

# **Site**



# **Floor Plan**



# **General Specifications**

### Location

- Situated in a sheltered valley off the Indian Creek Road, Piccadilly
- 5 minutes from English Harbour

## **Land Specifications**

- Plots approx. 1/3 acre
- Landscape gardens
- Fenced and Gated

# SANDY ISLAND St John's Harbour Deep Bay ST JOHN'S Harbour Deep Bay ST JOHN'S Harbour Parham Parham PARHAM PARES FARM PARES PARHAM PARES PARHAM PARES Nonsuch Bay DAM SWETES Bay Bogay Peak SWETES BOTWORKS Nonsuch Bay DAM NEWFIELD GREEN ISLAND FRAETOWN FRAETOWN SWETES BETHESDA FRAETOWN SEA Carlisle Bay Carlisle Bay Falmouth Harbour Harbour Falmouth Harbour Falmouth Harbour Falmouth Harbou

# **Villa Specifications**

- 1952 Sq. Ft
- 3 Bedroom
- 3 Bathroom
- Lounge
- Kitchen
- Laundry
- Ceiling Fans
- Central Air-Conditioning
- Built In Closets
- Swimming Pool
- Deck Area
- Covered Porch
- 18,000 gallon water cistern
- Water Filtration System
- Hurricane Proof to 140 mph

# **Furniture - Furnishings - Appliances**

- Curtaining
- Pots & Pans
- Cutlery
- Crockery
- Glasses
- Bedroom Furniture
- Bedside Lamps
- Linen
- Towels
- Lounge Suite
- 25 cu.ft. refrigerator/freezer/ice maker
- Dishwasher
- Microwave / Extract Hood
- Gas Stove
- Washing Machine
- Tumble Dryer
- External Barbeque Grill
- Electric Kettle / Toaster
- TV & DVD



# **Technical Specifications**



# **Insulation**

The external walls and roof of the houses are made from 4 foot wide Structural Integrated Panels (SIP's) of expanded polystyrene foam core with structural steel exterior skins. The foam is routed to form a continuous foam interface which makes the panel extremely energy efficient, and reduces energy use for heating and cooling by 50%.

The panels also have their own structural integrity. A vinyl siding has been applied directly to the exterior of the panel, although the baked enamel finish makes this step purely cosmetic. The walls are 4" thick, and the roof 6".



# **Electricity**

Due to oil burning turbines on the island, current (Nov 08) cost of electricity is USD 0.50 per KWH. (present costs in USA – US\$ 0 .15, UK £0.13). The great thermal properties of the SIP's mean that a relatively small (2 ton) air-conditioner can easily cope with the cooling needs of the whole house in summer, and in winter, the ceiling fans are sufficient.



# **Termites**

The panels are engineered to hold up against nature's toughest challenges. Quite possibly, one of the toughest challenges a home must withstand is surviving the constant onset of pesky insects like termites. Unlike wood, the SIP's offer no food value to insects. The panel, when clad with light gauge steel skins, makes for the "Ultimate Steel Stud." Used in conjunction with interior light gauge steel framing and insect resistant drywall, this version of the house package is truly termite proof.



# Hurricane

In several cases where homes within close proximity to one another were leveled by tornadoes, hurricanes or earthquakes, SIP homes have been found standing. The continuous wall and roof prevents sudden surges of air pressure within the home. The Structural Insulated Panel also has the strength of an I-beam. The skins act like flanges, taking compressive and tensile loads, while the insulation works like an I-beam web, distributing shear forces and keeping the skins from buckling.

These houses have been designed by engineers in Tampa, Florida, and come with a certification guaranteeing hurricane resistance to winds up to 160 mph



# Vapour

Humidity is one of the most destructive elements of nature, in regards to construction materials. Steel laminated to both sides of the panel provides an impermeable barrier against the transmission of water vapor. The coefficient of permeability for the panels is 00, compared to a 2.4 coefficient for brick. The rating is determined by the quantity of water vapor that can penetrate the material in 1 hour/sq. ft. x 1" Hg. mercury. A surface has increased impermeability the smaller the rating.



# **Earthquake**

Extensive and rigid testing has been made, to insure that your house can withstand nature's toughest elements. This system is also structurally superior to conventional stud framing methods. The core of rigid expanded polystyrene foam provides shear strength, while the exterior skins provide tensile and compressive strength. The solid walls and roof use all their capacity to support vertical loads, have exceptional racking resistance and can resist local loads, buckling and bending. These are important characteristics for resisting earthquake and hurricane forces.



The foundations have also been strengthened in this regard, and the base of the swimming pool and cistern is 12" thick, with extra steel reinforcing to ensure no cracking occurs in case of earth movement.

## Water

Due to desalination costs, water prices in Antigua are currently US\$8.00 per 1000 IMP gallon, or **\$36.00** per cubic meter. Present costs (Nov 08) in USA average \$0.70/cbm and in UK £1.00/cbm.

With this in mind, we have created a 24500 US gallon (93 cbm) cistern under the porch, which collects rainwater from the roof of each house.

Although each house is connected to the government mains, (in case of power cuts etc) this should not be needed if the average rainfall of 48" falls reasonably evenly over the year.



**Patio and Pool Area** 



Garden



Lounge / Kitchen



Lounge



**Master Bedroom** 



Twin Bedroom Queen Bedroom



**En-suite Bathroom 2** 



Flame Tree Villa



Garden