

KANDALAMA HOTEL

Kandy, Sri Lanka

HOSPITALITY RATING: 5-STAR

ROOMS: 162

ARCHITECT: Mr. Geoffrey Bawa (Sri Lankan born, UK trained)

LATITUDE: 12°N

The 162-room Kandalama Hotel in the cultural triangle has etched a great name in the hospitality industry, especially in pioneering the concept of eco friendly tourism. - Daily Mirror (Sri Lanka)

CONTEXT

Sri Lanka possesses the most intact biodiversity on the Asian continent. The hotel is located at the crossroads of different ecological zones harbouring a spectrum of wildlife in the heart of the Cultural Triangle. It is common place to watch herds of elephants migrating across the plains towards the seasonal "tanks" (lakes).

The Kandalama hotel was the first environmental hotel project in Sri Lanka when it was conceived with significant consultation with the local community in 1992. Initially, the development was met with much public debate as many people living in the relatively pristine and undeveloped region were opposed to any tourism development, as the area is one of the most significant regions of the country for wildlife. However, the developers took the communities concerns to heart and instead of fighting them, decided to embrace them, which led to the design and construction of one of the most environmentally friendly hotels on the planet.

Since its opening in 1995, the Kandalama's presence in the domestic and international marketplace has influenced 3 other hotels in the country to become Green Globe 21 certified and two other companies to join the Green Globe 21 program.

DESCRIPTION

The eco-friendly Kandalama Hotel is designed in a way that complements and enhances the natural environment, despite its size. The building follows the contours of the hill outcrop and in some cases, is elevated on concrete piles allowing for surface habitat to remain. Open, concrete hallways span the length of the hotel, providing easy access to amenities while providing the guest with an unprecedented view of the surrounding environment.

Interior spaces are mostly open to the outside with extensive fenestration allowing for adequate daylighting of most public and private spaces (kitchen and service facilities are located on the hill side of the building). The concrete structure is shaded by ample wood overhangs. The concrete roof, which can absorb a large amount of passive solar energy, is being covered by sod with the intent of growing organic produce and insulating the structure. The main reception "desk" is a reclaimed piece of old growth timber. Water is being collected from rainwater but is mainly sourced from a deep well (avoiding any depletion of the "tank"). Food in the restaurants is locally grown and organic where available. The entire hotel has been non-smoking since 2001.

Guestrooms are entered off of these main walkways and are all facing the large "tank". Each room is has efficient fixtures such as low-flush toilets and compact fluorescent lighting. The bedroom has a door to the bathroom that allows occupants to minimize the interior space required for air conditioning.

Employees, of whom many originate from the region, are encouraged to develop new environmental ideas and present them to management. An environmental ethic is fostered through what is known as the "Eco Park", an area near the employee residences that provides an environmental education centre for all employees and guests. The park was constructed by employees using local materials and involved a significant investment of time to clean up the area, which is now used for employee events. The park includes a composting pit, a native tree nursery, the wastewater treatment plant, and an Eco Library for employees, guests and local school children. The hotel with these facilities for re-investment in the region fulfilled their pledge to the community and the nation to be committed to preserve the environment and engage an environmental management system.

INDUSTRY RECOGNITION

Although only in operation since 1995, the Kandalama Hotel has won the Green Globe award three consecutive years 1996, 1997, 1998. They have been audited since construction and awarded the LEED Pilot Project Bronze medal 2000 (Green Technologies Inc. Canada). Other awards include: 2000 PATA Gold for the concept of the Eco Park, 2000 Gold medal for environmental commitment from Thomson - the biggest tour operator in UK, World Travel Market Environmental Company award 1997, Sri Lanka Association the advance for science 1997, and SAGA's BEST hotel for Food & Services in the South Eastern region. The Kandalama management are also seeking ISO 14001 certification.

SITING

- A total of 26 local species are grown this way and replanted around the hotel site and to a network of regional schools which plant then during school planting days.
- Collaborative partnerships are in development with the Department of Forest Conservation and the Government to declare the forest around the hotel as a Conservation forest.
- The in-house nursery continues to produce indigenous plants for the reforestation program that operates on the 50-acre hotel property and areas outside.
- Kandalama has been central to the rehabilitation of approximately 230 ha of rainforest.

DESIGN

- Hotel designed into and around the surrounding rock outcrops (including pools, patios).
- Passive solar cooling design utilizing building shading through overhangs, sod roof (retrofit of existing design in progress).
- Daylighting design throughout.
- Open concept design to minimize cooling loads.
- Insulated and sealed doors and guestrooms to reduce cooling loads.
- Mobility impaired access (elevators, concrete corridors).
- Small, tree-shaded, gravel parking lot.

MATERIALS

- Reclaimed wood products used in construction.
- Minimal use of paint. Design includes many natural materials unfinished.

WATER

- Rainwater collection tanks have been introduced at Kandalama with a view to installing more in the future.
- Low flush toilets and fixtures.
- Wastewater generated by the hotel is treated and recycled within a modern and well-maintained on-site wastewater treatment. This is then recycled for watering of the hotel compound.
- Greywater reuse
- Grey water from filters and softeners in the water treatment plant is collected and used to spray the gravel to reduce the distribution of dust.
- The hot water system of 80 guestrooms using electric heaters has been modified to use steam from the boiler as the heating medium saving 86,500 kWh per year.
- Electrically heated hot water systems were replaced with solar water heaters saving 80,300 kWh per year.

ENERGY

- Within the next two years, hotel management expects to meet 40% of its energy requirements through solar energy
- Lamps that are used for more than four hours per day have been replaced with energy efficient fluorescent lamps.
- The replacement of incandescent lamps in all public areas with compact fluorescent lamps has saved 75,000 kWh per year.
- Key tag activated master switches have been introduced to guestrooms to save energy.
- Drivers and guides are instructed to have the engines of the vehicles switched off when the vehicle is parked and awaiting the arrival of guests.
- Bicycles are encouraged as transport and a bus provides a service to travel to town and back which contributes to the reduction of private vehicles and thereby reducing emissions into the atmosphere.

INDOOR ENVIRONMENTAL QUALITY

- No substances generating toxic fumes are burnt within the hotel premises.
- No smoking for employees (and guests since Jan. 2001)
- All air-conditioned rooms and public areas are provided with sufficient quantities of fresh air to ensure levels of CO₂ are kept to a minimum.

OPERATION

- Derives significant income for Sri Lanka and the local community.
- The EcoPark at Kandalama has highlighted the hotel's commitment to sustainable development and to the local community. Initially the project employed over 300 people and generated an income of over US\$500,000 which assisted in increased living standards for locals.
- The EcoPark is used as an educational tool about the environment for local schools groups.
- Over the past 8 years since its establishment, Kandalama has managed to almost completely eliminate waste through a state-of-the-art recycling system.
- Recycling into 15 categories
- Kandalama encourages its suppliers to reuse glass bottles and jars for their products. Wherever possible, eco-friendly containers such as clay pots are used instead of plastics.
- Waste paper is sent for producing recycled paper, which is then used for hotel stationery.
- A tree planting program is in operation utilizing discarded coconut shells as seedling containers.
- Extensive composting on-site.
- Natural, locally grown food served in restaurants.

ENVIRONMENTAL MANAGEMENT

- The environmental management system of Kandalama Hotel has been developed by Ravi De Silva an environmental engineer, who presented an outline of its operation during the 13th PATA Conference on Eco and Adventure Tourism. The key environmental issues targeted by Kandalama were:
 - The impact of the initial construction on local forest and scenic beauty
 - The impacts during construction activities (clearing, disturbance, erosion and sedimentation)
 - The effects of the Hotel site on natural hydrology and run off patterns
 - The discharge of solid and liquid waste into the lake system
 - The discharge of waste and operational by-products in the proximate semi-pristine forest system
 - The impact on the local community
- Open policy for staff to generate environmental ideas and deliver them directly to environmental management head.
- Environmental education for staff and the community
- Kandalama has become an important control mechanism for illegal activities around the hotel site such as poaching, clearing and firewood collection.
- More than 300 local people are employed in the hotel and continues to provide work opportunities for the local population.

CONTACT INFO

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REFERENCES

Site Visits August 2000, January 2001 - Conducted by Mr. Ravi De Silva

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<http://www.ggasiapacific.com.au/casestudies/docs/ggkandalama.pdf>