

Goddess Spa-ce

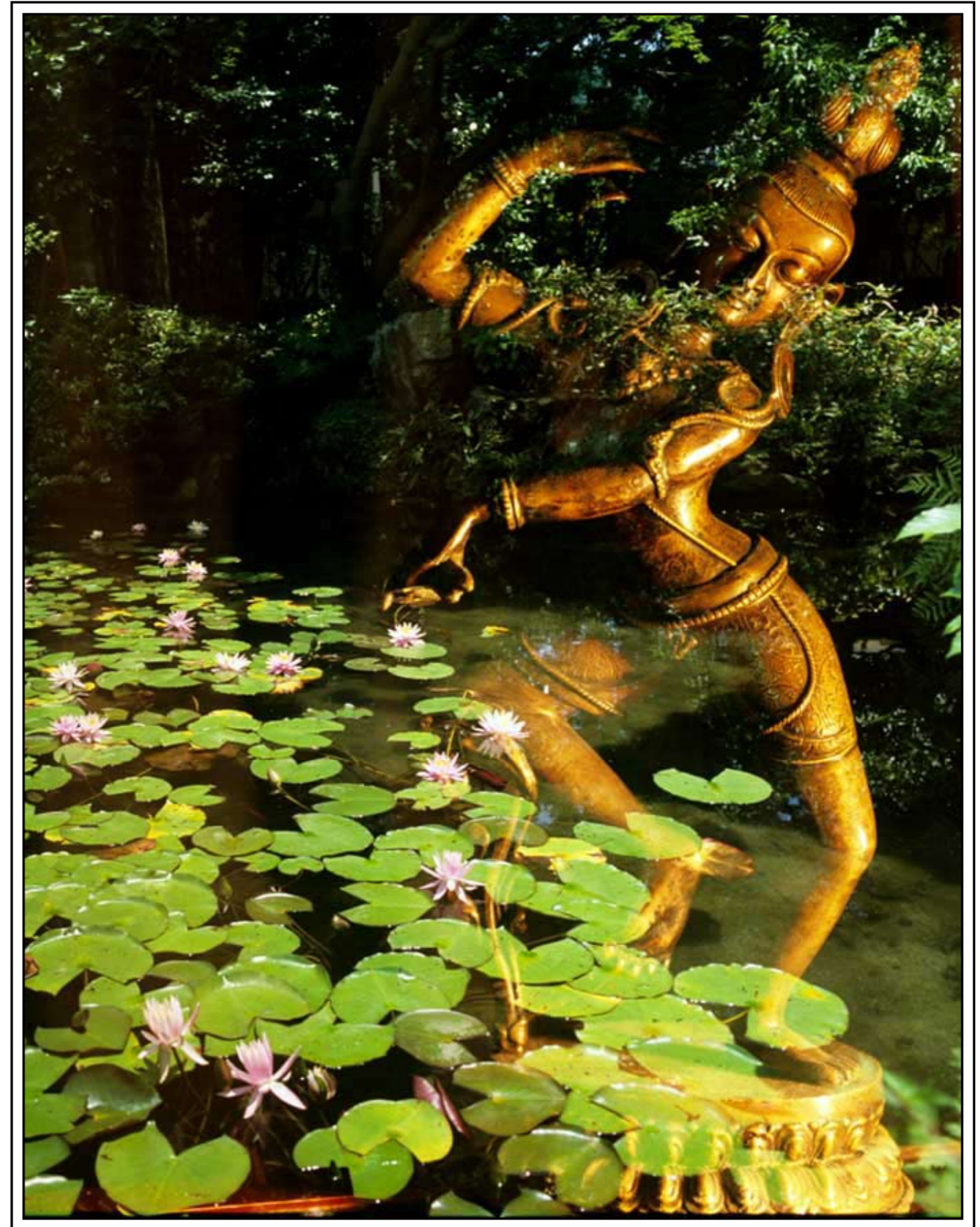
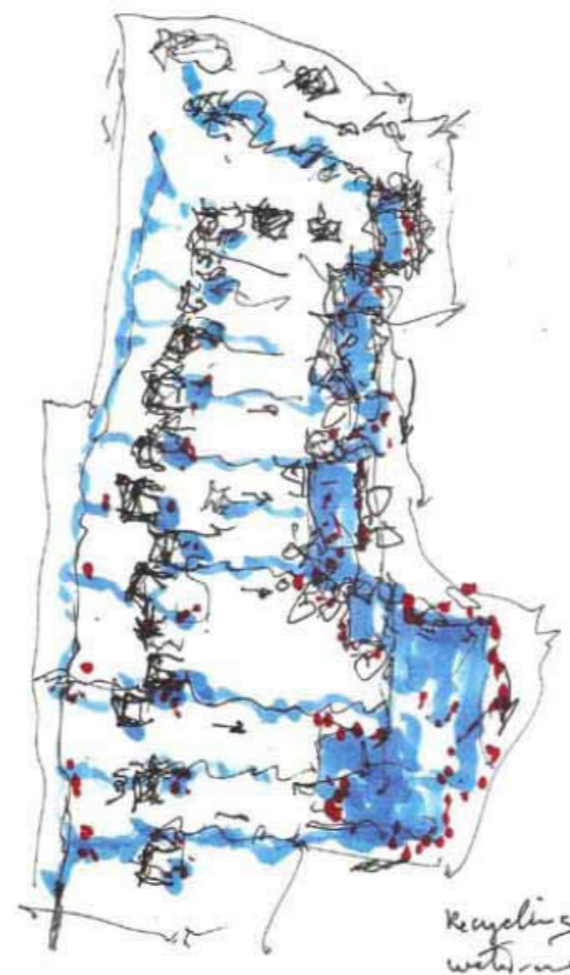
Project for a Sustainable Resort Hotel with Spa and Therapy Facilities
at Alibag, south of Mumbai, India, 2008

Team:

Jana Dreikhausen, Architecture and Finance

Günter Nitschke, Planning and Landscaping

Gilles Boulicot, Water Management,



Sense of Place and Self-sustainability

The site of the project is located at the coast of Maharashtra south of the city of Mumbai, directly behind the ridge of hills along the coast, and it is surrounded by typical rice paddies. The western and northern hillside has forests and monsoon riverbeds, the central part is a slightly sloped towards the ricepaddies in the east. The site is accessed from the south, along or over the water tank of the village Karle.

During and for some short time after the monsoon, the area is flooded with water, and all the greenery is exploding into growth and bloom. After this season the landscape dries up, looking like an African savannah until the next monsoon brings overpowering fertility and lushness again.

A sustainable land use and an integrated water management program was the main focus of the overall planning and architectural design process. This process had to embrace and highlight the spirit of the land, physically and spiritually. With our design we wanted to celebrate the monsoon nature of the site with the lush green of its forest, its waterfalls and rivers, and a large variety of wild orchids, birds and butterflies.

It is noteworthy that this land of the future Goddess Spa Resort Hotel had not been used for agriculture for the last 300 years. Thus, water and draught have shaped its landscape.

Access to the new Spa will be from the village of Alibag along or over, the existing village tank in the south. Design and construction of a bridge over the tank would be part and parcel of the upgrading and beautification of the tank itself which would be of profit also for the surrounding villagers.

Requiring complete self-sustainability in energy and in water led to an architectural and landscape design for the new Resort and Spa which had to take care of three different scenarios within one calendar year: a monsoon scenario, a dry-season scenario, and an in-between scenario.



Architecture and Landscaping

Architecture - Sense of Unity with Nature

In order to preserve as much as possible of the untouched natural landscape between the individual clusters of the projected 20 villas of the Resort (plus five luxury ones) and to make careful use of our scarce resources of water flowing down in the small rivers, we compressed the design of the required housing into four clusters of five villas each. Each cluster would be grouped around one small river with its murmuring waters falling down towards the lotos ponds in the east. These 'private' small rivers would thus become the visual focus and unique attraction of the housing clusters, somehow echoing the already existing main waterfall in the very north of our site which is accessible to all guests.

The actual building program comprises a main hall, special spa buildings and open-air massage facilities, restaurant for 50 persons, smaller cafes, boutiques, library, Yoga and Tai'chi hall, staff quarters, the mentioned 20 individual villas, four cottages for managers, and staff quarters for 12 to 15 persons.

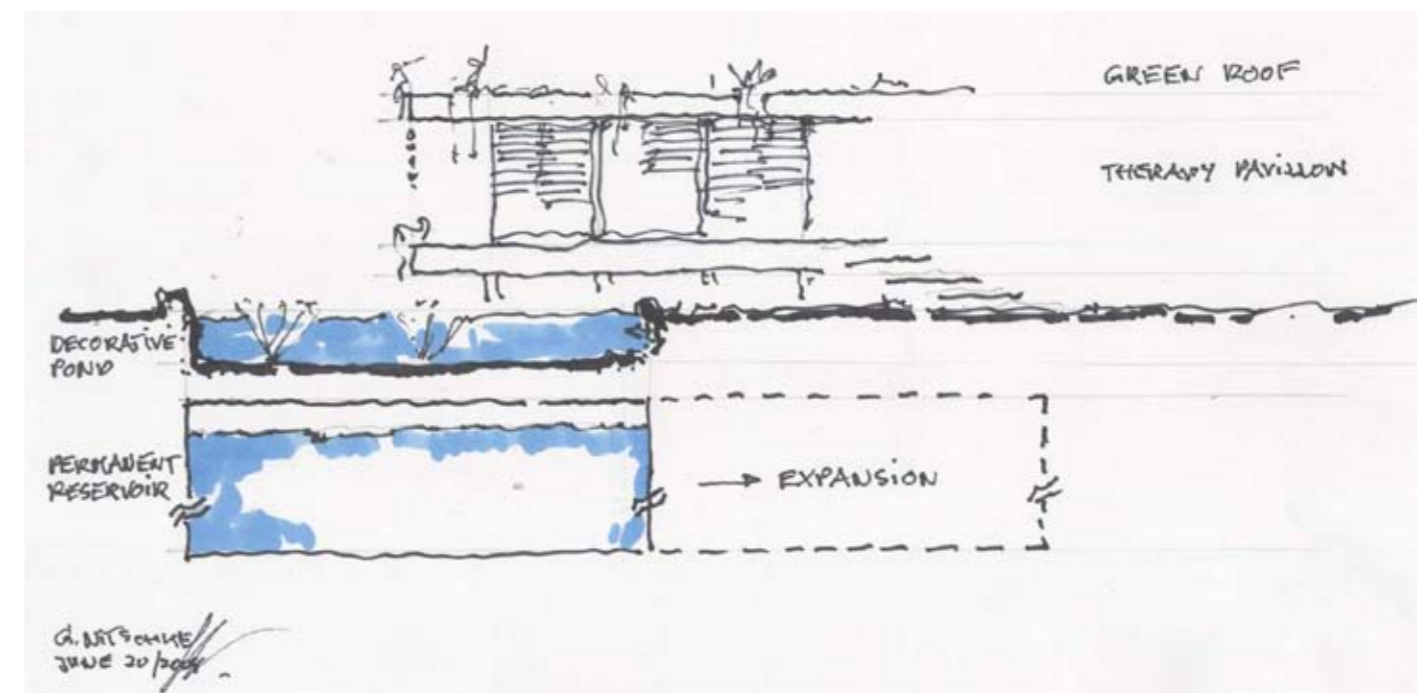
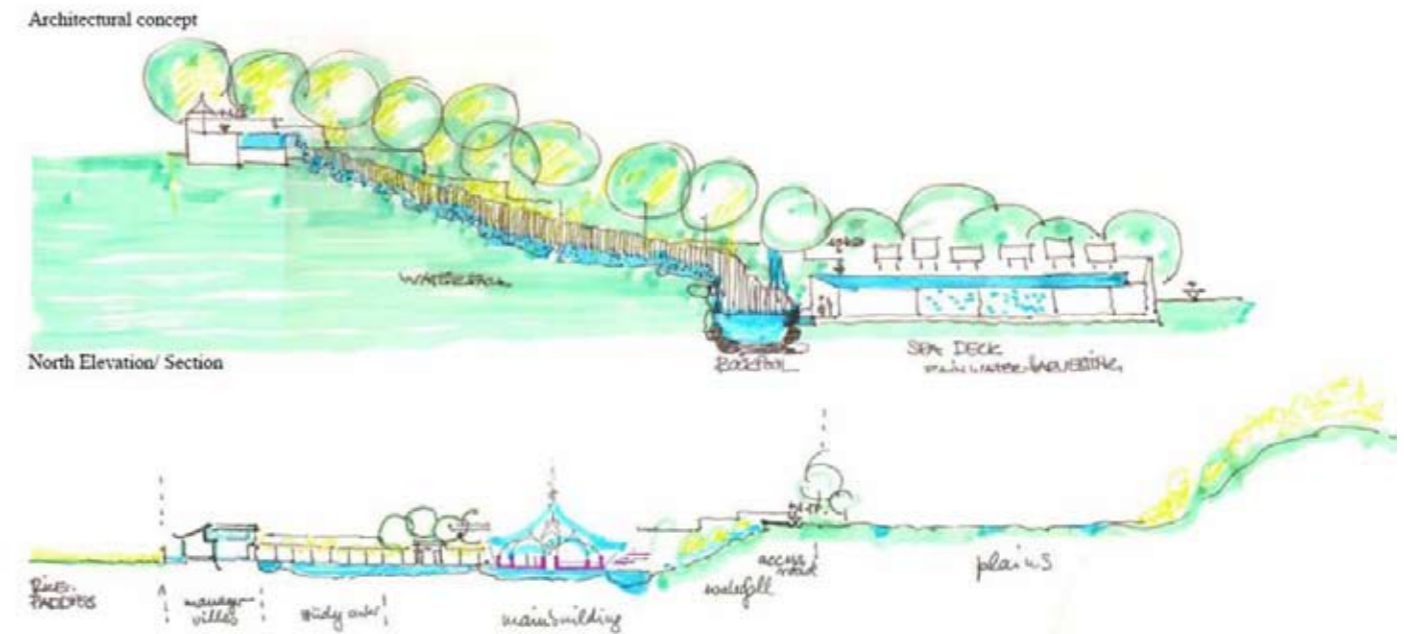
In detail, the 20 villas are designed to have outdoor areas, each with an inside-outside bathroom, a soak pool in timber and a space for massage or herbal treatment in the private atmosphere of their villa. Two luxury villas would have an additional hot water pool. 7 of the total 20 villas will have air conditioning, all other buildings are designed with a passive cooling system.

In layout and form each villa is designed differently; the 5 clusters are to be built on stilts and at different levels, with water or green on the roofs, and each villa would be dominated by the unique fragrance of a particular tree. Each cluster has its own pond from which to water the garden. The rivers are designed to fall over the roofs or in between buildings and meander their way down to the chain of lotus ponds.

Landscaping - Necklace of Lotosponds

The described landscape concept is based on the desire to celebrate the spirit of the land, to use renewable energy and water resources available and to design a recreation area where one remains in ever-present contact with the unique existing natural environment.

The mystery and main attraction of the Goddess-Spa will no doubt depend on the sensitivity with which a necklace of linked lotos ponds is designed to transverse the site from north to south. This chain of lotos ponds will become the very backbone of the Spa as a whole. It will be seen and felt from the individual cottages, the entrance complex with restaurants and coffees, and the massage and therapy pavillions. The landscaping of these linked ponds with their feeders, that is, the main waterfall in the north and the smaller rivers down from the hillside in the west will determine the success of this project.



Energy and Water Management

The energy demand for the entire resort hotel is generated by architectural low tech solutions and additional high tech elements. The flow of water, geothermic and air temperature, solar radiation, wind power, modules of glass windows, are all used to generate necessary the energy for a completely self-sustainable Resort Spa as whole.

To feed "the plus" of the generated electrical energy back into the community grid would save costs for energy storing in batteries. Estimates have been worked out for the electricity supply and demand of the Resort and the amount which can be fed back into the local net. An emergency generator is needed to provide energy during power cuts and low phases of alternative energy supply.

The harvested or recycled rain water will feed the streams by re-circulating water in the dry season and reusing it in the villas. Sprinkler systems will be run on solar energy in the dry season. During the rainy season gardens don't need additional water.

Permission to use wind power will be requested from the forest department, since the location of the site is close to the high hills in the west which would be the best location for potential wind-generators. That would provide enough energy for the hotel as well as for the village.

The **Monsoon Season** is a special challenge for our renewable energy concept as the monsoon season is also the high peak season for the resort Provision has to be made for 50 to 80 guests to enjoy the streaming rains and the beauty of the land with all its waterfalls, rivers and lush green. In the rainy season tremendous amounts of "run off water" will be collected. Water harvesting basins are designed in a way that they can channel the flow of water into waterfalls, rivers and ponds. Permanent water reservoirs buried underground could easily accommodate the the fluctuations of water during the three seasons.

Needless to say, during this season solar energy utilization is reduced close to zero, but during energy during this season is generated by a variety of heat exchange devices using the temperature difference in water, air and soil.

The **Dry/Hot Season**, calls for provisions for the cooling of buildings, water heating, light facilities, as well as energy to pump grey water back into the water recycling center on top of the hills constructed under the deck of the swimming pools. In the dry-hot season energy is created mainly by solar radiation and heat.

