

programme and brief

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01. Image of street activity in Yeoville (by author)

IMAGES

Brief - Project Definition

The project is the design of a modular prefabricated housing prototype and system which can be applied in different contexts. The modules are combined together in different ways to create different types of housing with different densities according to the place they are employed. Different combinations and variations can be made allowing it to adapt to urban contexts with street facing facades, areas with uneven terrain or to become an infill project to complete the city by occupying wasted space.

From the research conducted it has become clear that the recent xenophobic attacks were caused by the competition for scarce resources between the urban poor, refugees, asylum seekers and foreigners in the country. Because of this the system is to be developed using 3 test studies. The first will be as an infill project in the dense urban context Yeoville providing cheap rental options in the inner city for the urban poor. This will cater for South African migrant workers in the city as well as for immigrants in the city. This will be seen as an alternative to urban slums. The second study will be as a way to upgrade shack settlements by looking at an existing settlement in Orange Farm Township south of Johannesburg. This can be seen as an alternative low cost housing model for upgrading informal settlements. Finally the third will be as a contingency refugee camp in the case of a mass influx of refugees into the country due to the political instability of our neighbouring countries. This will be as an alternative to the typical UNHRC model for a refugee camp.

In the context of urban sprawl in post apartheid Johannesburg, the focus of the program will

be on mixed uses, public space, humanizing of streets, thresholds and links between public space as well as private spaces.

Important aims

- Create higher density development to oppose suburban sprawl
- Create an architectural solution that can help satisfy the need for affordable rental accommodation. This will be used as an alternative to help relieve the current housing deficit in South Africa. Offer an sustainable alternative to backyard room renting and urban slums.
- Utilizing wasted space in the inner city creating an urban neighborhood rather than suburban sprawl.
- Create enabling environments which are flexible enough to allow people to express their own ingenuity.
- Use courtyard spaces and thresholds from private to public realms.
- Allow for incremental growth and flexibility for the scheme to be able to adjust to a large variety of user groups.
- Use of streets as extensions of public space.

Program

Definition of final user

The future users will include a wide spectrum of people from different backgrounds such as asylum seekers of all ages, migrant workers, single people, single parents, couples as

well as growing families with low monthly incomes of say between R500 and R1 500. The system will have to be adaptable to accommodate a wide range of people.

Definition of Urban Infill Intervention in Yeoville and proposed density

- Create a housing module that will be grouped into clusters of different combinations. An element of incremental growth will be considered for the intervention.
- The recommended density will be between 150 and 450 people as the existing densities in Yeoville vary across the suburb.
- Various vacant sites will be identified for urban infilling.

Definition of Shack settlement Intervention in Orange farm and proposed density.

- Low rise high density model to be applied using a housing module that will be grouped in different combinations around existing informal housing so people won't be displaced in the upgrade process. There will be major focus on incremental growth.
- The recommended density will be 150 people per hectare.
- The scheme will be an urban intervention incorporating community, civic, commercial functions into the neighbourhood. It will also look at the separation of vehicle and pedestrian routes.

Definition of Musina Contingency Refugee Camp

- A density of lower than 150 units will be employed due to health concerns and fire hazards.
- Modules will be applied in the landscape creating clusters based on the UNHRC specifications of 8 units making up 1 cluster.
- The scheme will include all UNHRC specified amenities including market places, cemeteries, medical facilities, feeding centres, warehouses, distribution centres, schools, recreation facilities and facilities for religious rituals.

Definition of Individual Prefabricated Module

- The use standard factory produced materials to allow for mass production.
- Built in furniture and storage to aid users.
- Standard sized module which can be transported on a truck.
- The use of standard sized sandwich panels and standard sized doors and windows.

Other important considerations

Designing of the private space

The units, flexible to suit the intended users should also be environmentally comfortable regarding light and ventilation. The communal courtyards must be designed as an outdoor extension of the units with shared ablution facilities. Some of the units must allow in a limited for incremental growth (for example units catering for growing numbers in families). Each unit of +- 24 square meters must be

simple yet sophisticated solutions. Each unit must have facilities for cooking. Semi-private and public spaces

The semi-private spaces which include the courtyards between the units should have an aesthetic appearance. The semi-private spaces will allow for social interaction and should be designed as shared spaces and need to be able to facilitate the moving in and out of different residents. These semi-private spaces should also allow for incremental growth with certain units and facilities for disabled persons.

Public spaces

The public space must be designed for a multitude of communal activities e.g. socializing and play spaces. There should be places for parking of vehicles. These spaces should also have an aesthetic appearance. The materials used should be durable, inexpensive, easily obtainable and easily maintained. On the ground floor i.e street level, there should be facilities for spaza shops, workshops, offices and other functions such as crèches and meeting places. Thus some of the units shall have overlapping uses to provide communal benefits to the various residents. Larger public spaces will contain recreational facilities, civic and commercial functions.

Public spaces and the street as an extension of public life

The project should also give thought to the public spaces around the streets outside the complexes. Some of the considerations

include the widening of the pavements, pedestrian crossings, speed bumps to prevent cars from driving too fast in this public space and treatment of street surfaces etc.

Safety and security

The way that the units and spaces are grouped and designed should allow for visibility and surveillance.

Sustainability

Quality controllers and inspectors should be appointed to check and supervise the assembling of prefabricated units. There should be a caretaker for each cluster of modules who have sufficient knowledge of maintenance and obtaining funding for maintenance. Other factors to be considered are climatic conditions, and insulation of units. Use of inexpensive yet durable building materials is suggested. Other energy and money saving devices include installation of solar water heating system, low flow water taps to save water and prepaid electrical meters to prevent wastage of electricity. Use of standard windows and doors that are sturdy, inexpensive and easily recyclable is recommended. Units will also be easily dismantled and re-assembled or moved as required.

Green urban regeneration

Green interventions will be considered necessary for the general welfare of the targeted residents. These include the planting of indigenous trees and lawn patches.





