POST-INDUSTRIAL URBAN RESILIENCE

REFLECTION PAPER

HERITAGE & ARCHITECTURE
Disclosing the Military City Lisbon - September 2016

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Date: 25.04.2017
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INTRODUCTION

The Studio: Disclosing the Military City Lisbon is one of the graduation studios at the TU Delft under the section of Heritage & Architecture. The project is initiated in collaboration with the 14th International Conference of DOCOMOMO (the international committee for documentation and conservation of buildings, sites and neighbourhoods of the Modern Movement), with the theme: Adaptive Re-Use. The Modern Movement Towards the Future.

The project location is the former Military Maintenance Complex (henceforth: MMC). The MMC was an industrial facility that produced food, uniforms and other goods for the Portuguese Army. During the twentieth century the complex was expanded to a plot of at least 100.000 m². Whilst the Portuguese Army reached 200.000 men in the 1960’s, it is now reduced to 20.000 active soldiers. Gradually the factories closed and the MMC was finally substituted by a public enterprise in 2015. The MMC is located in Beato, Lisbon. The parish of Beato is one of the oldest parts of Lisbon and has a rich history with structures from the 16th and 17th century.

The graduation studio started during the workshop organised by DOCOMOMO in Lisbon, Portugal. In a first attempt to understand the context of the project location a brief analysis was done by several groups of participants with different nationalities. Especially the teachers of the Faculty of Architecture in Lisbon knew a lot of information about the parish Beato. The most important information: Beato had not been able to recover from the economical crisis.

Later it was important to me to express this statement in numbers. The first analysis on the situation of Beato in comparison to the entire city of Lisbon proves that Beato is in urban decay. In the last 10 years people (especially in the age group 14-25) have moved from Beato to live elsewhere, while in Lisbon for the first in 40 years the migration numbers are positive. These facts are the cause or the consequence of a high amount of vacant buildings in Beato. The demographic analysis of Beato shows that significant parts of the population is 65+ or older (28%), unemployed (16%) or only has basic education such as primary school (63%).

The conclusion of the first part of the analysis has played a dominant role in the rest of the design process. The significant scale of the MMC creates the opportunity to develop a strategy that could have a great impact on the future of Beato. The research question that I will attempt to answer during my graduation project:

How can the rehabilitation of industrial heritage contribute to urban resilience?

1. latest data from the period 2001 – 2011, retrieved from Instituto Nacional de Estática.
Strategy focussing on ‘here and now’
Source: Noelle Dooper

Modular tiny house concept, architecture by and for people.
Source: Own illustration.

Elbphilharmonie
Source: HERZOG & DE MEURON.
The graduation project focuses on a bottom up approach to the redevelopment of urban area’s in decay. In a wider context and in relation to Heritage & Architecture, the project explores the possibilities of introducing housing, urban agriculture and/or qualitative public spaces into a former industrial site and building.

The most conventional approach to the redevelopment of urban area’s generally is the (re)introduction of new functions into this area. An example is the introduction of the Guggenheim Museum in Bilbao, where the gentrification of an area is started with one very large investment. The Guggenheim in Bilbao is seen as a very successful strategy, and since this project many projects have been initiated or sold with the aspirations “the Bilbao-effect”. The strategy however has two disadvantages, both caused by so called Starchitecture. First being the large investment that is necessary to initiate such a project, both in Valencia (Ciudade de las Artes by Santiago Calatrava) and in Hamburg (Elbphilharmonie by Herzog & de Meuron) the projects have gone over budget leaving the city with unexpected costs. The second disadvantage could arise with any top down approach. The project is often initiated based upon general needs of larger urban strategy and cultural developments. Problems specific to the area are overlooked and there is little room for the individual to be a part of these plans.

In my project I was inspired by urban projects in which a group of individuals find a temporary new use for underutilized urban spaces. These projects focus on the ‘here and now’, being architecture by the people, for the people. It does not aim to find solutions for large scale urban developments, but it aims to improve the social and cultural situation of today. This approach is low-cost, functional and lacks all prestige. Resulting in places that are accessible to whomever wants to participate and in which social interaction is central. This approach adds to the development of a cultural identity in urban area’s, which is a starting point for a bottom-up gentrification process.

This wider social context is addressed in the objective of my graduation project: To find a strategy for vacant industrial complexes for social, ecological and economic gain. In the thematic research I looked at the process behind different redevelopment strategies for urban area’s in decay. The characteristics of the industrial heritage are researched in the first part of the design process to be able to identify the cultural values that should be taken into consideration when designing. The main objective is to offer an alternative to top-down strategies for industrial heritage focussing on long term social, economic and ecological sustainability.
Heritage & Architecture brings together the fields of cultural history, technology, and architectural design in a single holistic approach. Heritage & Architecture approaches research and design on all levels of scale ranging from the use of materials and technology, through the reuse and redesign of a building complex, to the development of landscape and urban structure. Context is an important informative on all scale levels. This approach is of vital importance in order to address the challenges and responsibilities of working with existing built structures. Particular attention is paid to those values associated with architecture, urbanism, structure and interior, particularly in their relation to architectural history and current questions on sustainability.  

During the first quarter, the location and building complexes were analysed on different scale levels and themes. The analyses will contain both tangible and intangible aspects resulting in three reports: The architectural analysis, the technical analysis and the cultural value assessment. In the cultural value assessment the found aspects from the (historical) architectural and technical research are valued regarding a method described by Riegl in “The Modern Cult of Monuments: Its Essence and Its Development”. The three documents become input for a so called transformation framework. The transformation framework is starting point for a first strategy that is developed during the second quarter. The third and fourth quarter the first strategy and transformation framework are developed into a elaborated architectural and technical design. The challenges faced during the design process are solved through research, while the design is a research itself.

Reflection
During the first quarter, the location and building complexes were analysed on different scale levels and themes. My focus, as mentioned earlier, was on the urban decay in Beato. This has led to an extensive research on the themes: demographics, economics and spatial qualities of both Beato and the larger area of Lisbon. The first starting points were regarding these topics, whether the design assignment is taken place on an industrial heritage site was not really relevant at this point to me. During the P1 presentations I failed to communicate my strategy regarding the cultural values of the MMC. Towards the P2 presentation more time was spent on the values of the MMC as a whole, the dilemma’s that needed to be solved during the design process and examples of strategies that could be implemented. However, on the scale of the building, this research was not made specific due to the believe that my position towards the dilemma’s are true on every scale level.

After the P2 presentation, literature has given input regarding Urban Resilience. The real goal behind my graduation project slightly changed to an ecological concept for living and (in this case) rehabilitating a building. Towards the P3 presentations I tried to communicate the importance of ecological design and why I wanted to implement this strategy. The cultural values became a secondary subject and I failed to explain why and how this subject/strategy is related to industrial heritage. Right after this presentation, a re-assessment of the Cultural Value Report was done to be able to understand and communicate the specific dilemma’s I face during the design process. The methodical line of approach of the graduation lab and the method I chose are different in the way that the cultural values of the building have not been a priority. Where I (maybe wrongly) believe that the Pasta and Biscuit Factory is not really special. The dilemma’s were always in my mind when designing but not expressed in drawing. I tend to focus on the problems of the larger whole to be able to achieve an holistic approach, rather than looking at the beauty and special (cultural) values of a place. In other words: if I can’t justify why and for whom I design, I don’t believe it matters what I design. After re-assessing the Cultural Values Report, I believe I will be able to communicate why and how my design relates to the cultural values of the place. Maybe a little late in the process, but I think that is also caused by the pragmatism in the building (it is rather easy to understand).
Starting points expressed in drawing. Concept.

Source: Own illustration.
As mentioned before, Heritage & Architecture brings together the fields of cultural history, technology, and architectural design in a single holistic approach. In this case, regarding a former industrial heritage site: a military maintenance complex in Lisbon. The thematic research one would expect in a graduation project could relate to one or more of these topics:

- How to deal with industrial heritage in general?
- How to deal with industrial heritage at a waterfront?
- How to deal with military heritage?
- How to deal with industrial heritage in a 16th century settlement?
- ....

Reflection
The strategy that I have developed does try to give an answer to some extend to the above mentioned questions. On the level of the whole MMC the characteristics of both industrial heritage, the (still active industry) waterfront and military heritage were taken in to consideration before proposing a strategy.

On the smaller scale of the building, only the question regarding industrial heritage in general seems relevant. Where there's no signs of military references in the building besides maybe a barbed wired fence, neither is there an attempt to create a physical connection with the waterfront.

The decisions regarding the design of the building are based upon research of Urban Resilience, Ecological Design, Public Space and the Cultural Values of the place. To some extend the theme of the graduation lab and my chosen study relate. However, the strategy I propose does relate more to starting point from research done in different fields than Heritage & Architecture.
Continuous Productive Urban Landscapes, implemented in Beato.
Source: own illustration.

Spatial quality meets industrial heritage.
Source: own illustration.

Ecological design expressed in modularity, flexibility and footprint.
Source: own illustration.
THE RELATIONSHIP BETWEEN RESEARCH AND DESIGN

The question I tried to answer through research in my design process:

*How can the rehabilitation of industrial heritage contribute to urban resilience?*

To be able to answer this question a better understanding of Urban Resilience needed to be defined. The article *Defining urban resilience: a review* written by Meerow, S., Newell, J. P., & Stults, M. (2016) is an overview aided by a bibliometric analysis regarding the topic Urban Resilience. The paper concludes with a discussion of how the definition might serve as a boundary object, with the acknowledgement that applying resilience in different contexts requires answering: *Resilience for whom and to what? When? Where? And why?*

The design strategy for the future of Beato started with the process of trying to answer this question. The why is posed as the problem that needs to be solved, the to what, when, where are the goals that will be transformed into a strategy. A subdivision has been made to be able structure the design process. A brief summary of the three themes:

1. **Cultural Resilience:** No coherence between the qualities of the historic landscape and elements from the 16th century and the introduced industry that has been superimposed in Beato since the 19th century (including the MMC). The rich history of Beato is visible, but hard to understand and experience.
   
   The research (architectural and technical analysis, and cultural value assessment) has helped to develop a strategy. The goal is to improve the qualities of the found values from all time layers to be able to understand and experience heritage through the built environment and landscape. During the P4 presentation the important Cultural Values and dilemma’s will be made explicit, the strategy towards the dilemma’s do relate to the eventual design of the whole MMC and the building.

2. **Economical Resilience:** The parish Beato has not been able to cope with the results of the economic crisis. Leaving the parish in urban decay. The problem however is larger than urban decay. The current industries have a negative influence on the environment and have been put in to place disregarding ecology as a whole.
   
   Research regarding ecological design and strategic development of areas in Urban decay have led to a strong concept. Continuous Productive Ecological Urban Landscapes (CPEUL). The strategy has been derived from existing research on ecological development regarding the quality of public space. The concept has been chosen because it concerns all the posed problems and goals. On a building scale research has been done regarding the architecture behind tiny houses (footprint), modularity, flexibility and use of materials. Actually all theme’s regarding ecological design.

3. **Social Resilience:** Beato lacks qualitative public spaces, most of the space is private and closed off by walls and fences. Some of these private spaces are vacant and neglected. The available public spaces are often dominated by cars.
   
   The creation of a qualitative urban spaces has been a goal in my design process. To achieve this goal literature has been studied to define what qualitative public space is. The book *Cities for People* written by Jan Gehl has helped to form a solid base to start. Jan Gehl describes the qualities that a public space in a simple matrix. Most of these qualities are already present when analysing the MMC. These qualities could be enhanced as mentioned before through (productive) landscape design. I’ve learned to some extent what the criteria for my design are, but I do not know how it should look like (yet). Most of my presentation is regarding the theory behind the strategy for design, and I have presented very little actual architectural solutions. Towards the P4 this is one of the most important aspects to work on. The goal is to create qualitative public spaces inviting people to meet, stay and appreciate life.