access for almost any vehicle. Primary Access Points are:
  - **Bomba:** This road, running northwards from Bomba, off the Old Northern Highway, provides access to BJE in approximately (1) hour from Philip Goldson International Airport (BZE) in Ladyville, just outside Belize City. It enters the property on the southwest side of the southern boundary, providing a direct link to the coastal road and all other roadways that exist.

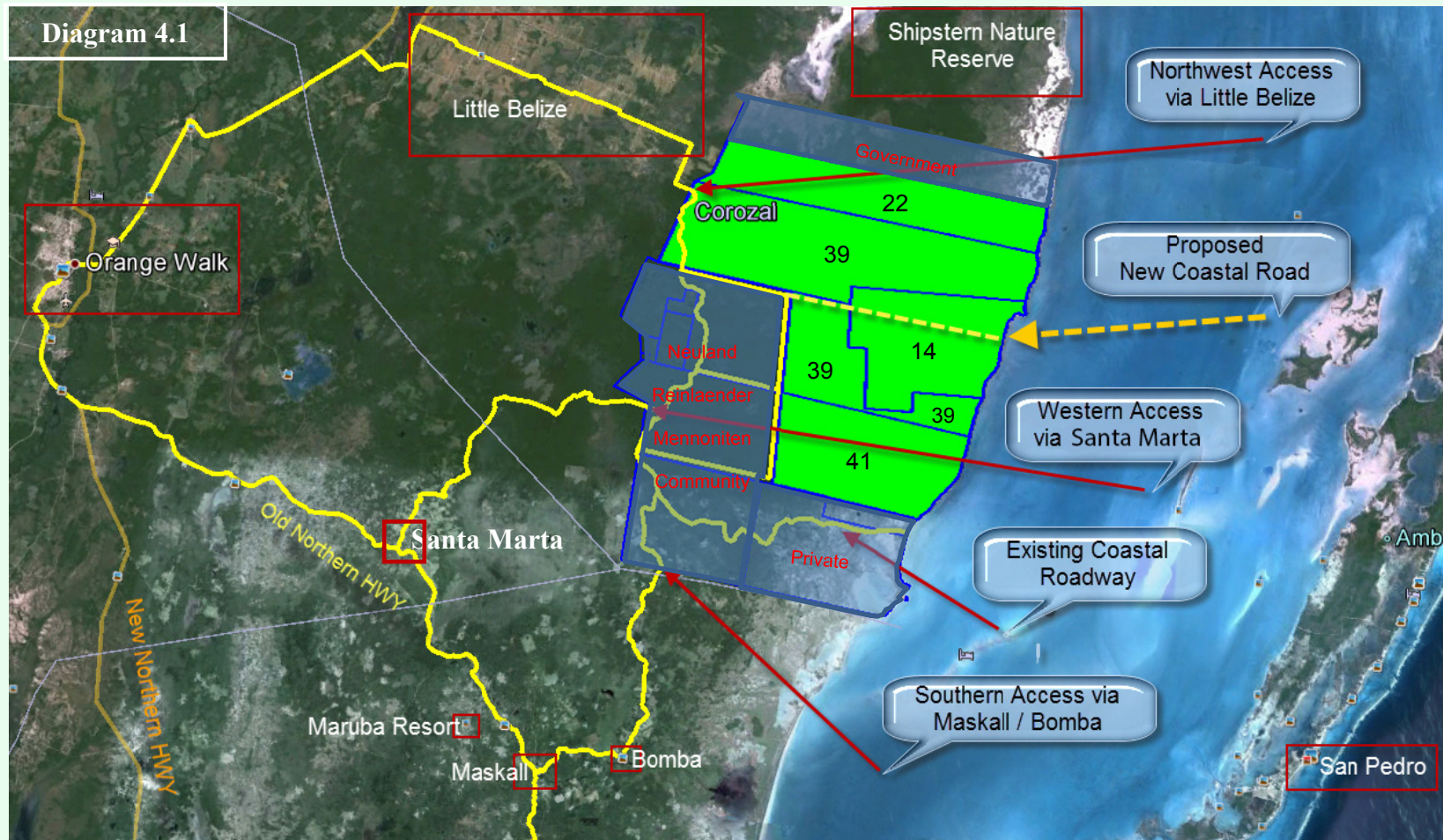




➤ **Little Belize:** The road accesses BJE to the Northwest and serves as a main artery to all existing roadway. This entry is located approximately 43.6 km (27.1 miles) from Orange Walk Town.

3. **Inland Access to the Coast** – All of the main roadways on the property connect to the present coastal roadway. A new coastal road has been planned in order to access the northern area of BJE’s coastline (via Parcel 14).

4.



## TOPOGRAPHY

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**Inland** – The north east of Belize is part of the low-lying Yucatan Platform and, characteristic of the entire Yucatan Peninsula; the entire area is extremely flat with slight variation in height. On the western boundary, the forested land lies at an altitude of approximately 5m (16.4ft) above sea level, then slopes gently towards the mangrove savannas to the north and east.



**Photograph 1:**  
Cleared land in Little Belize, adjacent to BJE Estates, showing undulating characteristics of landscape

The forested area can be characterized as an ‘undulating plain’, as can be seen very clearly in the north west corner of the property, and in the nearby cleared farmland of the adjacent communities of Neuland Reinlaener Mennoniten Church and Little Belize. Within the BJE, this undulation follows the top surface of the limestone bedrock. It varies from shallow, widely spaced undulations to low, but steep, limestone ridges 3 to 4m (10-13ft) in height where the limestone top is exposed and lacks soil cover. Other characteristic features of limestone are also present within the area such as cenotes.

**Coastal** - There is a very definite divide between the higher forested region to the west, and the lower savanna coastal areas, indicative of different past eras of inundation and deposition. The coastal savanna, stretching from the forest edge to the sea, has very little altitude, rarely exceeding 0.7m (2.3ft) above sea level and certain areas are frequently inundated

during wet season. Small, forested, limestone ‘islands’ or hummocks – low limestone protrusions that occur scattered throughout the coastal area – maintain dryer regions throughout the savannah. The southern portion of the coastal zone has a thick deposit of fine carbonate sediment left by the most recent geological inundation period. Towards the more northern part of BJE’s coastal area, the limestone bedrock is much closer to the surface, with sharp, unweathered rocks often projecting above.

## **TEMPERATURE**

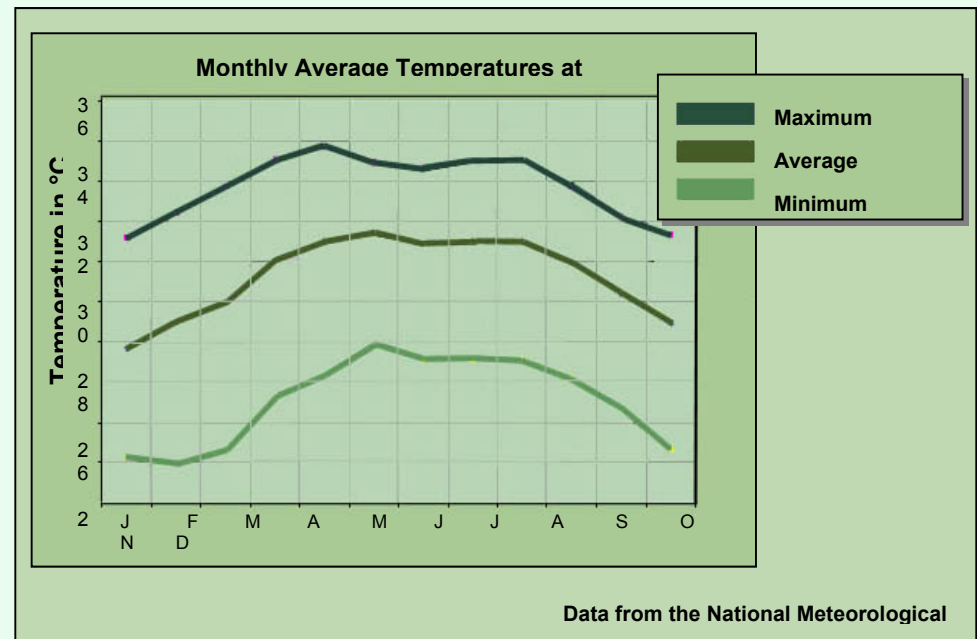
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Being a large property, there is some local climate variation between the inland and coastal areas, as well as between the north and south of the area, though overall the influence is primarily coastal, with the ameliorating effect of the sea breezes. Temperature varies throughout the year from 15°C to 36°C (59°F to 97°F), corresponding to the change in dominant wind direction, with northers bringing colder temperatures during January/April, and hottest temperatures occurring during the short dry season in August. This can be seen in the figures from Tower Hill, 25km (15.5 miles) to the west of BJE.

Water temperatures of approximately 30°C (86°F) were recorded in the shelf lagoon and bay with daily warming of 2°C (25.6°F).

## WIND PATTERNS

The prevailing winds, the trade winds, come from the east and northeast throughout much of the year, rarely exceeding 15 knots. During November through to March, periodic ‘northers’ (strong, cold, north fronts) interrupt the regular wind patterns, bringing strong northerly winds of up to 30 knots and, at times, heavy rain. These north winds affect the water table by creating currents that take water from the semi-



enclosed Chetumal Bay and push it southwards, reducing both the level of Chetumal Bay and wells further inland. These northers are countered by stable south-easterly winds produced by strong anticyclones during this dry season period.

Hurricane Season begins in June, and extends until November, bringing both tropical storms and the potentially damaging hurricanes. Even though Belize has escaped the majority of hurricanes spawned within the Caribbean, hurricanes have had an impact in the past.

BJE's coastline is quite well protected from the danger of storm surges by the presence of the Belize's Great Barrier Reef, Ambergris Caye and the expanse of shallow water over Bulkhead Shoal; 3 solid lines of defense.

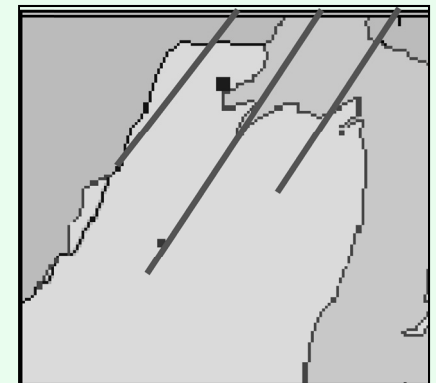
**Note:** Low speed turbines used on BJE's coastline could generate a high enough capacity factor to make wind an efficient alternative energy a viable option.

## TECTONICS

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The northeast corner of Belize lies on a stable fault block or horst, formed as a result of the eastward sliding of the Caribbean and North American plates during the Tertiary-Recent period. To the north of the BJE area lies the major Shipstern Lagoon system, one of several major waterways in the north (other examples being Progresso Lagoon and the New River) believed to be aligned along these SW-NE trending faults down-faulted to the east.

No evidence of tectonic activity has been seen in BJE's area, though it should be borne in mind that this coastal area of Belize remains a tectonically active area.



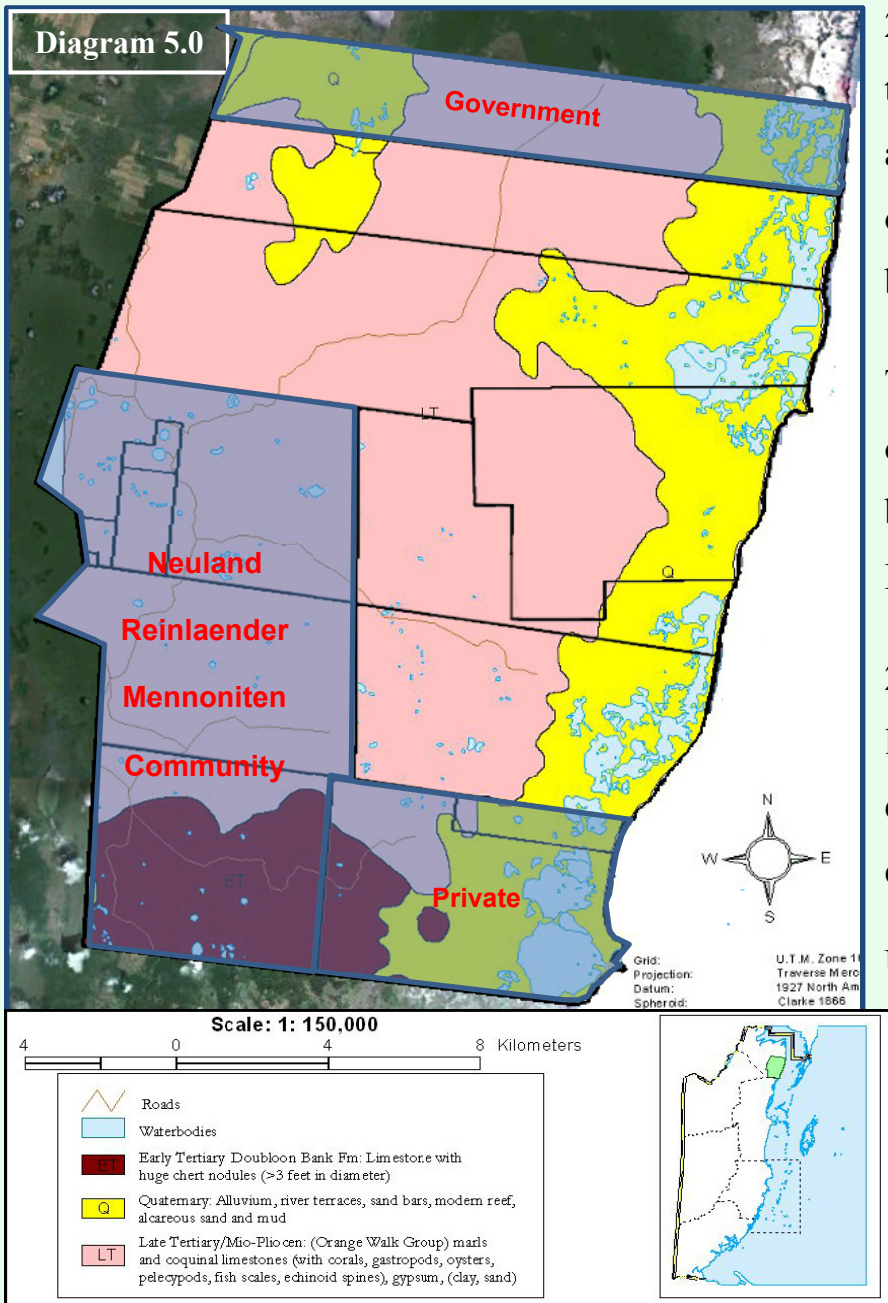
**Map 5: Fault lines of Northern  
Belize (After James and  
Ginsburg, 1979)**

## GEOLOGY

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**Overview** – The BJE, lying in northeastern Belize, is part of a region belonging to the Yucatan carbonate platform, a Cretaceous to Tertiary age sedimentary basin that once covered the Yucatan peninsula, Belize and much of the Peten in Guatemala. Most of the surface geology of the BJE is composed of late Tertiary limestones of the Orange Walk Group, while the southernmost part is older and referred to the early Tertiary, flint bearing, Doubloon Bank Formation.

1. **INLAND** – One of the most striking bedrock features in BJE is the widespread occurrence of a hard, well cemented, limestone bed, up to 2m (6.6ft) thick. The hard limestone layer forms a modestly undulating topography with gentle ridges separated by small basins. Distance from ridges to ridge, as seen along BJE's roadway, is often less than 100m (328.1ft) and the height of the ridge above the basin floors are estimated to be only a few meters. In the basin-like areas, a thin bed of soft limestone, locally termed marl, is preserved and readily available. It's the preferred aggregate in Belize for land filling and unpaved road surfacing.



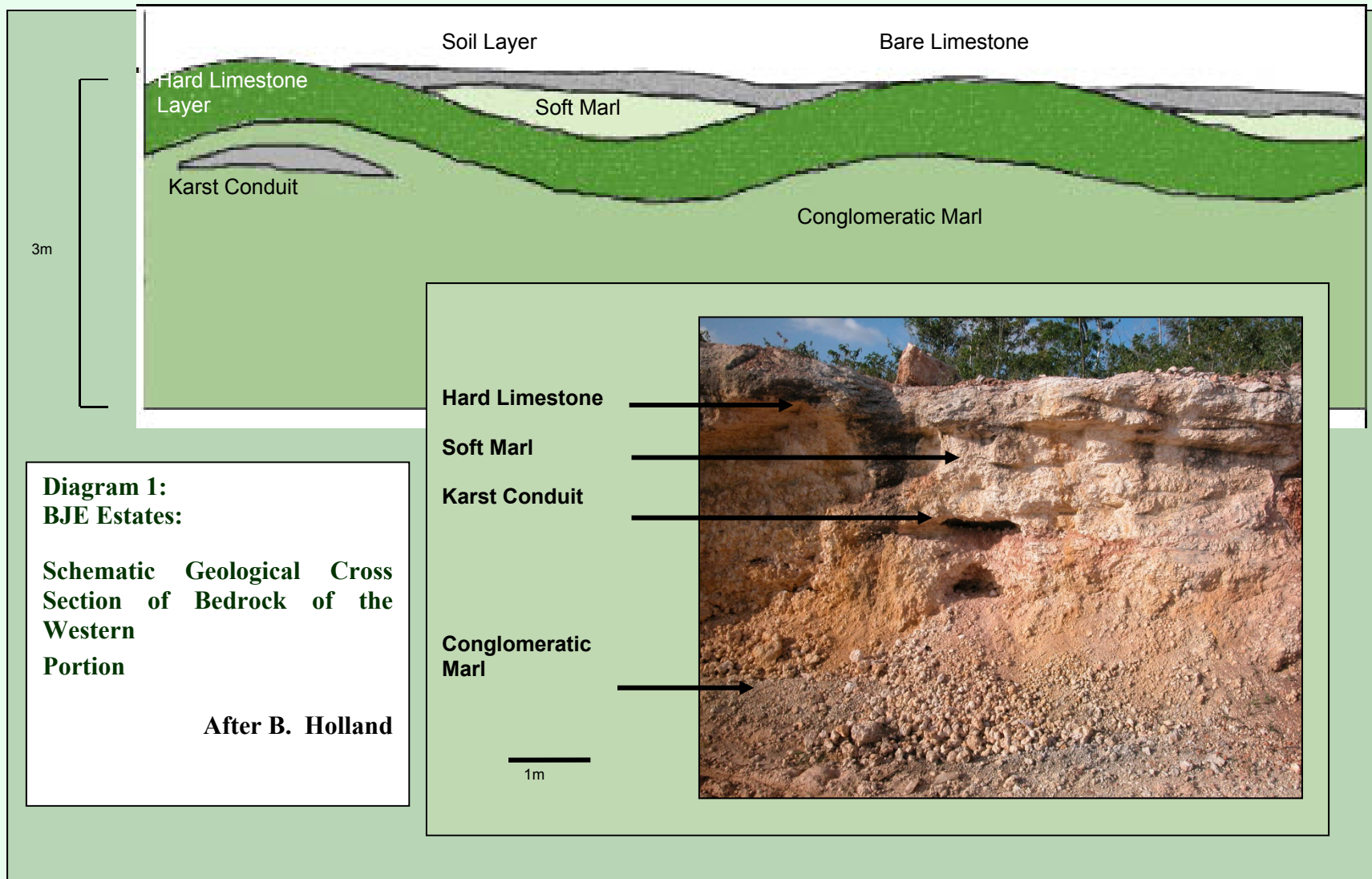
2. In the southern part of the property, flint nodules occur in this marl. In addition, the marl and the hard limestone bed appear to be conglomeratic; i.e., there are clasts (fragments) of limestone ranging in size from pebble up to an occasional boulder.

Thin, often less than 1m (3.3ft) in thickness, clay layers occur on top of the marl beds. The clay is rarely silty and based on descriptions of clays in other areas of northern Belize some of these clays could be bentonitic.

2. **COASTAL** - The north east of Belize is part of the low-lying Yucatan Peninsula (BJE's coastal area), typically being extremely flat with very little variation in height, maximum elevation being no more than 1m (3.3ft) above sea level.

Unlike the more northern part of the Sarteneja peninsula, where the limestone bedrock is close to the surface with rocky outcrops often projecting above the soil surface, the southern limestone bedrock of the much of the coastal area has a fairly deep band of sediment deposited above it.

However, the sediment is easy to excavate and the limestone bedrock beneath provides a reliable base for solidly constructed foundations that can transmit demanding loads from heavy structures to the ground.





### 3. ECONOMIC GEOLOGY –

**Hydrocarbon (oil & gas):** Although seismic surveys for hydrocarbon exploration have not been conducted on BJE, the petrochemical mapping system for Central America shows that the property lies in the Corozal Basin, part of the Yucatan Platform. This is thought to be the eastern continuation of the Northern Peten Basin and the western continuation of the Yucatan Basin, both of which have proven to be high oil producing areas in neighboring Guatemala and Mexico (CEP 2000, unpublished). For this reason, this area has attracted much of the country's oil exploration activities in the past and test wells drilled in area adjacent to BJE have recorded live oil shows.

**Limestone (aggregate):** The widespread hard limestone layer can and is presently quarried and utilized as rock aggregate and sand for development projects on the property. This onsite material is a great benefit to any future development.

**Bentonite (clay):** The clays are quite plastic and, depending on firing/testing results, could be drilled and used for impervious liners for waste dumps, handicrafts, scale pottery, bricks, or ceramic production.

**Other Economic Minerals & Rocks:** Besides the numerous reports of hydrocarbon occurrences in exploration wells, geological studies on the property have shown strong potential for economic rocks and minerals in the subsurface and surface of BJE. The following potential resources now warrant further investigation as to the extent of their presence on BJE:

- Gypsum – wallboard, cement retardant and soil amendment in agriculture
- Hydrothermal mineralization associated with crystalline quartz.

## SOIL DESCRIPTIONS

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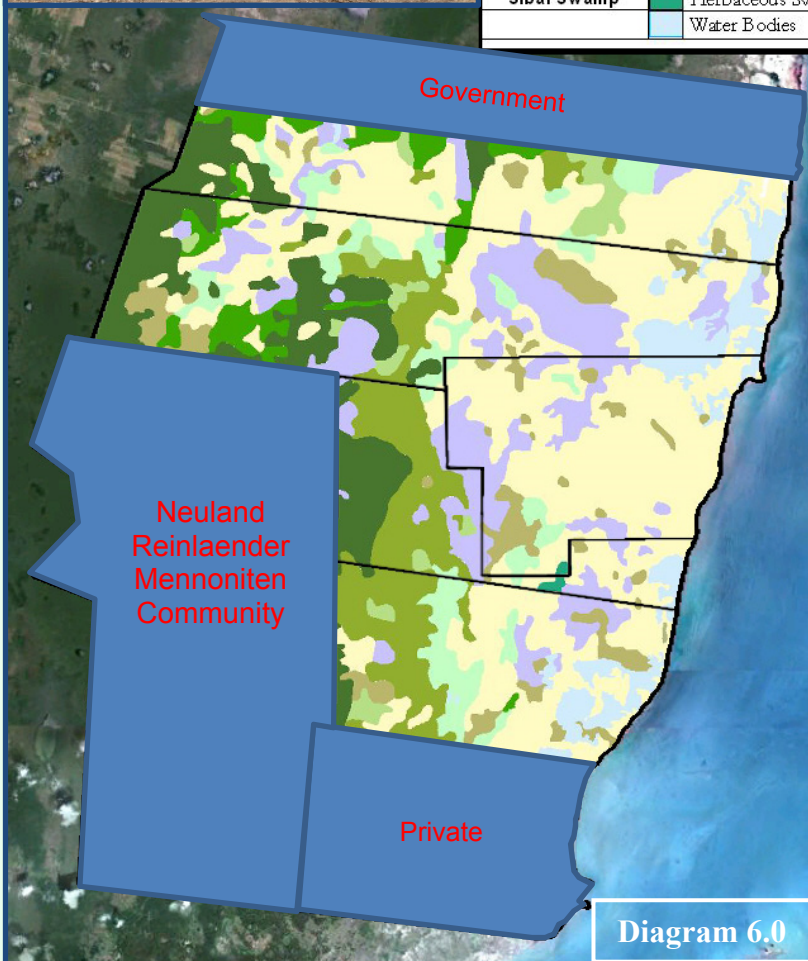
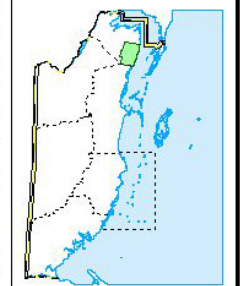
- 1. INLAND** – BJE lies on the northern coastal plain, with a bedrock composed of the youngest limestones to be found in Belize, being formed in the Pleistocene period. These limestones provide the parent material for the different soil types found on the property.
- 2. COASTAL** – The coastal area has limited agricultural value due to high salinity and seasonal or permanent inundation. The soils are poorly drained and due to their high salinity, can only naturally support halophytic plants such as mangroves, which are the predominant associated vegetation type. These soils are very young and composed of fairly structureless silts and clays, with a moderately alkaline pH.

With little traditional agricultural potential, present use is primarily as fishing grounds for local communities. There is a major potential for aquaculture, residential or tourism development with consideration given to the clearance of coastal red mangrove, which maintains a buffer vegetation to protect this area from erosion due to full force storm waves and destructive hurricanes.



Land System	Sub_Unit	Main Soils Type	Limited Factor For Cultivation
Corozal Saline Swamps	Savanna	Shipstem - Ycacos	Root room, nutrients, salinity, wetness
	Swamp	Ycacos	Wetness, salinity
	Mangrove	Ycacos	Wetness, salinity
	Tree Savanna	Shipstem - Ycacos	Root room, nutrients, salinity
Shipstem Plain	Glady Forest Plain	Puluacax < (Xiabe, Remate + Ycacos)	Nutrients, drainage
	Clumped Tree Savanna	Ycacos > (Puluacax + Saibe + Remate)	Wetness, salinity nutrients
	Mangrove	Ycacos	Wetness, salinity
Xaibe Plain	Flat Plain	Xaibe, Puluacax + Remate	Moisture, nutrients
	Lower Slope	Puluacax > (Remate + Xaibe)	Nutrients
Northern Bulkhead Plain	Flat Plain	Xaibe + Puluacax > Ycacos	Nutrients, drainage
Sibal Swamp	Herbaceous Swamp	Sibal	Wetness
	Water Bodies		

1 0 1 2 KM



This coastal plain stretches westward for 4.5km to 5km (2.8miles to 3.1miles), where it meets higher land with less saline, slightly better-drained soils, representing an older shoreline from a previous inundation period. Here, soils are shallow and calcareous, over old coral reef limestone bedrock. They have low agricultural potential due to their shallow nature (averaging less than 30cm / 11.8 inch deep) and the impenetrable hardness of the underlying bedrock, causing extreme drought during dry season.

Solid bedrock found throughout the area at varying depths provides a dependable base for foundations used in future development and infrastructure projects along this coastal strip.

## BIODIVERSITY

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BJE occupies an important biogeographic position both within Belize, and within Mesoamerica, being the confluence of several major ecological regions – North American, South American and Antillean – evidenced in the different elements that make up the land. The position of the property, along with the heterogeneity of the habitats and protection from major human impacts, leads to this area being one of the most species-diverse in the region.

The rich resources found on BJE make the property an internationally recognized biodiversity “hotspot” that includes all three ecosystems prioritized by IUCN in the Mesoamerican region: Freshwater, Coastal and Marine, and Broadleaf Forest.

BJE is host to some of the tallest and densest broadleaf hardwood forests in Belize; a shelter for the highest biodiversity levels in Mesoamerica. With a projected 260 bird species present within the Estates, the property has one of the highest concentrations of bird species anywhere in the world. The



lagoons and savannah with intermittent littoral and mangrove forests that compose over 15 miles of coastal waterways are recognized as an assemblage of habitats crucial in maintaining the health and integrity of Belize’s Great Barrier Reef, and is home to a vast array of marine population. This includes the endangered manatees that use our coastal waters as a

primary part of their migratory route. It is an understandable fact that our coastal land is designated a priority coastal area under the regional Mesoamerican Biological Reef Programme.



## ECOSYSTEMS

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The vegetation of BJE is both rich and diverse, with numerous habitat types forming a mosaic of structurally and floristically differing systems, ranging from some of the tallest broadleaf forest in northern Belize, to the maze of freshwater pools and channels, to the extensive coastal saline savannah and major lagoon systems.



The timbered land gives way to thousands of acres of a variety of coastal ecosystems ranging from extensive mangrove and littoral forests to coastal lagoons and estuaries. The coastline is made up of mangroves and saltwater marshes interspersed with sugar-white beaches and palm trees. The clear jade colored coastal waterways serve as the nurseries that support the vibrant offshore fishing industry and also serve as

transmigration routes for a variety of marine life, most notably the endangered manatee.

## **FORESTED LAND**

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Although selectively logged in its history, BJE's forests are a remarkably resilient ecotype, surviving and flourishing through these exploits. Today, with the ongoing protection and preservation efforts over the past 15 years, recent assessments evidence the forests and other vegetation patterns have never been severely damaged. The area is, with regards to its extraordinary richness of flora and fauna, one of the last important coastal forest refuges of the Yucatan Peninsula.

In order to gain a true understanding of the forest's natural treasures, how they've been impacted and how they can best be preserved, a Guatemalan organization, Fundación Naturaleza para la Vida (NPV), was contracted to complete a full forest inventory of BJE's forests. NPV, who was recommended through Smartwood, the world's leading nonprofit forestry certifier, established BJE's Forest Management Plan.



## COASTLINE CHARACTERISTICS

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### 1. WATER QUALITY

- a.) Water Depth** - Within BJE, water depth over the entire coastline is 150m (492ft) fairly shallow; seldom more than 1.5m (4.9ft) in depth at a distance of 150m from shore. Within the survey area; however, there are some notable exceptions found on the coastline areas near the outlet point of Bennett's Lagoon, where water attains a depth of

1.3m (4.3ft) within 50m (164ft) of the shoreline. This may well be because of movement of sediment away from the area by water flowing out from Bennett's Lagoon.

**b.) Water Clarity** – Water clarity is dependent on sediment load in the water, which is itself largely dependent on sediment particle size, water currents and wind. Nearly the entire length of BJE's coastline maintains excellent water clarity as far as 50m (164ft) from shore.

In general, during dry season, water clarity increases south of High Bluff. This was observed during extensive surveys of the coastal area and confirmed through the satellite photography taken of the property.



## **2. COASTAL SEDIMENT DEPTHS -**

Sediment depth appears to be much deeper in the southernmost areas of the coastline; test areas showed over 2.4m (7.9ft). The sediment may be as much as 6m (19.7ft) deep in offshore areas.



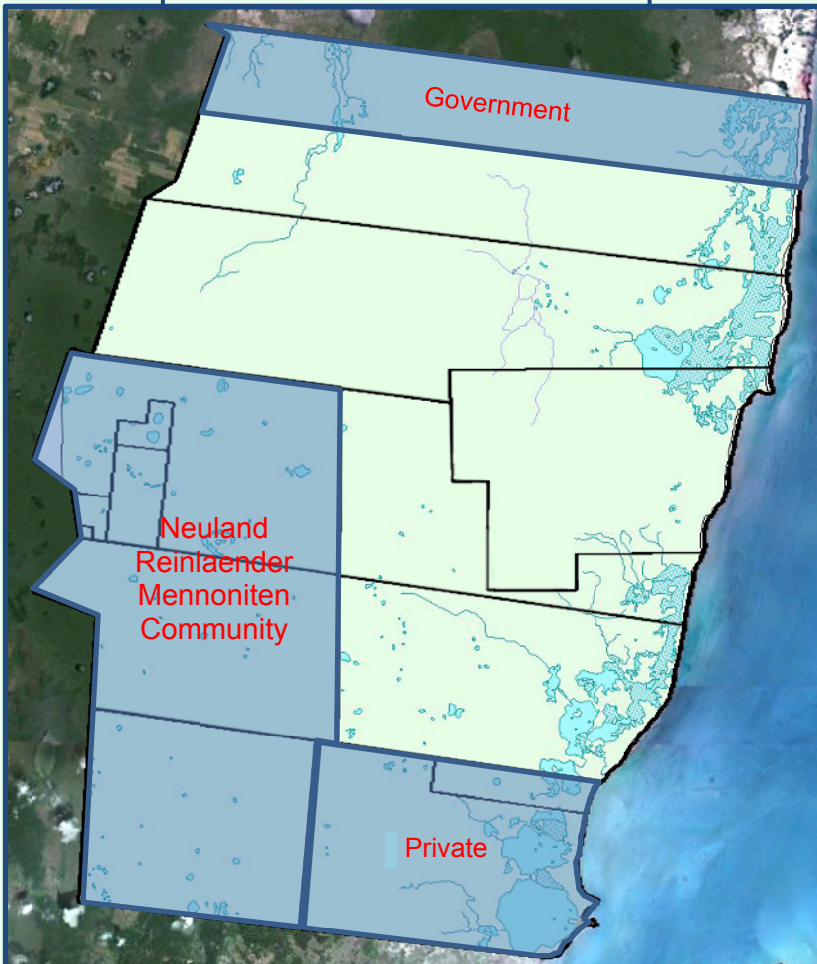
The coastline east of the southern point of Bulkhead Lagoon is the first coastal area to show a bedrock base within 2.4m of the sediment surface [measured at 2m @ 20m from shore and 2.12m @ 50m from shore]. The more northerly coastline has a much shallower sediment layer, bedrock being reached at an average of 1.5m (4.9ft).

Sediment shows variation between 100% mud content and 100% sand. There appears to be a general decrease in sand content with distance from shore. Mollusk fragment content varies extensively.



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Hydrology Map – Diagram 7.0



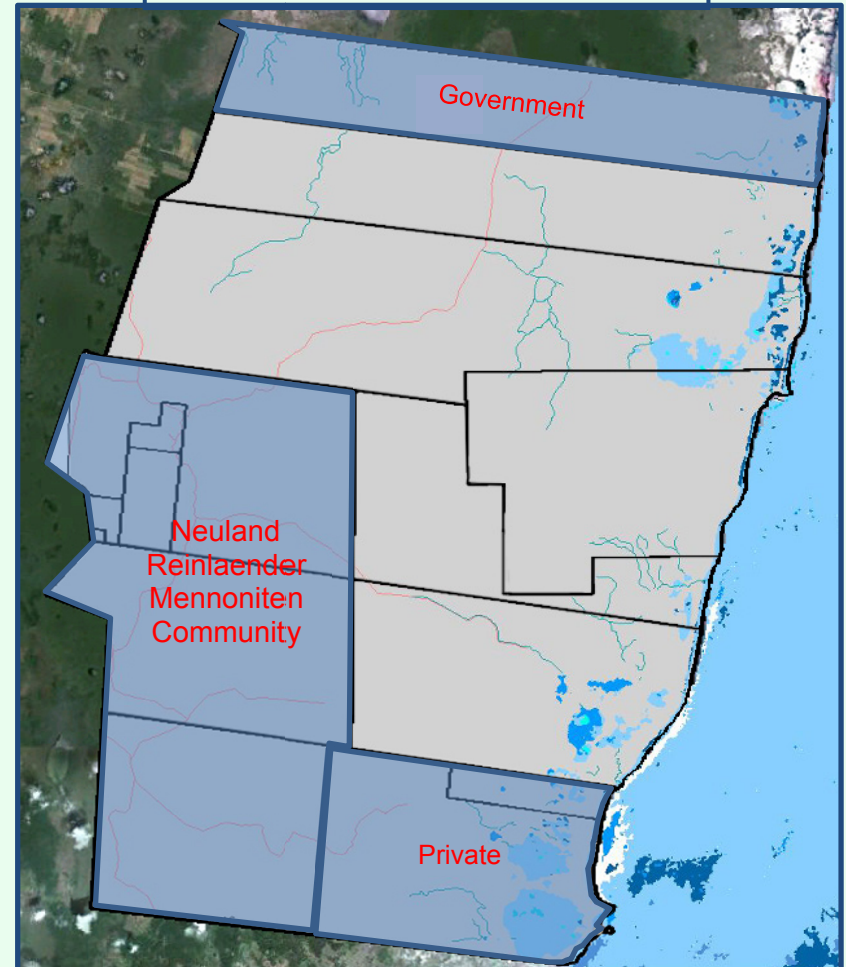
LEGEND

- Foreshore flats / mud
- Waterbodies
- Property Boundary

Water Source

- Surfacewater
- Groundwater
- Mixed

Marine Habitat Map – Diagram 7.1



- Unclassified
- Turbid Seagrass
- Spur and Grooves
- Sparse Seagrass
- Silt and Sparse Algae
- Shallow Gorgonian beds
- Sand and Sparse Algae
- Reef Crest
- Patch Reefs
- Medium Seagrass
- Fore Reef
- Dense Seagrass
- Waterways
- Roads
- Dense Patch Reef
- Deep Water
- Back Reef
- Property Boundary

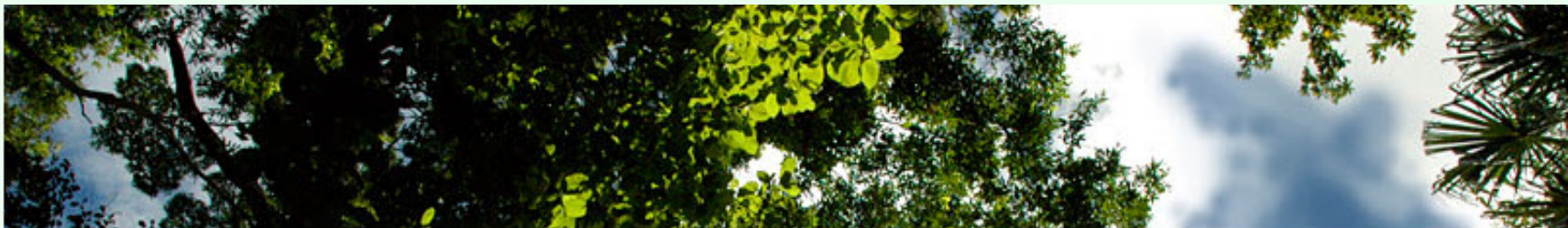
## ASSESSMENTS & DEVELOPMENT

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### 1. ASSESSMENTS:

In order to coordinate development and management initiatives in harmony with BJE's vital natural resources, we have conducted the following assessments, studies, and inventories while considering the most productive land uses:

- Geological Assessment
- Sustainable Forest Management Plan.
- Natural Resource Inventory
- Coastal Survey
- Biodiversity Assessment
- Environmental Impact Assessment (EIA) in preparation coastal road construction.



OUR MISSION, WHICH REMAINS CONSTANT, IS TO REVEAL THE MASSIVE POTENTIAL AND INSPIRE THE POSITIVE SUSTAINABLE DEVELOPMENT OF THE BALAM JUNGLE ESTATES.

## 2. BASIC COSTS OF DEVELOPMENT IN BELIZE:

- a.) Roadwork** – Road construction is limited, for the most part, to the dry-season months and depending on the impact to the environment, the Department of Environment (DEO) may require an Environmental Impact Assessment (“EIA”) be undertaken prior to construction. The DOE should be notified as soon as the planning phase begins.

For reference, the EIA that was required prior to the building of the Coastal Road on BJE cost approx. US\$8000 for 6.9 km (3 miles) of unpaved roadway across a sensitive savannah and beachfront region. Project costs are negotiable and it’s strongly advised that local expertise is employed in order to expedite clearance processes.



- b.) Landfill & Dredging** - Any coastal development will require significant volumes of landfill material. One acre of this coastal land will require approximately 5,000 cubic yards of fill. Two potential options are available: quarried landfill from the western portions of the property or dredged material from the seabed.

Quarried landfill is the cheapest option (starting at approx. US\$6,500 per acre), the most solid substrate, and the easiest upon which development can be undertaken. The drawbacks of this system include the destruction of habitat

at the quarry site (generally around one acre for every four acres filled), and the conversion of these quarried sites into unproductive lands for further development although biodiversity can be reintroduced into quarried areas.

Dredging for fill material is theoretically an attractive option: the very shallow in-shore waters could be deepened and the material put to good use as landfill. Dredged material usually has a high compaction rate – one yard of dredged material may settle to less than a foot in depth. Controlling surface run-off has to be established through the construction of dykes and banks. It is expensive if equipment and services have to be contracted - a cubic yard of pumped dredge material may cost US \$10-12 as compared with US \$2.50 for quarried material – and compaction of dredged material can be less than half the depth of quarried material. In balance therefore, it would seem that quarried landfill is the a more cost efficient option unless the investment was made to purchase a dredger thereby cutting the operating expenses significantly and thus making dredging an extremely useful strategy. It is important to recognize impact to the environment and the DOE would need to be consulted prior to commencing dredging operations.

### **c.) Power Options -**

- i.** Belize Electricity Limited (“BEL”) is the chief power provider in Belize. Unless one is looking to set up their own alternative energy system, the only option for immediate power is with BEL. Power can be sourced by tapping into the high tension lines that provide power to Ambergris Caye, which draw their feed from a power grid in Mexico, part of a Power Purchase Agreement between Mexico and Belize. The high tension lines carry a voltage of 115KV. These high tension lines pass approx. 6.4km (4 miles) south of our southern border. In order to reduce the voltage to a usable current level to feed power to a project on BJE - maintaining the ability to expand

in the future - a substation would be required. An estimate for a smaller model substation would be around US \$100,000-150,000. Larger substations can cost upwards close to US\$500,000 or more. However, depending on the project size and the amount of current that would be needed, BEL may have a substation available or be willing to help finance the setup if there were enough load on the line. The cost to set the poles, install the transformers (if needed), and run the lines is going to be approx. US\$25-\$30,000/mile. As a general rule of thumb, underground lines are going to more than double the cost for installation and materials. BEL would also have to assess the feasibility of underground installation in coastal regions of the BJE because of its slight elevation above sea level.

**ii. Renewable Energy Options -**

- a. Solar Paneling** – Today, projects can utilize a range of photovoltaic technologies and applications such as Concentrator Collectors, Building-Integrated Photovoltaic (BIPV) and Stand-Alone Photovoltaic Systems.
- b. Wind Generation** – One of today’s fastest growing forms of electricity generation, wind generation has not yet gained much popularity in Belize due to the results of Belize Electricity Limited’s (BEL) preliminary wind studies, which were conducted by ReTech International Limited. The data collected from site testing near BJE demonstrated that continual production of the required 25 mile-per-hour winds, a standard that has been used to decide if a wind operation is worthwhile, was not achieved.

However, new technology advances in wind generation efficiency have reintroduced the potential for wind in Belize as a valuable means of energy production. The wind generation industry in the states is being fueled by

the Department of Energy and there has been a huge emphasis put on the development of cost effective, low speed, wind speed technology, specifically targeting more typical class 4 wind sites (5.8 meter/sec @ 10m height or 13mph @ 33 feet).

The anticipated new technology in this field would make wind generation an ideal electricity generating alternative for BJE's coastal region and even specific inland areas as well. New breeds of wind turbines will provide good power in low wind speeds with enhanced designs to survive high wind events, while still producing maximum power.

## **DEVELOPMENT RECOMMENDATIONS**

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### **1. COASTAL DEVELOPMENT RECOMMENDATIONS**

The coastal lands have been highlighted as best suited for development due to the relatively close proximity to Ambergris Caye and the Belize Barrier Reef. The coastal lands have a strong and immediate "coastal tourism potential".

It is recommended, on both environmental and financial grounds, that the number of roads crossing the coastal savannas (from the forest to the coast) be kept to a minimum. Access to coastal lands within one zone (such as the southern two blocks) should preferably be via the existing Coastal road, which leads to a single north-south coast road at least 100m (328ft) inland from the shoreline, and a minimum of 25m (82ft) from the eastern edges of the

fragile coastal lagoons. Minimizing the number of roads crossing the saline savannas will be important in minimizing impact on a delicate habitat.

Of the coastal habitats identified within this southern portion of BJE, tropical littoral forest is by far the most restricted in extent. They represent fragments of a habitat that has traditionally come under significant conversion pressure. It would be desirable, from a conservation standpoint, to identify a few of the more intact fragments and for these to remain largely untouched, for conservation and aesthetics. The other habitats exist in far more extensive areas along this coastal plain and cannot be considered either rare or threatened in this context.

Specific development goals can usually be justified through a proper Environmental Impact Assessment (EIA) application/clearance process with the DOE. However, in order to achieve balance between development and conservation priorities, zoning should reflect areas with better water clarity and depth, less muddy seabed substrate, and higher drier ground within the proposed development area. Significant stands of coastal fringe mangrove should be left untouched between one development zone and the next and proper permitting sought for any habitat alteration within the 20m (66ft) coastal reserve. A 20m (66ft) non-development belt should be left, whenever possible, around the sensitive lagoon systems. By doing so, the development zone would include the highest value “beach-frontage” and reduce the depth of landfill needed while leaving the better tracts of coastal fringe mangrove and deeper sediment trapped there. Whenever possible, development should also avoid the seasonally most-inundated mudflats and shallow lagoons as they help filter surface run-off, provide habitat to nesting birds, and serve as nurseries for fish.



## INVESTMENT CLIMATE IN BELIZE

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### Highlights:

- **Stability:** Long-standing, democratic tradition; independent judiciary, exchange rate fixed to the US Dollar (\$2.00BZE = \$1.00US) for 25 years, English is the official language.
- **Profitability:** Flexible fiscal incentives and concessions, Commercial Free Zones, Export Processing Zones, Repatriation of profits and dividends
- **Livability:** Subtropical climate, virgin rainforest, unspoiled beaches and spectacular barrier reef in coexistence with the friendly local people.

With a stable political and economic climate under democratic rule, Belize is an opportunity for the international investor. Belize is a lively offshore center with some of the most beautiful natural landscapes in the world. Property prices in desirable parts of Belize have been steadily increasing in value for the past 25 years. And, unlike any other place in Central to South America, English is the official language.

Foreign buyers have the same rights as Belizeans to own property; no special permissions or permits required. Further, Belize's Government has established incentives and less restrictive development criterion to promote and support foreign investment and trade. There is no capital gains tax and no inheritance tax in Belize.