

## Reflection-Urban Architecture Graduation Studio

Urban architecture studio focuses on medium-scale urban sites and aims at critically evaluating and intervening in a specific urban context. In this year's graduation studio, a block in Anderlecht of Brussels is selected as the project site and "Spolia" is set up as the theme. In the first place, a collective research was conducted in P1 in order to gain basic and relatively comprehensive understanding of the site. Then an individual research based upon P1 collective research follows in P2. Both of the research are intended to establish the foundation for the subsequent design process.

### Collective Research

The collective research is comprised of five sections, namely "Unstable City", "Zenne", "Living & Working", "Whose Neighborhood" and "Bricolage", each of which is in the charge of one group. All of the five sections involves not only the block itself but also the broader urban context of Brussels.

"Unstable City" focuses on the continuously changing urban form of the block and its neighborhood. "Zenne" studies the river Zenne which is covered, violated and relocated throughout Brussels. "Whose neighborhood" is concerned with the diversity of people living in the neighborhood and their occupation of public and private spaces. "Bricolage" explores the notion of spolia both in general and specific to the chosen site. And in our group of "Living & Working", we investigate the mix of working (production) and living (residence) on different scales throughout Anderlecht in order to answer the following question: How are working and living programmes spatially and programmatically organized in the city, in urban blocks and in buildings?

Firstly, we conducted a historical research to identify the factors that influenced the industrial development in Brussels and resulted in the hybrid of living and working on urban scale. A timeline was applied as an analytical tool and also became the final outcome, demonstrating the effects of influence factors through history and the evolution of production sectors especially with respect to spatial distribution. Secondly, we identified and classified present programmes in the selected area of Anderlecht and then analyzed them through mapping. One of the two maps illustrated the distribution of production buildings and areas, while the other one indicated the strength of productive activity by the proportion of production area to living area. Thirdly, we studied the blocks selected from the maps, in terms of the relation between working and living. Through the study, nine types of mix-use blocks were defined according to the arrangement of living and working spaces inside the block as well as the accessibility and perception from outside the block. After that, the nine types of block were abstracted into diagrams and a matrix was made to categorize the blocks from a typological point of view. Further, we selected three representative blocks for detailed study and figured out through diagramming how the

working and living space interact with each other and how the block functions as a whole. Finally, we moved onto architecture scale and a section model revealed how living and working spaces arranged spatially in a cluster of buildings.

Through the collective research, I found that urban blocks are the most evident and characteristic urban elements that reflect the diverse and lively mix of living and working in Brussels. And the integration of production into residential area as well as continuing urbanization have posed a significant impact on formation, composition and appearance of urban blocks. However, since the intervention of modern urban planning and the consequent deindustrialization of urban area, a large number of characteristic urban blocks have been gradually broken down, which means a loss of a valuable traditional urban tissue and the lively mixed urban life inhabiting it. Our site block in Anderlecht is exactly a typical case that reflects both of the processes.

### **Individual Research**

After P1 study of “Living & Working” on the basis of urban block, I was interested in the intermediate role urban blocks play in between architecture and city, individual and collective, privacy and publicness. Therefore, I continued the research on the medium scale with urban block as study object, but in a more general perspective. The research is intended to answer following questions: How do urban blocks articulate collective and private realm? And how do urban blocks facilitate the transition from public space to private area? In order to answer these questions, six representative perimeter blocks across from western Europe were selected as study cases. They are Amsterdam Het Schip built in 1920s, Madrid Casa de Las Flores built in 1930s, Marseille Cité Radieuse created in 1950s, Berlin Ritterstrasse-Nord Block reconstructed in 1980s, Berlin Schlesisches Tor Block restored in 1980s and Barcelona Càndida Pérez Garden Block dated back to 1860s and renovated in 2000s.

The cases are studied in the aspects of contextual relationship, spatial and programmatic composition and treatment of façade in different orientations. The results are visualized. First, the site plan illustrates the relation between the block and its surrounding blocks as well as public space. Then, the plan and sections demonstrate the spatial and programmatic composition inside and outside the block and indicate the accessibility and visual connection among the spaces. After that, photos of the inside and the outside of the block are compared, showing the different treatments of perimeter facades and their contribution to distinct spatial atmosphere.

P1 research on the mix of working and living in Brussels and P2 research on intermediate urban blocks help me decide my focuses of the design proposal, that is, a well-organized mix of working and living in urban area on the one hand and a well-defined block structure that facilitate such a lively mix on the other hand. These two focuses remain consistent through the design process on both urban and architectural proposal.

## Design Approach

The design approach is built upon research results. As we did in P1 research, we approach the design assignment in different scales, namely, city (or rather, urban block), architecture and material.

### Urban Block.

The site block is characterized by fragments dated back to different times. Among them A high-rise social housing dominates the sky and a traditional pieces of urban tissue with typical mix of working and living remains. The aim of intervention is to reinstate the block and enhance the existing coherent mix of working and living, both of which are intended for a lively community life.

The proposal is inspired by previous research and the excursion to Berlin. Its concept is to reshape both the edges and the heart of the block in order to bring fragments closer to each other and also to the surrounding context. Firstly, the remaining piece of traditional urban tissue along Rue des Basins is preserved and a new infill structure is introduced to restore the west block perimeter. This new building integrates with an existing large industrial building (Rotor), which is going to be transformed, and form a productive complex providing diverse productive and educational spaces. Secondly. The high-rise Les Goujons housing and its new community restaurant are kept, while the isolated social-housing at the north end of the block and the existing park to the east are replaced by a new social-housing development and a new urban park. This new housing development is intended to mediate between Les Goujons and surrounding context. It reshapes the north block perimeter with the new urban park serving as a replacement of the existing one that will be built, and the east perimeter with a series of community services. Thirdly, workshops in the south corner of the block will be shifted to the new productive complex, while a new sports center and residential building takes their position, defining the new urban square together with the on-going Citygate project. Finally, a courtyard is created in the center of the block, shared by both residential and productive buildings around it.

### Architecture.

The architecture proposal focuses on the productive complex. As an integral part of the block, the complex is a specific project responding to the aims of urban intervention. It's intended to provide not only working space in various sizes but also common facilities shared by habitants of the block and educational programme contributing to a social environment. In this way, interaction between production and education, among different working groups and residents will be fostered and a positive community life will be facilitated.

The proposal is based on P1 research and case study in both Berlin and Brussels, such as Aufbau Haus and Exrotaprint in Berlin and Novacity and Merchandises in Brussels. The

productive complex is composed of the transformed Rotor building and a new infill structure. Its organization refers to the adjacent mixed urban tissue, featuring an atrium and several courtyards. The Rotor building is transformed to accommodate workshops of different sizes, Rotor's business and a shared atrium next to the central courtyard. Its steel frame is kept but slightly modified to meet new spatial requirements. But its enclosure is totally rebuilt for better thermal performance and a brand-new appearance. The new infill structure is further divided into two components. The one along Rue des Bassins houses ground-floor workshops which are connected with the atrium, upper-floor studios offering living and working space for artists and a roof garden shared with Rotor building. The other one in the depth of the block is occupied by educational spaces and an auditorium. It is connected to the atrium via a small entrance hall at north end and a cafeteria opening to the block courtyard at south end.

### Materialization

Materialization responds directly to the theme of Spolia. The aim of the materialization in my proposal is to reuse in-situ material and components as much as possible and at the same time introduce reclaimed materials, which are supposed to be in line with the architectural concept, from other sources.

The proposal consists of three aspects. First, the materiality will not only correspond to the programmatic characteristics of different buildings, but also form consistency among them to some extent. Specifically, the studio building along Rue des Bassins is clad in reclaimed brick in order to blend in surrounding brick houses. And the Rotor building and the educational building are composed of a brick-clad ground floor showing the consistency of brick from the context and upper floors covered in aluminum sheets reflecting their productive identity. Secondly, the material and components dismantled from rotor building is either reused in the new project or put back on market. Besides the steel structure, two of the three elevators and all the sanitary equipment will be reorganized and the tiles on both floors will be reused as pavement in the new building. Also, the aluminum panels on the façade will be integrated into the new façade. Thirdly, salvaged timber will be upcycled in the project. It will be used to line the interior of workshops and build new furniture in public space. The timber lining can be used as working surfaces and switched out as needed, and the furniture made out of recovered timber will also improve the working atmosphere.

### **Reflection and Wider Social Context.**

In recent years, with the rising awareness of the importance of productive economy in the city, dynamic investigations and initiatives have been set up in Brussels in order to study the possibility and potential to reintroduce productive activities to urban area. These efforts not only result in specific architectural projects but also promote the development of planning tools like ZEMU and Canal Plan. And my proposal is actually an individual study on integrating productive activities into existing urban area. But apart from that, I also try

to respond to other general social demands. For example, the new social housing development is a direct response to the increasing housing pressure, and the added community service is aimed to enhance the residents' continuous attempt to improve their living environment. Besides, the proposed educational programme of in the productive complex is designed to train craftsmen and technicians in order to deal with low-skilled labor and high unemployment problem in the community. This is a way to connect production with community and connect people working there with people living there. And all of these responses and strategies are built upon a restored urban block structure, which provides shared outdoor spaces for greenery, activities and buffer area between working and living whose coexistence and interaction are therefore facilitated. In my opinion, reintroduction of productive economy in the city is not simply reintroduction of a different activity from living. It is supposed to become an integral part of the community and the urban structure in some way. And it is supposed to not only make products and provide employment, but also take responsibility for a healthy community life and better urban environment. In my design, this is proposed to be realized by a well-organized urban block and interactive programmes.

One significant issue, when it comes to integration of production in urban area, is how the coexistence between living and working is achieved. During the research and the design, I realized that most of the time, the type of production is not the most important, though it still matters. It is the way how the production is spatially and programmatically organized that makes a huge difference. What I learned from Brussels traditional urban tissue is that working and living activities normally respect each other and get used to each other, with occasional conflicts settled through negotiation. Therefore, I think most of the light industry is able to coexist with living space with necessary protection methods and well-organized programme. The former can be achieved by design such as providing a buffer zone, an insulation layer and dust prevention, while the latter depends on mutual respect and negotiation between living and working

Finally, I gain new understanding about design involving Spolia. The concept of Spolia is not limited to materials and components reused in new building, but covers a broader range. In my case, the traditional urban tissue featuring the mix of working and living, the way people working and living in such tissue, the existing buildings, materials and equipment are all considered as spolia, although some of them are immaterial. They are referenced or directly reused in different phases of the new project in order to establish the connection with local context and memory. But anyhow, recovered materials and components are still the most common spolia. And sometimes, the size of these materials is fixed and nonstandard compared with new ones, which actually requires the adjustment of design approach when reusing this kind of spolia. It means that the specific characteristics including nonstandard sizes of the materials have to be taken into account in design process. In other words, what you choose to reuse and how you reuse it will play an essential role in shaping your space and the final quality. Though this doesn't happen in my case, it still impresses me a lot.