The Design Philosophy

Opposite:
Bungalow bedroom in Estate 3.
"The entire design philosophy
of The Estates can be summed
up in one word: Nature."
– Baldip Singh Bhullar, architect of
YTL Design Group –

# of The Estates

This is my Father's world,
and to my listening ears
all nature sings, and round me rings
the music of the spheres.
This is my Father's world:
I rest me in the thought
of rocks and trees, of skies and seas;
his hand the wonders wrought.

"Why do we do what we do?" That was a question that the architects of Pangkor Laut had to ask themselves before the tasks of conceptualising and construction commenced.

As a member of the Forest Stewardship Council, the YTL Group held (and the Design Team agreed) that the "how-to" portion was a given: treat the land properly and it will reward you.

The "what-to-build" portion drew inspiration from a slew of traditions and influences – from vernacular architecture of the Malay Archipelago, to British colonial verandahs, to Geoffrey Bawa's sustainable architecture – with the result that the buildings in The Estates have their own distinct identity.

To the "what-to-call-it" question, the answer was "The Estates". As Dato' Mark Yeoh, the Executive Director of YTL Corporation in Malaysia, says, "The name itself conjures up an atmosphere that recalls the romantic lifestyle of a British estate manager of old Malaya."

Right:
Every tree was tagged before construction began. One of the few original tags that are retained can be found on Estate 1.

Opposite:
The rain forest takes pre-eminence over buildings. Space is made to accomodate entire trees, thus one finds tree trunks going through roofs, like this in the bungalow bedroom of Estate 4.

This is my Father's world,
the birds their carols raise,
the morning light, the lily white,
declare their maker's praise.
This is my Father's world:
he shines in all that's fair;
in the rustling grass I hear him pass;
he speaks to me everywhere.

"TREAD LIGHTLY UPON THE LAND"

Tan Sri Francis Yeoh's clarion call to tread lightly on the land was – and still is – the overarching principle that underlined all efforts to keep Pangkor Laut as pristine as possible while working on the island.

To avoid changing the lie of the land, levelling of the hillside was absolutely forbidden. Instead, many of the roads on the island were cantilevered into the hills so that trees and plants could continue to flourish underneath. Natural clearings from old logging trails from the 1960s were turned into passageways. One of the roads to The Estates was naturally created by fallen trees.

To lessen the impact on the environment, structures were "massaged" into place amid the jungle terrain. Was there a boulder blocking the stairs? They built around it. Did a tree sprout in an inconvenient site? They made sure a hole in the roof accommodated the tree. Was there a natural pond? They kept faithful to its depth and contours, and turned it into a swimming pool.

The care taken to minimise The Estates' footprint in the forest is a conscious effort to be a responsible steward of the land, harking back to the tradition of a respect for the land that most native peoples have. Taking care of the land means making the least impact on it to produce a piece of work of such timeless quality that generations later, it would still be poignantly relevant.

The management of Pangkor Laut acknowledges that nothing that is man-made can even come close to equalling the work of the Creator. For that reason alone, the rain forest of Pangkor Laut has been left largely intact, the way eons ago it was freely given to man to enjoy.

This is my Father's world.
O let me ne'er forget
that though the wrong seems oft so strong,
God is the ruler yet.
This is my Father's world:
why should my heart be sad?
The Lord is King; let the heavens ring!
God reigns; let the earth be glad!
- Maltbie D. Babcock -
(Hymn: This Is My Father's World)

AN ORDERED WILDERNESS – THE LANDSCAPING

There are few alternative experiences that capture the spirit of connecting with nature quite so well as being physically within the lap of nature itself. This is precisely what Pangkor Laut offers. On an island of which 80% of the rain forest is left in its natural wild and uncontrolled state, it is pointless to attempt to mirror nature by bending it into neat, ordered and manicured gardens punctuated by spots of jungle.

Yet Pangkor Laut is a garden. The difference is that the hand of man has very little to do with the magnificence of it. The vast stretches of unspoiled landscapes testify to the passionate will of the management of Pangkor Laut to preserve nature's handiwork in its original glory as much as possible.

Sometimes, however, nature has required a little help to fill out its more bald spots, such as under towering trees which prevented adequate sunlight from reaching the ground. Where it was called for, careful landscaping answered the need. The landscape architects found that the most important and difficult part of designing the gardens was maintaining as much of the forest as possible. That, in turn, posed the challenge of finding a range of plants that do well in shade and still produce colour. The small patches of chosen tropical shrubs, planted as ground cover after the construction of the buildings, were allowed to grow naturally wherever they would to form their own patterns and borders. Every garden takes about a decade to mature and reach a stage of equilibrium where its real beauty can be seen. The majestic rain forest of Pangkor Laut has had a head start of millions of years.

Selected tropical shrubs lend a touch of colour to The Estates' lush natural foliage outside one of the bungalow bedrooms in Estate 8.

THE *GENIUS LOCI*

The *genius loci* (genius of a place) is an important principle in landscape gardening. In the book "Geoffrey Bawa: The Complete Works", David Robson wrote that the noted architect Bawa was of the opinion that architects must "transcend the rational and enter the realm of the emotions". To do so, the architect must first absorb the intangible essence, the indefinable soul of the place before building on it. This is basically accomplished by doing a walkabout and listening to what the land is saying.

Consult the genius of the place in all;
That tells the waters or to rise, or fall;
Or helps th' ambitious hill the heav'ns to scale,
Or scoops in circling theatres the vale;
Calls in the country, catches opening glades,
Joins willing woods, and varies shades from shades,
Now breaks, or now directs, th' intending lines;
Paints as you plant, and, as you work, designs.
– Alexander Pope –

Classic 19th century *kampong*, Penang. Replicating the cool ambience of relaxing in a hammock under a tree, homes are built on stilts, roofed with palm fronds (even the walls are made of leaves), merging harmoniously with the rain forest trees.

Colonial estate manager's bungalow, Kulai Estate, Johor, British Malaya, 1946. Note its similarities to the classic Malay *kampong* house.

VERNACULAR ARCHITECTURE OF THE MALAY ARCHIPELAGO

Vernacular architecture has been around since mankind built the first homes. Simply put, it is "architecture without architects". It is erecting structures using local materials and techniques to fulfil local needs, building with knowledge that has been handed down through the generations. Such buildings were also biodegradable, thus there are few archaeological remains of prehistoric vernacular architecture of the Malay Archipelago.

The forms, proportions, craftsmanship and decorations of these vernacular structures are symbolic and meaningful to the people who built them. Such indigenous architecture originates from and speaks to man's existence in the world, particularly the human relationship with nature.

In The Estates on Pangkor Laut, this return to vernacular architecture is so patently obvious, both in building design and materials used, that guests are under no illusions that they are living on a tropical island in the Malay Archipelago.

WHAT IS THE MALAY ARCHIPELAGO?

The term *Malay* is commonly perceived to describe what is within the borders of the 20th century nation-state of Malaysia. However, the Malay Archipelago covers a very much wider area. It also encompasses present day Indonesia, the Philippines, Thailand, Polynesia, even as far north as the indigenous heartland of Taiwan.

Just how far the Malay world stretches is indicated in the 1816 edition of Johann Wyss' "The Swiss Family Robinson". The author wrote that when shipwrecked, the family educated themselves by learning widely-spoken languages like English, Spanish, and (surprisingly) Malay. In present day Manila, Bali, or Sarawak, one will still hear similar Malay words for "child" (*anak*), "milk/breast" (*susu*), "home" (*rumah/uma*), "white" (*putih/pote*), "black" (*hitam/itim*), "land" (*tanah/tana*), "sky" (*langit*), and "pavilion/community place" (*balai/bale/balay*). Deeply rooted in the context of the rain forest and the climate, the vernacular architecture of this region is timeless. Its features will never look dated; instead they have an uncanny ability to blend seamlessly with each other even though each element originates from a different nation-state of the Archipelago. On The Estates, one will not find superficial pastiches of the Malay Archipelago. Demonstrating a deep understanding of the psychological properties of each feature and material, every form that is incorporated is selected for its original function and philosophy.

Starting from the foundations, it is obvious that all the buildings in The Estates are not built on stilts commonly associated with Malay architecture. Instead, they are set upon raised stone platforms, or stereobates, a tradition unique to Bali, Java and Polynesia.

Moving up from the foundations, the other striking feature of The Estates' architecture is the predominance of roof over wall. In Western architecture, walls are a dominant element of built form. In contrast, buildings of the Malay Archipelago (such as Balinese pavilions) usually have no weight-bearing walls at all. Buildings that do have walls in this region commonly incorporate huge floor-to-ceiling windows that open completely, like those found in Malay, Acheh, and Bugis homes.

Looking up from within each building of The Estates, one never fails to notice the soaring, radiating rafters. The roofs at The Estates are unquestionably the dominant expressive element like the rest of the Malay Archipelago's built forms. This architectural preference is clearly seen in the living pavilion's octagonal, two-tiered roof, the cool high ceilings of the bungalow bedroom, and the dining pavilion's more angular and horizontal roof.

The open-walled style pavilions of The Estates can be seen among the Balinese, the Sasaks of Lombok, and the indigenous Yami of Lanyu Island, off the southern coast of Taiwan. Roxana Waterson's "The Living House" describes such pavilions as "truly ingenious constructions, admirably fitted to the climate and to the lifestyle of the people".

Besides the living and dining areas, the bungalow bedrooms on The Estates are also designed as pavilions. One just needs to draw the curtains and roll up the bamboo blinds, and voila, "walls" turn into views.

Bungalow of Museum Director, Taiping, Perak, 1900. The tiger skin, indigenous potted palms, and *kampong*-style latticed fenestration provide hints of old Malaya in an otherwise English-style interior.

"The Crag" in 1869, a bungalow occupied by Europeans in Penang. Attired in native *sarongs* of cool cotton for the tropical climate are Capt. Ord, Mr. Bishop, Mr. Jobson, Mr. D. Brown III, Capt. Budgen, Mr. Bond and Mr. Gentle. (Photos and details courtesy of National Archives Malaysia)

FROM *KAMPONG* TO COMPOUND

There are no fences on any of The Estates, yet one enjoys privacy without the sense of being confined. Historically, fences have largely been absent from traditional native homes found throughout the entire region.

To get a feel of the unfettered, unfenced lifestyle in the old Malay Archipelago, one just has to look up the Oxford Dictionary for the word "compound". Under its etymology, it is explained that the word originally came from the Malay word *kampong*, which means "village".

The anecdotal version of how the word "compound" was created is of interest. When the first British estate managers set up their colonial bungalows in Malaya, they noticed with dismay that their neighbours' chickens and ducks freely roamed into their manicured gardens. The natives did not think this odd as it was the natural order of things for animals to forage. There was no concept of private property back then as native wisdom held that nature's bounty must always be shared. Even today, among the Penan of Sarawak, richness is not measured by how much one owns, but how much one shares.

The closest thing to the notion of "private property" to the natives was the concept of a *kampong*, as they had a very well-defined sense of belonging to their village. To establish that his property belonged to him alone, the British estate manager had to tell his neighbours, "This is my *kampong*", and thus out of bounds. Over time, "my *kampong*" spoken with a British accent evolved to become "my *compound*", and thus a new word was born.

VERNACULAR ARCHITECTURE AND THE COLONIAL BUNGALOW

Manifestly Malay Archipelago vernacular in concept, the architecture of The Estates is also tempered by the memory of a British colonial past. During the 18th century, Britain extended its empire to India, centring in Bengal which stretched from the east coast of India to the north and west of Calcutta. British settlers who ventured into the interior of tropical Bengal were faced with the challenge of building homes that were both comfortable and affordable in climates that were very different from what they were used to back home. That need gave birth to the bungalow, a new building form that incorporated and adapted local strategies for beating the relentless heat and sheltering from the torrential monsoon rains. In Pangkor Laut, several elements of bungalow-living have been incorporated into the design of The Estates as a whole, like the carefully planted gardens in front of some of the pavilions, and the verandah.

The verandah is an open area, such as a gallery or portico, which is usually roofed and sometimes screened or partly enclosed by a railing. It is attached to the exterior, frequently the front and sides, of a house or other structure.

The verandah was so naturally a part of vernacular buildings in the hot tropics that the English novelist W. Somerset Maugham, one of the most popular novelists of his era, frequently and offhandedly mentioned this architectural feature in his evocative stories about the life of planters in South East Asia. It was common in the European-style bungalow for each room to open onto a verandah on at least two sides, to maintain airflow. Maugham indicated this in "A Man With a Conscience" when he wrote "We were sitting in one of the corners of the verandah that surrounded my house in order to get any draught there might be ..."

The architect Geoffrey Bawa spent much of his childhood in typical mid-19th century coconut estate bungalows that had continuous deep verandahs. He recalled that "it was marvellous sitting on the long verandah after lunch having endless conversations of limited interest." This use of the verandah as the most often-used space to savour afternoon teas, catch evening breezes, and for family gatherings, is echoed in the mental pictures painted by Maugham in "The Moon and Sixpence", wherein he had written: "We got up, and he led me on to the verandah which surrounded his house. We paused to look at the gay flowers that rioted in his garden." A great verandah almost begs that the eye should be treated to the view of a great garden. As a semi-outdoor room, nature becomes part of the decoration.

The Estates have so composedly integrated vernacular architecture with colonial overtones that guests would be forgiven for thinking that they live in a modern-day version of Somerset Maugham's era, when tea would be served to them while they lounge about the verandah, enjoying the fragrance of the morning.

Opposite:
Tunjuk langit finials crown the roofs of pavilions in The Estates and ancient Malay palaces. In previous centuries, these slim, elegant finials functioned as a form of sundial; their shadows indicated the different times of the day.

Below:
"Green architecture" in the form of little separate bungalows and pavilions to minimise impact on the environment.

VERNACULAR ARCHITECTURE AND TROPICAL CONTEXTUALISM

The design philosophy for Pangkor Laut is also heavily influenced by Geoffrey Bawa's pioneering work in the integration of man's built structures with the natural environment. Bawa, Sri Lanka's most renowned, prolific and inventive architect, is considered one of the most important and influential Asian architects of the 20th century.

Bawa's designs showed that he was a forerunner of what is today known as "green architecture" or "sustainable architecture". He took pains to incorporate many environmentally responsive design principles, taking into account the orientation of the building, reducing solar gain, and even the aerodynamics of prevailing winds. He fused the interior with the "outside" landscape in such a way that the "outside" was frequently contained and wrapped inside an enclosure by the shape of the building itself, such as within an inner courtyard. Bawa also separated a "building" into scenic spaces such as a cluster of pavilions or a series of built structures which were connected by terraces, pathways, courtyards, gardens, verandahs and balconies.

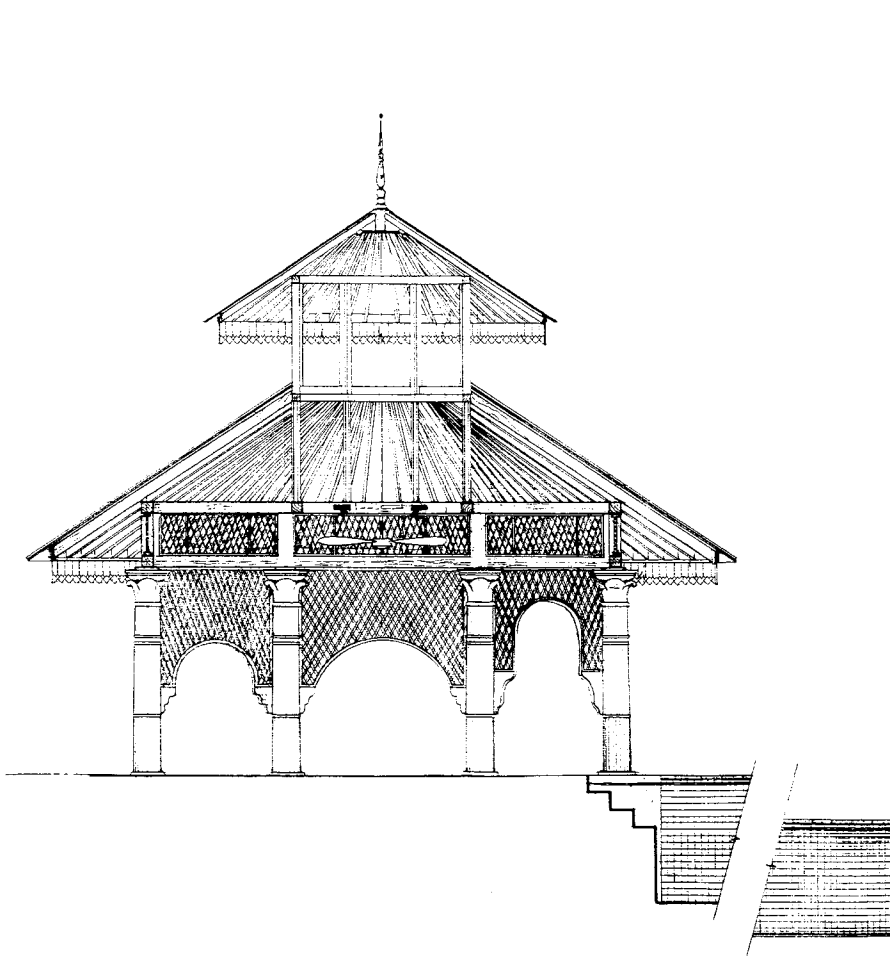
This concept of separate buildings being interconnected to form a network is adopted by Pangkor Laut Estates. Individual pavilions are ingeniously connected via a combination of flagged stone pathways, wooden bridges and decks, ponds, gardens and rock steps into an integrated whole.

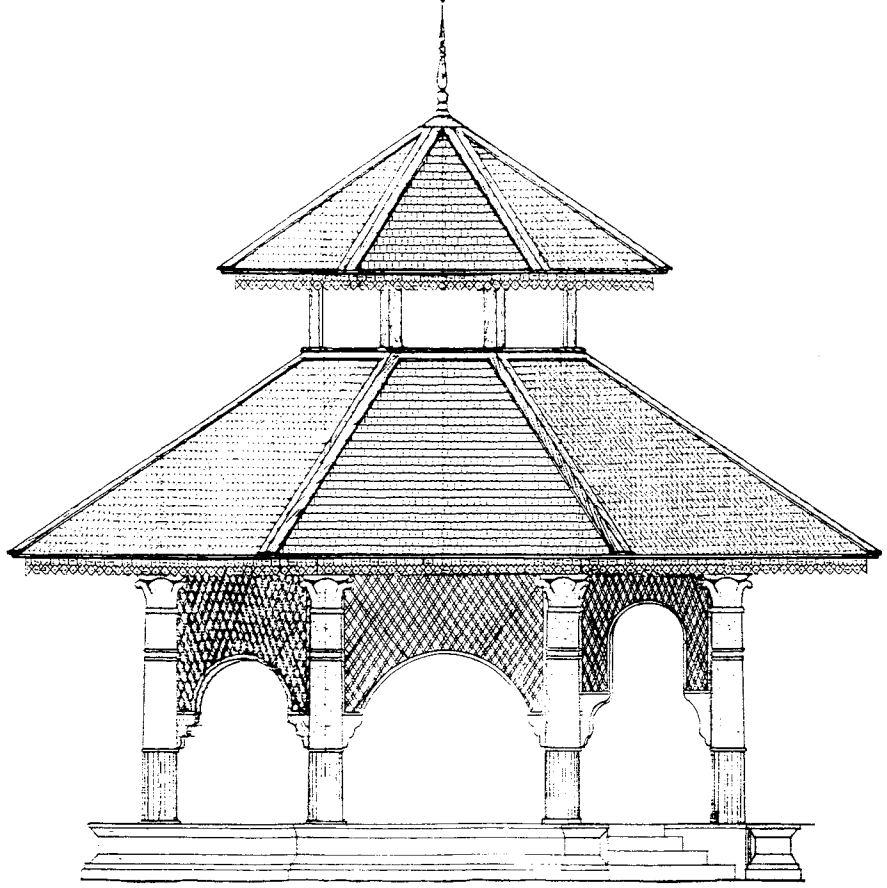
The result of all these influences, from vernacular to Bawa's architecture, is an intriguing synthesis of design that is unique to The Estates.

Living Pavilion

In stark contrast to the living room of a normal house which requires fossil fuel-powered ventilation devices to minimise the temperature differential between the inside and the outside, the living pavilion in each Estate takes advantage of natural ventilation. It is separately built as an open-sided structure with a large central area and high steeply-pitched two-tiered roofs, all features which encourage active air circulation. Energy costs are thus reduced and The Estates' carbon footprint is kept small, in harmony with nature.

Airflow is greatly increased in The Estates by arranging the pavilions in random order and also to accommodate the trees. This is very different from the fixed rows of uniform buildings seen in most housing estates that trap air and prevent adequate ventilation.





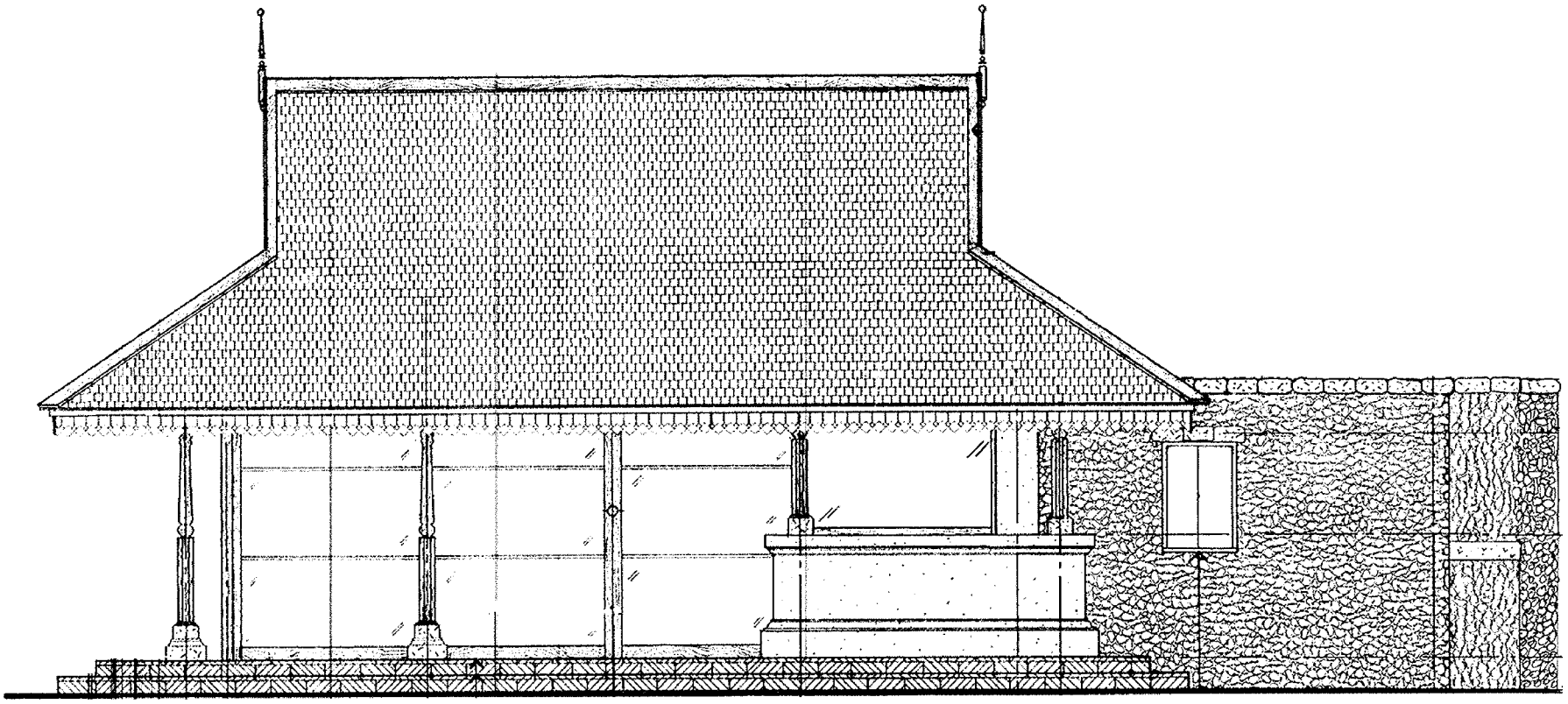
The fan installed in each pavilion is almost gratuitous. Forest cool air and refreshing sea breezes flow so freely through the structure that the air movements themselves energetically rotate the fan's blades!

Belian, a tropical hardwood which weathers beautifully in the salty sea air and tropical conditions, is used to make the roof shingles.

Dining Pavilion

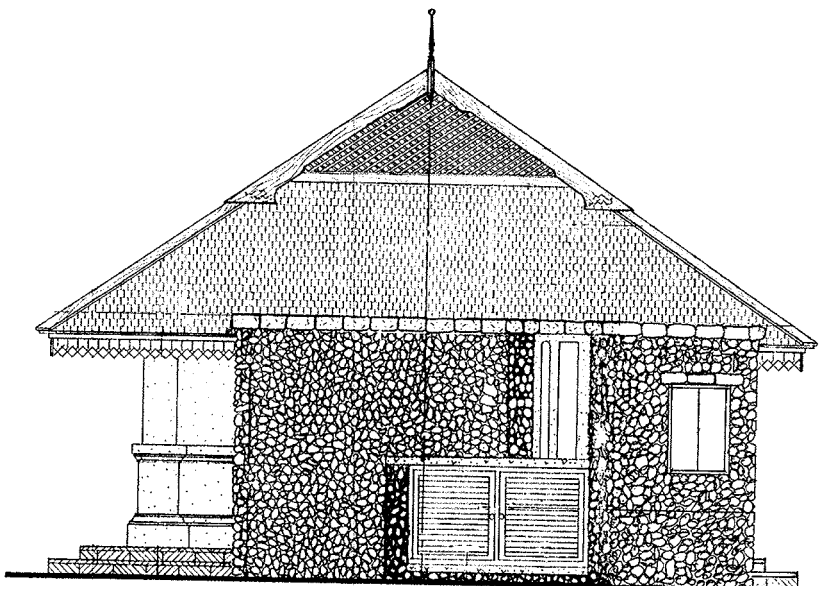
Every dining area of The Estates was initially designed as an open pavilion, not as a dining room. The incorporation of air-conditioning was secondary, as an option to cater for guests who have yet to acclimatize to the balmy weather of this island. Thus one will notice the dining area has huge crystal-clear glass doors – a more appropriate description for these doors would be "moving glass walls" – as they can be opened up completely, turning the dining area into a pavilion in every sense of the word.

It is also noteworthy that each dining pavilion in every Estate is strategically placed to overlook the Straits of Malacca. In this way, diners can enjoy the delicious creations of their personal chef accompanied by spectacular views and sweet ocean breezes blowing through the rain forest.

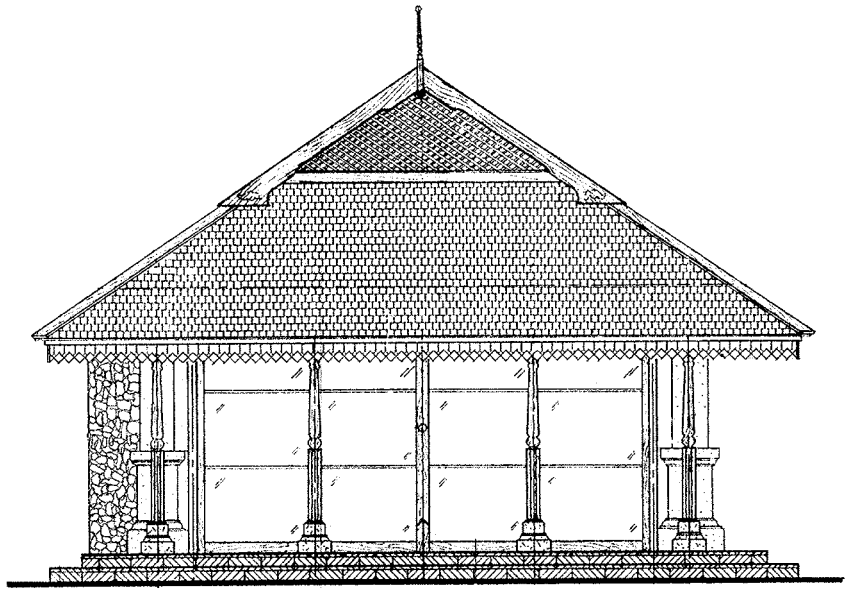


SIDE ELEVATION

No animal should ever jump up on the dining-room furniture
unless absolutely certain that he can hold his own in the conversation.
- Fran Lebowitz -



BACK ELEVATION



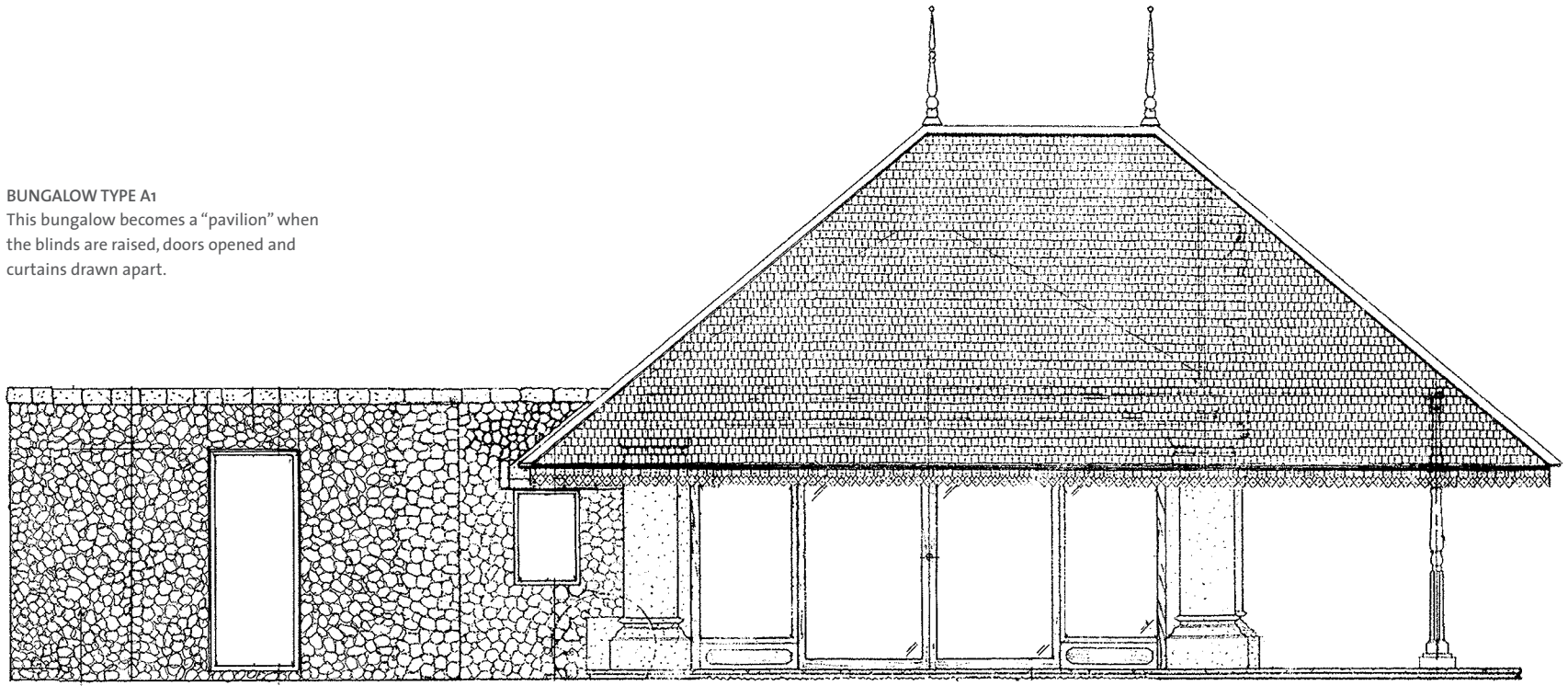
FRONT ELEVATION

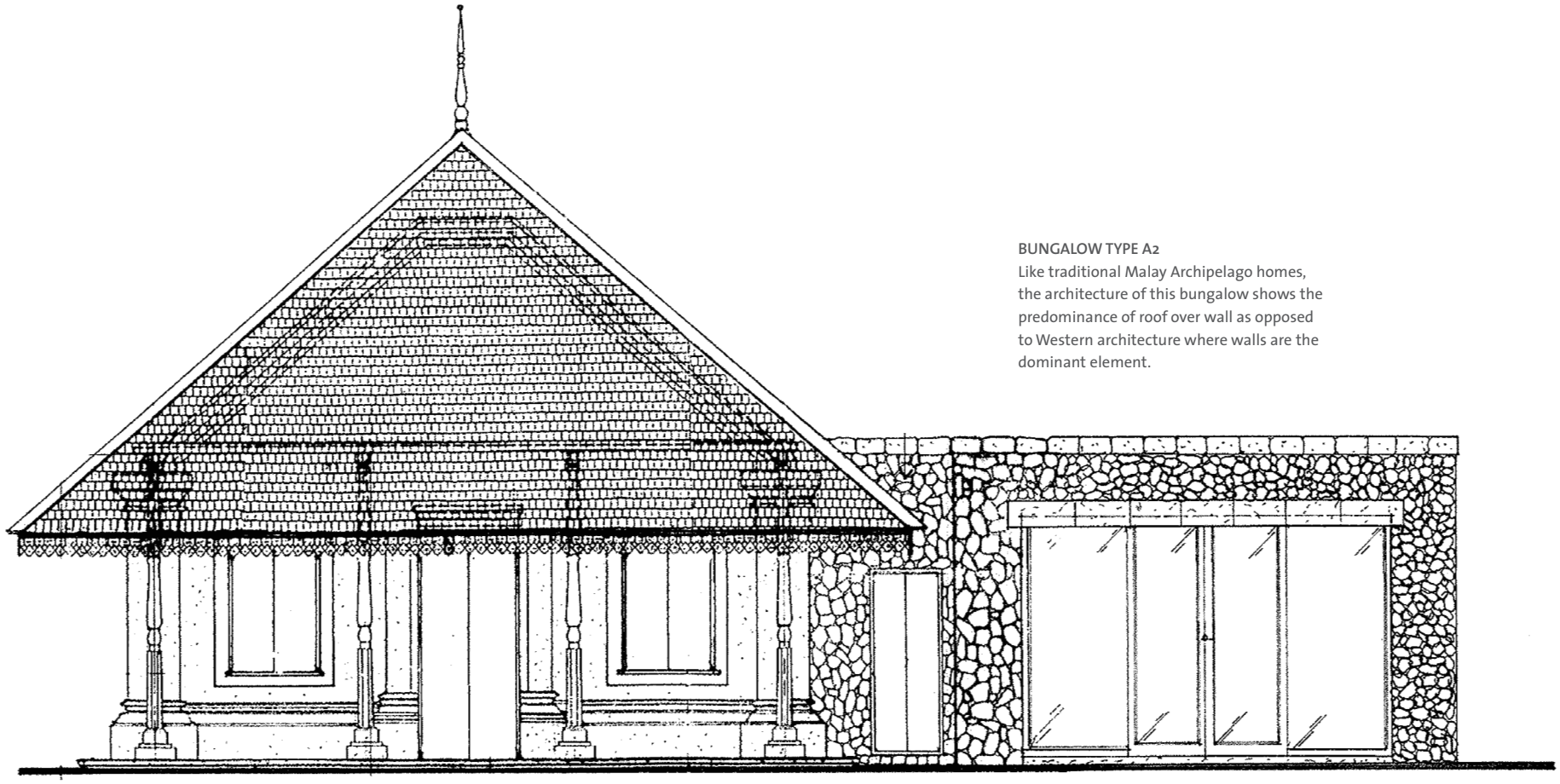
Bungalow Bedroom

"Introvert in public, extrovert in private" is the architect's succinct description of The Estates' bungalow bedroom designs. Of the four sides of every bungalow bedroom, just the side facing the public realm has a solid wall, wooden door and window shutters. For the other three sides, crystal-clear glass is the only thing that separates guests from their secret gardens and all of nature's glory. Slide open the glass doors, raise the bamboo blinds, draw apart the curtains – and the bungalow bedroom instantly becomes a "bedroom pavilion". Yet total privacy is assured as the architects have cleverly incorporated a "second skin" around the secret gardens in the form of rubble walls. Thoughtfully planted with delicate climbing figs, these rubble walls give guests total privacy *sans* the feeling of being walled-in. Once in the private domain of any of these extremely spacious bungalow bedrooms, one can go *au naturel* and yet be totally safe from all human eyes.

BUNGALOW TYPE B
This design incorporates a distinctive tower-like structure which houses an additional very spacious day bed. Each bungalow bedroom is actually just one bedroom, however indulgent and spacious it may be.

BUNGALOW TYPE A1
This bungalow becomes a “pavilion” when the blinds are raised, doors opened and curtains drawn apart.

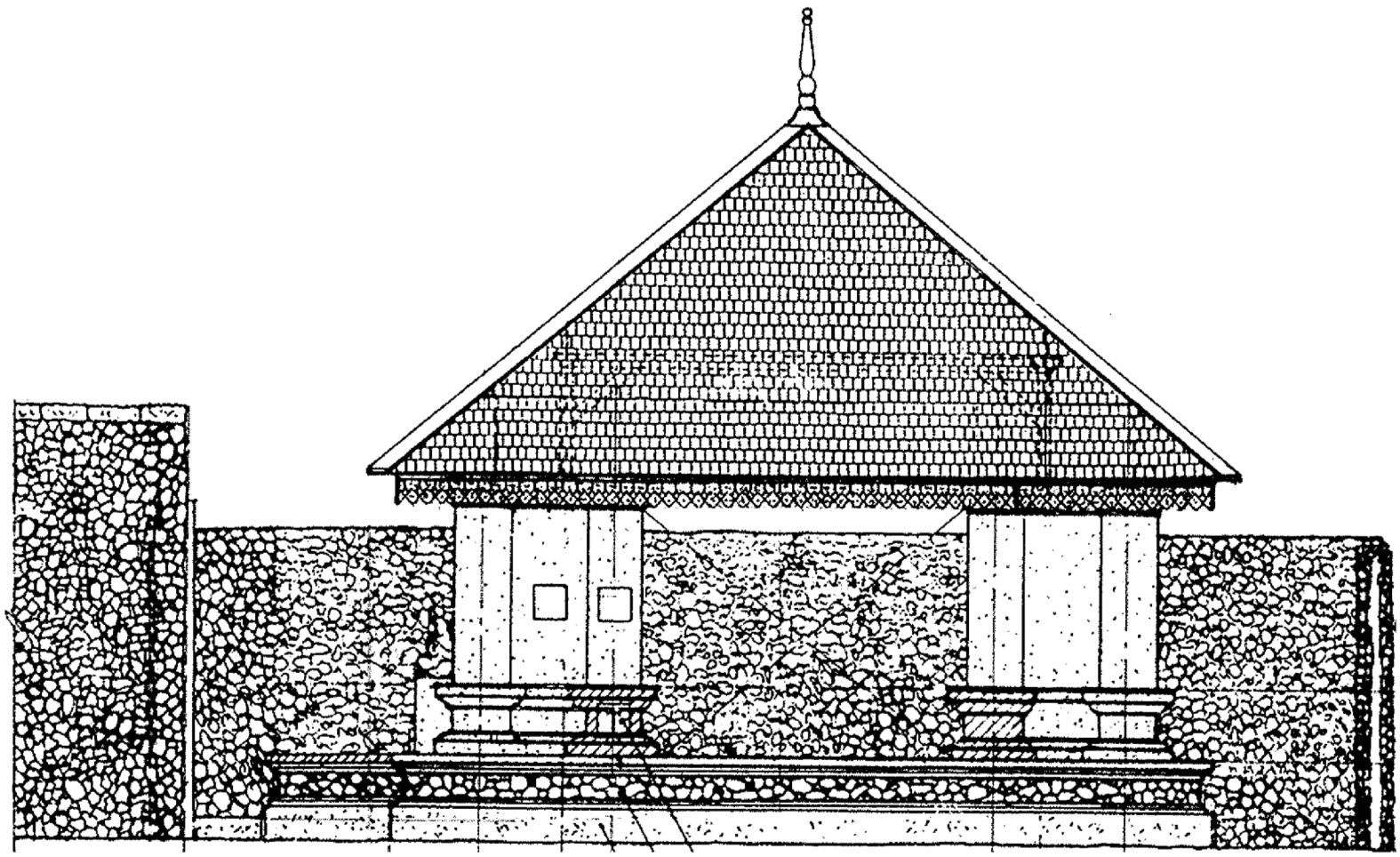




BUNGALOW TYPE A2
Like traditional Malay Archipelago homes, the architecture of this bungalow shows the predominance of roof over wall as opposed to Western architecture where walls are the dominant element.

Bath Pavilion

All through history, cultures throughout the Malay Archipelago from Borneo to Bali have used water sources for health and therapy. Natural hot springs are traditionally recognised for their ability to improve circulation and promote healing, while the cascading rhythms of waterfalls and river currents have been massaging away strain and stress for centuries. In every Estate of Pangkor Laut, there is at least one personal "water therapy" pavilion or courtyard with private access from the bungalow bedroom. The jacuzzi combines the natural benefits of thermal springs, the powerful massaging effects of waterfalls and the aromatherapy of rain forest plants, and is built in the open outdoors. Yet it is designed to be so intensely private that no one but the sun or stars can peek in.

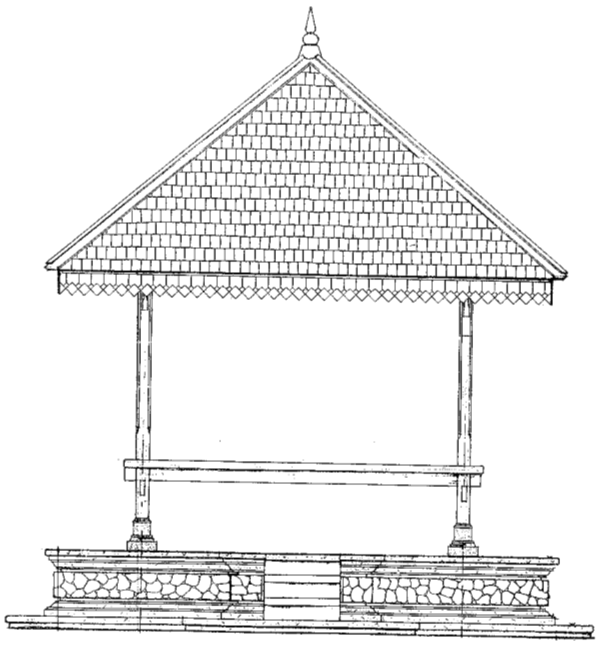


In The Estates, the interplay with the environment is seen in the blurring of the line between the private “inside” and the public “outside”, such as in the private outdoor jacuzzis.

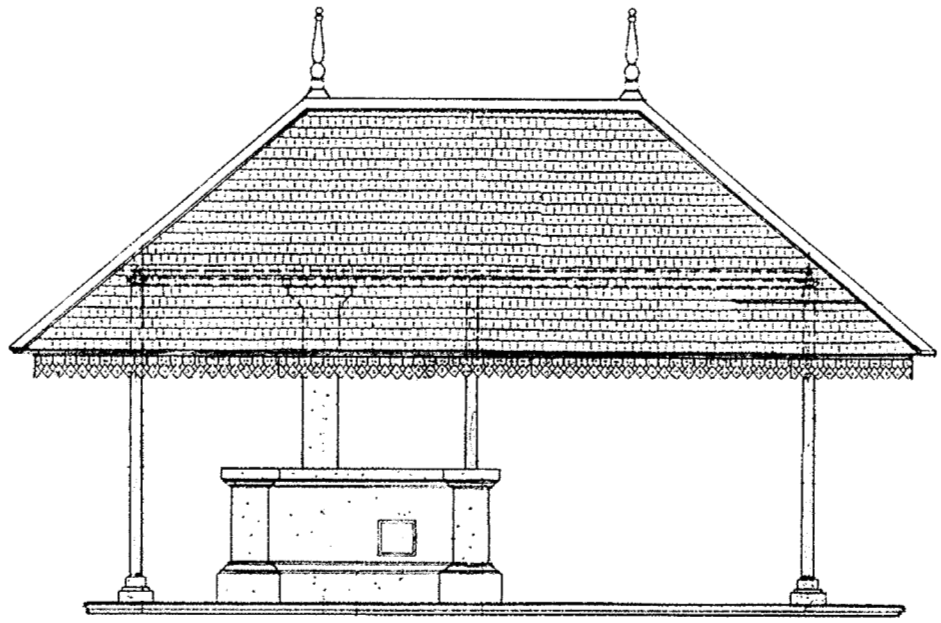
Resting Pavilion

Sequestered among the trees or even perched half on top of a swimming pool as in Estate 7, the resting pavilion extends an irresistible invitation to be silent and contemplative. All around, nature calls to those who choose to be attentive to the sensuous treats of the rain forest.

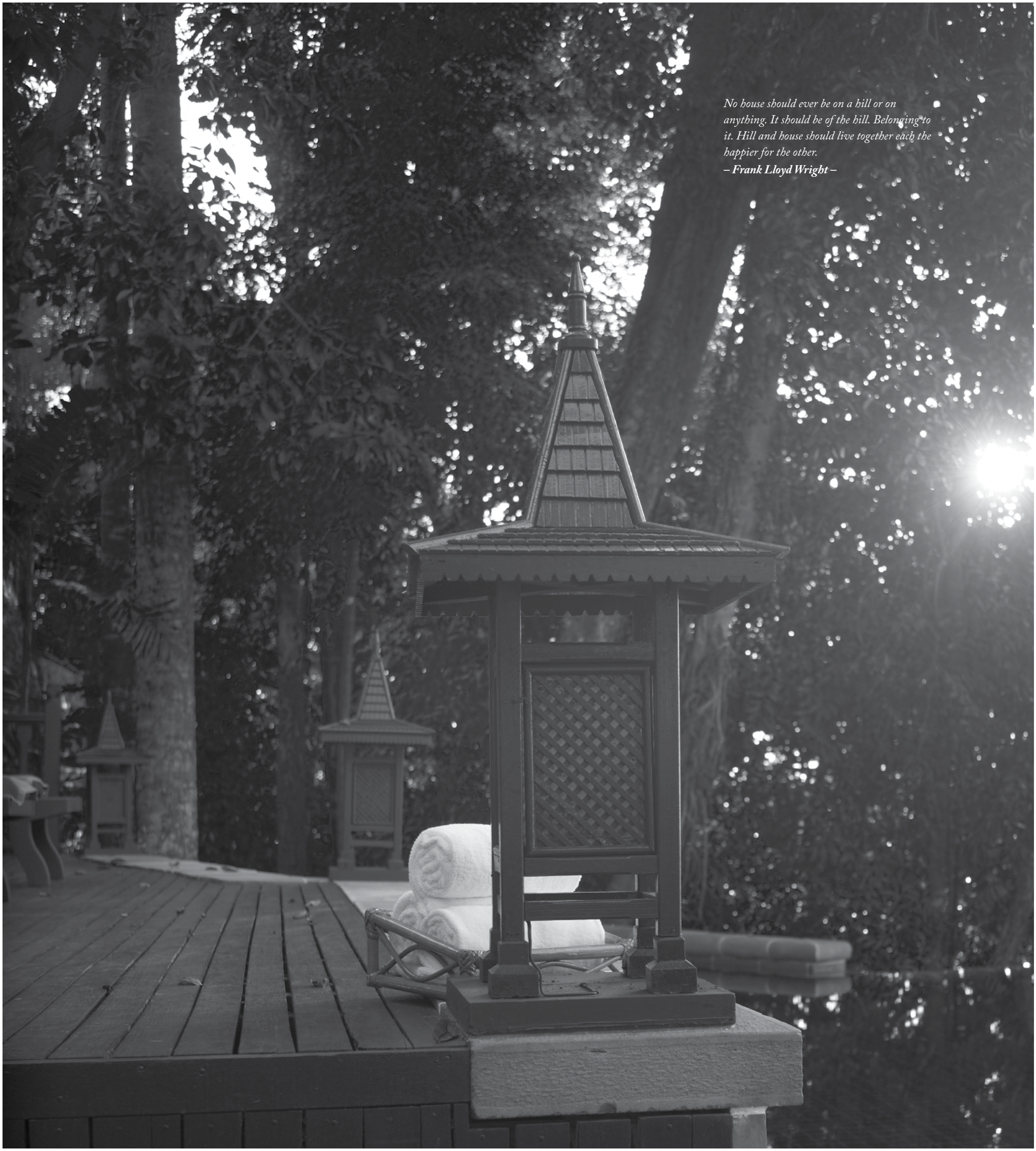
The design of the square resting pavilion was inspired by the purpose-built, open-walled pavilions that are found in the Malay Archipelago islands such as Bali or Lombok. Admirably fitted to the climate, these pavilions are used for such diversified purposes as social activities, ritual functions and sleeping.



RESTING PAVILION

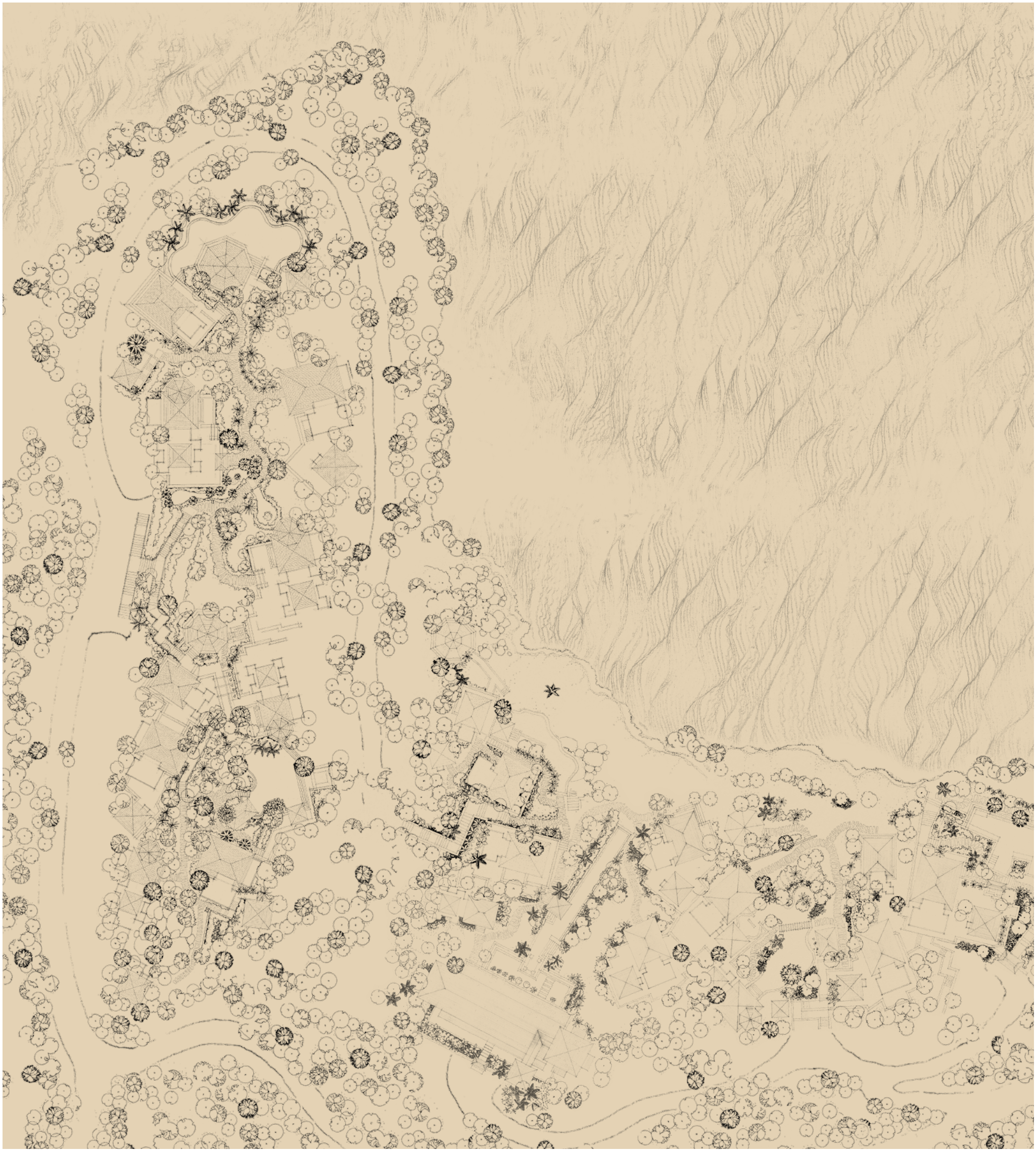


SITTING PAVILION
The Estates' only sitting pavilion, equipped with a bar counter, is sited in Estate 2.



No house should ever be on a hill or on anything. It should be of the hill. Belonging to it. Hill and house should live together each the happier for the other.
– Frank Lloyd Wright –

Introduction to The Estates



The Estates

The aerial view of Estates 1-9. Note that this has to be drawn, not photographed – because of a very beautiful reason – in reality, the trees tower over all the buildings, and the rain forest canopy eclipses the pavilions with a living emerald veil.

Opposite:
Estate 2's pavilion is roofed with shingles made from the ironwood tree. Like its name, ironwood is immensely resilient and can last for up to 150 years.

He that planteth a tree is a servant of God,
he provideth a kindness for many generations,
and faces that he hath not seen shall bless him.
– Henry Van Dyke –

"NAK KE MANA?"

The above phrase was probably the most commonly used casual greeting in the Malay Archipelago during previous centuries. Meaning "Where are you going, dear?" this salutation highlights the importance of the "sense of place" amongst the natives.

Among the Sumba communities, such a greeting would be answered in terms of upstream/downstream. For the Toraja in the Indonesian island of Sulawesi, words for "going to" and "coming from" are modified according to the cardinal directions involved. According to G. Bateson who researched value systems in Bali, this sense of place is so strong among the Balinese that an individual who has temporarily lost his bearings in relation to the "mountain" direction, *kaja*, may be rendered quite helpless by the loss of orientation that, for instance, a dancer becomes unable to dance. For the Karo Batak of Sumatera, terms for landscapes in the natural world are even applied to house interiors, with "*gunung*" (mountain) referring to the higher sleeping area, while lower area is called "*sawah*" (rice field).

In line with the indigenous tradition of this region, this chapter helps each reader orientate himself or herself within each individual Estate. And in doing so, one comes into greater harmony with the natural world – and with one's inner self as well.

AS UNIQUE AS ONE'S DNA

"Each one is a private paradise," wrote one magazine reviewer of The Estates in Pangkor Laut. Located on the northernmost part of this exclusive island, all nine properties are very similar "paradises" in the sense that each one is set within acres of pristine rain forest, and architecturally they feature 5-star creature comforts built in the environmentally sound ancient tradition of the Malay Archipelago. However, that is where the similarity ends, because each Estate has its unique *genius loci* and biosphere of distinctive plant and animal species. The beachfront Estates 1-4 have a self-sustaining, giant, natural marine "aquarium" at their doorstep, in the form of the cove's waters. Meanwhile, sited within the rain forest, the hilltop Estates 5-9 are magnificent examples of 5-star living in a colossal natural "arboretum".

It may not be immediately apparent to the untrained eye, but closer study will reveal that there are vast differences in species on each Estate. In the following pages, the individual Estate sections detail the natural uniqueness of each property. While the sections are by no means comprehensive studies, they do help to illustrate how luxury homes that tread lightly on the land can be built in little niches between virgin rain forest trees.

It is crucial that these stands of old-growth forest be maintained. Replanting, though just as important, can never truly replace the ancient trees. "Young forests can't support what the old-growth forests did," said William Laurence of the Smithsonian Tropical Research Centre. As renowned Harvard biologist Dr. Edward O. Wilson cautions, "The world's species are not spread out evenly. Around 50% are found on just 2-3% of the earth's surface." These species-rich areas are termed "biodiversity hotspots". Most of these hotspots are in the world's tropical rain forests, and the forest in The Estates rank among them.

The value of the trees here is priceless. But for those who may need a dollar value to qualify the need for conservation, Professor T.M. Das of the University of Calcutta offers a rough calculation: "A tree is worth $196,250. A tree living for 50 years will generate $31,250 worth of oxygen, provide $62,000 worth of air pollution control, control soil erosion and increase soil fertility to the tune of $31,250, recycle $37,500 worth of water and provide a home for animals worth $31,250. This figure does not include the value of the fruits, lumber, or beauty derived from trees."