

# Ban Mai

methodology ■■■  
 local development ■■■  
 renewable energies ■■■  
 ressources management ■■■  
 materials ■■■  
 process ■■■

Wongsanit Ashram is a local development organisation which offers workshops and courses while training people on the site. In this particular case, the workers produce bricks during two months and will use them subsequently during four months on the site. They therefore train through practicing and will thus be able to build with raw earth by themselves in the future.

Wongsanit Ashram est une organisation de développement local qui propose des ateliers de formation aux techniques de construction. Ici, les ouvriers produisent des briques pendant deux mois qu'ils mettront en oeuvre les quatre mois suivants dans un projet de complexe hôtelier. Ils se forment en parallèle à l'auto-construction et acquièrent des savoirs faire qu'ils pourront exploiter pour des projets personnels.



## Traditional technics and contemporean architecture

### project

**Function**  
Hotel complex on the seashore composed of 50 twin pavillons.

**Building owner**  
Private hotel

**Type of property**  
Private property

**Opening date**  
October 2004

**Surface**  
3000 m<sup>2</sup>



### process



**The site**  
Once moulded, the bricks are dried in the sun during 2 weeks without being watered. Once hardened, the construction modules are ready for use. Cleaning the surface which is in contact with the ground is nevertheless necessary. It is worth noting that when drying the bricks take on a less saturated tint. The site is composed of two camps of 12 and 18 people. A real social organisation is set up within the group where everyone has a role to play.

**Prefabrication of raw earth bricks**  
The site chosen for prefabrication is situated 12 km away from the construction site. This site was chosen in order to reduce the energy linked to transport (12 km from the construction site and 6 km from the earth extraction site) and because of the presence of a water supply point. The buildings which will be constructed with those bricks which be composed of 2 storeys at the maximum and walls will be 8 meters high.

**Surface**  
3000 m<sup>2</sup>

**Type of building**  
Hotel complex in a rural area with tourists

**Geographic morphology**  
The site situated 80 km away from Bangkok is flat, with unexpected chains of mountains in the distance. The luxuriant vegetation is composed of palm trees, coconut trees and eucalyptus mainly. The construction site is sandy (about 10 m away from the shore).

**Process**  
The earth used to fabricate these bricks is rich in iron oxides, hence its highly saturated ochre tint. The composition for one brick is:  
 - 50 % clay  
 - 30% sand  
 - 20% vegetal fibres coming from local rice production



**Setting bricks up**  
Bricks are piled up one top of one another and jointed with the same mixture as aforementioned (c.f. process). The finish is handmade and is composed of a mixture of bovine excrements and earth, like the one used for floor-covering in Rajasthan (India). In order to protect the upper part of the wall against rain erosion, wooden dripstones are nailed on lengths of wood which are themselves fixed to the wall. In order to stabilise the earth and give it a very light tint to prevent heat absorption, the walls are then whitewashed.

