POLITECNICO DI TORINO SECOND SCHOOL OF ARCHITECTURE Master of Science in Architecture <u>Honors theses</u>

New Transit Camp: a process of requalification in Dharavi, India by Miriam Bodino and Fabio Colucci Tutor: Paolo Mellano Co-tutors: Korde Bhau, Echanove Matias, Srivastava Rahul

None of what has been written in this Thesis would have been possible to write without the direct experience in Mumbai. Living one month with the people, within the streets and the lanes of Dharavi, considered today the more populated "slum" of the world, has given us the possibility of observe and comprehend some of the complex dynamics of Indian informal settlements. Dharavi is not only the biggest informal settlement of Asia, with poor hygienic conditions, but it is a great example of democracy and peaceful relationship between hundreds of different religions, languages and cultures.

This fragile balance has made of Dharavi the most heterogeneous and productive place of the City (despite that it occupies less than 5% of the city's land, it produces 60% of the GDP). The area has become very desirable for possible future investments in the real estate market due to its actual location in the heart of the city, generating interests at national and international level. This has given birth to some requalification hypothesis, such as the *Dharavi Redevelopment Plan*, with doubtful results towards the needs of the present people living there.

To work in such an informal context, as stratified and complex as this, has made it necessary to concentrate part of the research to studying the reality of "slums", not just inside of Indian borders. This work was born by cooperating with the URBZ Association, which is settled and works in New Transit Camp (Dharavi's neighborhood). This association promotes initiatives in which Dharavi's inhabitants are asked to participate directly, and in this way, making themselves contribute in the improvement of their own conditions. This bottom-up approach reflects the design and research methods proposed in this Thesis.

We took part in a workshop organized by URBZ, where we carried out a metric survey of a typical building in New Transit Camp, whose material, dimensional and historical characteristics, alongside its role within the context, can be considered common to the whole neighborhood.



Bird eye view of the New Transit Camp neighborhood

When studying and intervening an *in-formation settlement,* it is not possible to exclude the study and direct observation of that which already exists. Therefore, when defining the aims to reach it was important to take in consideration certain aspects: to respect the very high density of people, to improve today's drastic hygienic conditions, to distribute very small homes and productive units, and to fulfill the lack of places for distribution-aggregation and open spaces. It was necessary to make a distinction between positive and negative aspects. The first ones are mostly referred to the social dimension and as so, are elements which must be maintained and strengthened in a requalification proposal; whilst the second ones are lacks related to the physical aspect of the reality, which needs to be improved or solved. Therefore, the first part of our proposal was based on a hypothesis of intervention on the existing, in order to solve some of the sanitary conditions. In particular, the proposal consists in the intervention on the water and sewage system and the introduction of shafts to bring light and air into the existing small lanes.



Hypothesis of transformation in phases

The second part of the research consisted in a transformation in stages of the existing, by introducing a new housing type, which respects the strong social networks that already exist while solving, at the same time, the physical problems. The great advantage of a gradual transformation is linked to the possibility of verifying the effectiveness of the project during the process, and leaving open the possibility for any necessary adjustments.

The construction method suggested for building the new blocks consists of a prefabricated dry assembly system, with an internal honeycomb structure made of recycled paper. This technology has already been tested and used in the Vaspar Ecosolution, based in Bangalore. This system would involve the people of Dharavi in the production of the construction panels, promoting a bottom-up requalification and, at the same time, giving them a key role in the transformation of their neighborhood.



Section of the proposed typologies

For further information, e-mail: Miriam Bodino: miriam.bodino@gmail.com Fabio Colucci: fabiocolucci@hotmail.com