TU Delft

Architecture & Dwelling

TU DELFT | FACULTY OF ARCHITECTURE AND THE BUILT ENVIRONMENT
DEPARTMENT OF ARCHITECTURE | CHAIR OF ARCHITECTURE & DWELLING

REFLECTION

Master of Architecture, Urbanism & Building Sciences

A - Personal information

[Full name] Xiaozhu HUANG
[Student number] 4617460

B - Studio
a) Name / theme of the studio:

Global Housing Graduation Studio:
Mixing Mumbai. Affordable Housing for Inclusive Development

b) Tutors:
Prof. Ir. Dick van Gameren
Dr. Ir. Nelson Mota (
Rohan Varma (

C - Graduation Project
[Community-oriented housing without developers :
Redevelopment project of Baithi Chawls in Nalasopara, Mumbai]

D-Reflection
In the reflection the student uses a short substantiated explanation to account for the preliminary results of the research and design in the graduation phase (product, process, planning). The choice of method (how) and argumentation (why) which preceded the research, was a part of your study plan – the reflection must contain an answer to the question of how and why the approach did or did not work, and to what extent.

Research:

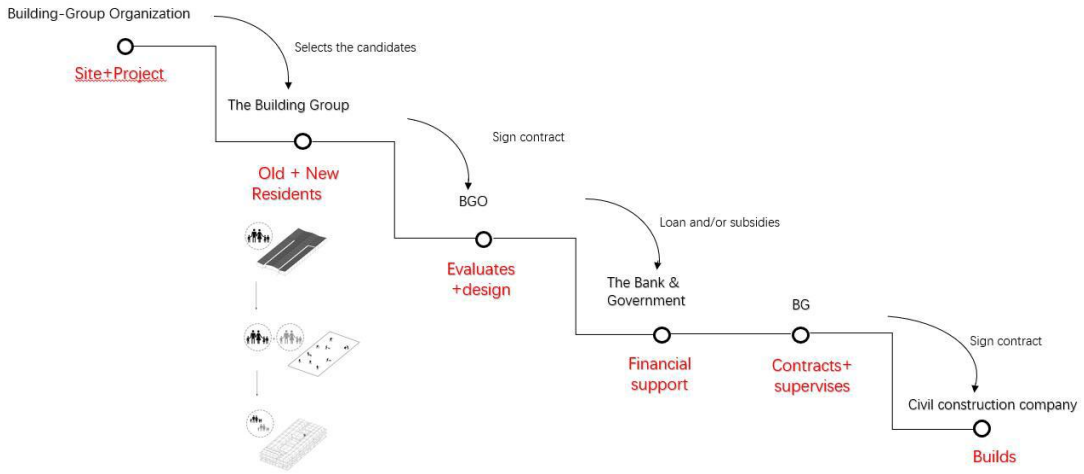
Indian Architect Charles Correa said that "If adequate housing is not appearing in our cities it is sign that something wrong with the system.Our job is to understand the malfunction and try to set it right". As India's economic capital and most populous city, Mumbai has a total population of 12.44 million — 60 percent of whom live in slums,while half a million flats are left vacant there.When I came to the housing issue of Mumbai,I first turned to study the housing policy in Mumbai and tried to find out the main reason why majority of people can not afford decent houses but live in slums. Mumbai is among the first cities in the world that have adopted a market-dominant model to redevelop slums.The expansion and persistence of slums in Mumbai is primarily a function of failed housing policies combined with other political factors. Therefore, I was wondering that except adopting this market-dominant model, is there any other way to redevelop slums ? As architects,how to provide affordable housing for urban poor and how to give the most with less money?

I put forward a new housing system model-Building Group Model -to replace the market-dominant model for redeveloping slums and providing more houses for urban poor.In this model, architects and dwellers can get rid of developers and

remove Builders profit as well as improving the quality of their living environment.Under the architect's guidance, or to say under the guidance of a NPO/NGO made of archtects,residents can become clients by forming a building group in order to purchase the site that architects suggest for their particular project, and then the architects can give designs according to the situation of different building groups.

In my opinion,architects can do something way better than just designing or constructing in Mumbai. For them, developing strategies together with building group to achieve housing solutions with smaller scale practices that not only address today´s necessities, but also indicate the future tendency when it comes to slum redevelopment for urban poor in Mumbai. When the government can not really accommodate large numbers of people living in slums, instead of expecting and waiting for the capitalist doing somethings good for no reason, people can turn to figure out how to create settlements and improve the life quality by themselves, and give a bottom-up answer to redevelopment of slums.

With the idea of Building group Model,I started to search for the case study about housing without developers and tried to figure out how the model could wor.According to the reference of three housing projects without develpers,*SmartHoming in Germany,Minga Casa Minha Vida in Entidades and Chaekop Site&Service Scheme in Mumbai,* I tried to give a proposal about how the building group model system could work.My main idea is about this:



To begin with,Building group organization most made of architects would give a proposal of project for one site and put it online.LIG and MIG have access to all the information about the project. The old residents living in that site can apply for this program and have the priority to be seclected as the candidates for a building group by the organization.Then the building group can sign a contract with the organization to entitle them to evaluates the whole project and give a

design according to the building group's situation.As for the fanacial support, the organizaiton can help the building group to apply for the loan or subsides from the government or bank, which may be more effective and effienct comparing to individuals applying for money in Mumbai,especially for urban poor.Later,the building group can select which civil construction companies to work with and supervise the whole construction process by themselves,their participation correspond the actual construction cost.

In the model, the dwellers participate the whole design and construction process and can really have a say during the whole project.There are two main benefits: one is the building group can take charge of and manage the budget of the house cost, the other is that the design can be given according to residents' needs and requirements.

Significantly,the concept of the building group is not only a strategy about housing affordability for urban poor,but also can be a design strategy to create a settlement with good living enviroment.One building group can form a community with shared open spaces and facilities.

"In the Indian's village environment,there is always space to meet and talk, to cook, to wash clothes .There is always a place for the children to play" said by Charles Correa.The traditional old village is a community for all residents , it is an acquaintance society ,where people know each other and are more willing to help each other.I want to design a community where they could gain a feeling of belonging and sense of home just like the old village of India.

Therefore, I did some research of Sopara's old village which is located in the west of Nalasopara ,and wanted to know what's quality of this village's structure and open spaces.

It was a self-growing village.At first,the primitive village had one core,residences developed along streets, communities with the small courtyard started to appear.Then,small-courtyard communities evloved to bigger communities with the bigger courtyard.However,there is the maximal scale for one community in Sopara's old village.The courtyard can't grow bigger with the limit of road networks.
In addition, as for the study of old village's open spaces, I tried to identify different communities from the clusters' fabric.According to clusters'structured boundaries and shared courtyards of the cluster, different scales and graphic patterns of the communities can be identified. From the atlas,I found out that there are just several big communities with more than 100 households and also not a lot of small communities with less than 30 households, but the medium size communities of about 50 households are at most.

To conclude,my research has two main parts:to propose a tentive building group model system as a housing solution without developers and to study old village's structure as a scale standard for building group communities.

Design:

The topic of my project is housing redevelopment of the Baithi Chawls in Nalasopara of Mumbai. Instead of adopting Top-down strategy to make a clear urban planning with largr public open spaces and produce low-density and high-rise apartments, I use the concept of building groups as my starting point for my project and intend to create self-growing communities with high density but low-rise housing and with small open spaces for each community.
First,as for urban strategy,it is not ture that there can exist one clear urban plan at the very begining, and also people would not demolish the baithi chawls and build new block exactly as planned if there's one.Because building group model is a bottom-up answer to slum revelopment and the whole process of baithi chawls area's redeveopment could not really be controled.Even though there are endless possibilities of urban planning, but the footprint of the transformation can be kind of predicted according to the context and I can give one possibility of the urban plan for building group communities.
Like what I did for my research part about study of the sopara's old village,according to existing fabric and the size of different building group, different Baithi chawls' clusters from 30 households to 90 householdscan be identified from the atlas and the baithi chawls area is divided into various sizes and shapes of sites for differeny builidngs groups.
Secondly,it turns to the house design.As for my design assignment,I need to at least accomadate the current inhaibitants living in the Bathi Chawls area and create different building group communities,in other words,my task is to provide high-density& low-rise houses for different building groups.Therefore,at the dwelling level,I have to design house types with quality of flexibilities and diversities to meet the need of various socio-economic groups.At the community level,I need to think about creating a settlement where a sense of continuity of fundamental values of security exist and to plan a good living environment for different building groups.
With the reference of the prototype of old village's community in Sopara, we can see structured boundaries and shared courtyards in all clusters.I intend to design building group communities with same qualities like in the old village.
In order to form a complete courtyard community, there should be at least three house types of diffrent qualities located in three position around the courtyard,which are outer house、corner house and center house.

These three house types can be combined in various sites and have endless configuration.At the same time, I have to think about the density for the

coummunity and decide the levels of houses to make sure new community can at least accomadate all current dwellers in Baithi chawls.

Moreover,in order to reduce the construction cost, I adopt incremental strategy for housing design and the house can grow with the owner's requirements and his earning capacity.Sometimes they may even add a new housing unit and use the rent they receive to further improve their homes.

To conclude,my design description is