

LOW RISE HIGH DENSITY OPEN BUILDING FOR AFFORDABLE URBAN HOUSING

Towards places where love can flourish

by ir. Frans van der Werf,
architecture, urban design and consultancy

SUMMARY

One third of all city residents, actually more than 1 billion, live on city outskirts in slums. Those people are poor, generally come from the country side and stake out a piece of land to improvise their illegal homes, depriving themselves of basic services and an adequate environment. They try to find work and live on top of each other, in sometimes more than 67 small units per acre (165 per ha. Colombo).



While looking for appropriate answers authorities have tried to replace those improvised settlements by high rise apartments, walk-ups or prefab cottages. This does not work. High rise buildings are much too expensive and alienating for those people, who mostly are originating from the countryside. Cottages and walk-up dwellings are less expensive, but they lower density so much that a high percentage of the people, evicted from slums, would be forced to find other places to settle.



High rise in Colombo



Walk up in Colombo



Prefab home for Africa

Open Building

As an alternative to those initiatives we want to introduce an 'Open Building' upgrading approach within a clearly defined existing area, characterized by:

1. Solid low rise 'base buildings' around courtyards and along parking streets, lodging at least the same number of occupants as before. The empty base buildings, with 40 cm thick standardized walls and floors, will be occupied and filled-in by the users: residents, artisans, artists, local cooks, shopkeepers, etc. A whole neighborhood.
2. Half of the roofs of the base buildings will be covered by fertile soil for vegetable gardens. The other half will store rain water and be provided with solar systems, becoming the local source of energy;
3. In some courtyards water might be provided by pumps on solar energy. In other courtyards grey water might be purified by helophyte filters and biodegradable waste could be composted.



Base buildings, streets and courtyards

In our vision those simple solid base buildings might have a lifetime of over 200 years, and could be realized by a government through a once-only investment of the usual subsidy per dwelling, or by hiring out the space for minimum rent during the first ten years of occupancy.

A local electricity company might realize, maintain and exploit half of the roofs as solar systems, while the overflow of sun will offer good profit. This profit might also be used towards the supply of local water and for sewage purification, public lighting etc..

The project has a floor area ratio (FAR) of 1, including streets and courtyards . It will house more than 200 units per ha of 45m² average on three floors and could leave sufficient outdoor space for social life and local traffic. By the long galleries a limited number of stairs and hand-elevators make all floors accessible, also for handicapped people.



Simple solid base buildings + solar and vegetable roofs

What are the **benefits**?

1. This project offers to all people a solid roof and basic services free of public charge and independent of public facilitators.

The courtyards as 'gated communities' provide a greater safety.

Occupants are offered freedom to define and realize their private homes according to their own taste and means.

Our proposition enables, contrary to high rise buildings, all sorts of small scale commercial and cultural activities on the ground level, as an extension of, or close to the private home.

2. The project will upgrade part of the city by a durable reduced public investment in base buildings, in streets with limited dimensions and in self supporting services.

3. It uses the existing creative energy of the occupants, which will stimulate initiative and responsibility in community life and provides everybody with a more dignifying healthy environment and life.

The aim of this paper is to introduce the principles and the application of Open Building, illustrated by a possible pilot project up to 1000 units.

