SAMSARA

DEVELOPMENT OUTLINE

Features and Finishes

Key Features:

- Low maintenance systems and construction to be used throughout.
- Deep overhanging eaves to reduce solar gain.
- All roofs and walls insulated to reduce heat build-up.
- Trees on site to be kept wherever possible.
- 100% back-up generator capacity

Driveway	Exposed aggregate in random pattern.
External Walls	Random limestone facing to feature walls. Render with paint finish to utility areas.
Roofing	Cedar shingle finish on insulated system.
Windows and Doors	High quality aluminium system to all areas of open-able glazing. Glass on glass detailing to fixed glazed panels.
Terraces and Decks	Sand-wash with stone tiled insert panels.
Pool Lining	Hand made ceramic tiles throughout.
Internal Stairs	Timber treads and dynamic steel structure.
Doors	Solid timber doors and frames.
Internal Floors	Generally solid teak tongued and grooved strip flooring.
Internal Walls	White-set plaster top coat on render with paint finish.
Ceilings	Solid teak tongued and grooved lining to 'cathedral' ceilings. White-set plaster on 'Gyproc' ceiling system with paint finish.
Handrails	Minimalist glass on edge balustrade and handrail detail.
Kitchen	Options from imported specialist kitchen to custom-built.
Bathrooms	Sanitary ware from Kholer, Toto and American Standard. Hardware from Grohe and American Standard. Tiling to be from hand made range.
Air Conditioning	Custom designed system with all hardware concealed.
Hot Water System	Circulating system with heat supplied from heat exchanger on A/C system.
Telecommunications	Project infrastructure designed for full IT and internet flexibility.
SMATV System	UBC satellite TV signal.
Water Supply	Self-sufficiency in water by treating run-off collected from the roof.
Waste Water	System Centralised waste water treatment plant on site.

Solutions to Environmentally Sensitive Development

The environmental constraints on Phuket have galvanised everyone involved in Samsara to seek ways in which this landmark project could evolve as an example of how environmental sensitivity can be achieved in a commercially led residential development. Some of these solutions have drawn on age-old (albeit almost forgotten) techniques used throughout Asia and the world, some required a little assistance from state-of-the art technology, some merely require policies to be implemented, but all have had a common goal of making Samsara friendly to Phuket.

Self-sustained Water Source

The rainwater from the roofs of the houses is collected to a central storage facility from where it is re-distributed to the individual villas for treatment and use. This system has been designed to provide sufficient water for the development throughout the dry season and will mean that Samsara will have minimum impact on the island's dwindling water resources.

Waste Water Treatment

Unlike most developments on Phuket, Samsara has a full, centralised waste water treatment plant (WWTP). Solid and liquid waste from the villas is collected and biologically treated to a level that is safe enough for use in irrigation and/or discharge direct to the sea.

Deep Overhanging Eaves

The roofs of each house are heavily insulated and overhang the glazed walls below to minimise the amount of solar heat gain to the air-conditioned internal spaces. This not only lessens the amount of power required to cool the villas but also reduces the amount of equipment.

Double Glazing

External glass walls and windows are all double glazed making the air-conditioning system more efficient and reducing the effect of external condensation obscuring the view.

Central Air-conditioning

Great care has been taken to provide specialised central air-conditioning systems to each house. These systems are designed to optimise efficiency and keep power consumption and equipment to an extremely low level.

Recycled Hot Water

Hot water is generated by recycling the waste heat from the air-conditioning system through a heat exchanger system. Kept in circulation around the house, free hot water is available night and day without the customary wait.

Water Cooled Air-conditioning

A water cooled system for the air-conditioning has been selected as an ecologically friendly alternative to freon distribution.

Protection of Trees

A digital survey of the topography and trees was commissioned to provide the most accurate site information possible. This precise information has been used to design a meandering road network which respects the trees and follows the natural slope of the land. The villas themselves have also been located to avoid as many trees as possible. Many have even been introduced as features.

Houses Nestled into Hillside

To reduce the impact these homes have on the beauty of the site and the waterfront of Patong Bay, the houses have been designed to respect the natural slope of the site. All that is apparent at the entry level is a single storey house. From the sea, the land appears to terrace down, oblivious to the accommodation below. Modern, contemporary space is tucked carefully into the hillside producing houses which are low impact externally but high impact inside.

Timber from Replenishable Sources

To reduce the impact in the broader sense, all timber for the construction and finishing will be sourced from recognised replenishable forests.

Outline Description of Services

The general intention is to take a 'green' approach to the entire development, recycling both energy and water and to maintain each dwelling with its own self sustaining water system, so minimising the requirement for mains and trucked in water. The electricity supply will be from the Local utility supply in the event of a electricity failure or reduction in storage capacity of water the dwellings primary system will be supplemented with secondary supplies from the ancillary accommodation area.

There are three different areas which require servicing: the villas themselves; the ancillary accommodation area; and the guardhouse. Each of them requires connection to the other two, for transfer of information, and distribution of joint development resources.

The Villas

There is a central water storage tank for potable, pool and irrigation water, these will be continually replenished with rain water drained off the roofs and run-off water from the site.

The electrical and mechanical systems to be used in these villas are to be housed in a single area. The aim is to have it accessible from the outside of the villa. This service area will contain all circuit boards, valves and plant that will require regular maintenance or replacement. The general intention is to allow easy access for the service and maintenance staff, and enable them to carry out repairs and maintenance to the building electrical and mechanical systems without needing to enter the dwelling itself.

Ancillary Accommodation Area

The ancillary accommodation area will be the central delivery and collection point for all central water systems. The pumps for all central water systems will be housed here, and the back-up generators for use in the event of a power interruption.

Guardhouse

The development will have a guardhouse, where all visitors will be checked and credentials verified, a telecommunication system will allow residents to be informed of a guests arrival. Security staff would also constantly monitor a closed circuit surveillance system and have contact constant with foot patrols to offer a secure environment.

The guardhouse will also act as the first point of contact for any local protection services, fire and police. It will house a main fire alarm and detection system for each villa and be able to locate fires precisely. The Security staff will contact any relevant local services, co-ordinate remedial action and brief the professional services as they arrive.

Design Intentions

- Utilise run-off water from the roofs for the primary water source.
- Utilise run-off water from the site for swimming pool water.
- Swimming pools to use salt treatment systems.
- Waste water to be recycled for use in irrigation, flushing water and car washing.
- Air conditioning centralised and designed to optimise equipment.
- Water cooled system for a/c distribution
- Hot water system to use heat exchanger from a/c as primary heat source.
- Prefabricated components to be used to minimise construction impact.
- Low maintenance systems and construction to be used throughout.
- All roofs and walls insulated to reduce heat gain.

Potable Water Supply

- Primary Source: Run-off water from the roofs. (Stored in tanks at each dwelling)
- Back-up Source: Trucked in water. (Stored in tanks at the ancillary accommodation area - pipe connection)

Pool Water Supply

- Primary Source: Run-off water from site. (Stored in collection tank located at the ancillary accommodation area – pumped to each pool as required)
- Back-up Source: Trucked-in water (Stored in central collection tank at the ancillary accommodation area - pipe connection)

Irrigation/Flushing/Washdown

- Primary Source: Recycled waste water. (Waste water stored in collection tank located on periphery of site – pumped to dwelling storage tanks for use as required)
- Back-up Source: Trucked-in water. (Stored in central collection tank at the ancillary accommodation area - pipe connection)

Waste Water

- Collection and Treatment: Centralised collection and treatment plant. (Located on the periphery of site, the treated water will be pumped to a central collection tank at the ancillary accommodation area)

Electrical System

- Primary Source: Local utility supply
- Back-up Source: Fully diversified on site generation for all systems.

Telecommunications

- On-Site Infrastructure
- In-house Infrastructure

Fire Services

- Fire Alarm Systems (Direct telephone connection to local Fire Department)
- Smoke Detectors (Within dwellings)
- Fire Hydrants (Located throughout development site)
- Hose Reels (Stored at fire hydrants)

Security

- Physical Barriers
  Guard house, gates, barriers.
  Fences, gates, dwelling doors, windows
- Electronic Systems
  Entryphone Systems
  Intruder Alarms
  Closed Circuit TV Systems
- Personnel
  Surveillance of Closed Circuit TV Systems
  Development Site Security Patrols

The Estate Management After Completion

Phuket Island Property Services (PIPS), a professional Phuket-based property management company will provide Samsara owners with a defined range of services including management of the Common Areas and, optionally, individual home services and letting services for a period of two years from completion. Management of the Common Areas will commence during the house construction phase of the development. At the end of the initial term of the estate management contract SOC can re-negotiate the contract with PIPS or appoint a new management company.

PIPS will provide the following services:

- Common Area Management this includes managing security, utilities, refuse, general maintenance gardening, operation of reception, paying insurance, government taxes, etc. and managing a reserve fund. The level of service provided will be directed entirely by the Owners Corporation.
- Individual Home Services such as gardening, maids, pool cleaning, cooks, airport transfers, etc. Individual fees for these services shall be negotiated between individual owners and PIPS.
- Letting Services – If you choose to let your home, PIPS will manage all aspects of this service, including marketing, cleaning and monitoring your home.