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An experience in Hasselt

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"Nesta página estava uma dedicatória
aos meus. Ainda está"

António Lobo Antunes

Resumo

Este documento conjuga todos os principais trabalhos realizados no ano académico 2016/2017 em que estive na Universidade de Hasselt, na Bélgica em Erasmus. Todos os trabalhos seleccionados, apesar de não terem uma relação directa, foram seleccionados de forma a revelar as questões colocadas por cada unidade curricular e as minhas respostas a cada uma. As unidades curriculares seleccionadas foram: Seminar Urban Design; Architectural Design 4A; Architectural Design 4B; Art Nouveau and Regional Modernism in Belgium; Building Construction 4, Cultural Sciences 4 e Research Training.

Um dos projectos apresentados, é um exercício proposto pela unidade curricular Seminar Urban Design, uma cadeira de prática laboratorial, com o objectivo de entender o conflito existente entre os habitantes e os turistas na vila Nungwi, na Tanzânia. Neste projeto foi-nos apresentado um plano de acção aplicada à ilha, o qual tínhamos de criticar e apresentar novas soluções. O outro projecto apresentando, também um exercício de uma unidade curricular de prática laboratorial, Architectural Design 4A, teve como caso de estudo a cidade de Heerlen, nos Países-Baixos, que está a enfrentar o problema de redução da sua população residente desde o fim do período Industrial.

Um outro projecto apresentado, é um trabalho de pesquisa realizado, sob o tópico “ Industrial Heritage: Conflict Between Contemporary Industry and Adaptive Reuse”, adaptando-o a um caso de estudo no Nordeste do centro de Hasselt, na Bélgica. O último exercício apresentado teve como objectivo criar um ou múltiplos espaços, onde pessoas com mobilidade reduzida conseguissem viver independentes da necessidade de obter ajuda exterior.

Este trabalho, desenvolvido na Universidade de Hasselt, Bélgica, correspondeu ao meu último ano de estudos no âmbito do programa de Arquitectura e concluiu a minha aprendizagem no ISCTE-IUL, com uma nova visão sobre a educação na Arquitectura e a possibilidade de visitar e habitar diferentes cidades interessantes na Europa Central.

Palavras-chave: Conflict, Património Industrial, Shrinking City

Abstract

This document conjugates the main exercises done in one academic year 2016/2017 at University of Hasselt, Belgium, while in Erasmus exchange. The selected exercises, although not directly related, were chosen in order to show the questions raised by each of the curriculum courses, and my answers to them. The selected courses were: Seminar Urban Design; Architectural Design 4A; Architectural Design 4B; Art Nouveau and Regional Modernism in Belgium; Building Construction 4, Cultural Sciences 4 and Research Training.

One of the projects presented is an exercise done in a studio course, Seminar Urban Design, which the aim was the understanding of the existent conflict between locals and tourists in the village of Nungwi, in Tanzania. Nungwi has a policy plan already in motion, and it was asked to criticize it by giving other responses. The other project presented is also an exercise of a studio course, Architectural Design 4A, aiming the study of Heerlen city, in the Netherlands, which is facing the shrinking phenomenon since the end of the industrial era.

Another project presented is a research study made on the topic of "Industrial Heritage: conflict between contemporary Industry and Adaptive Reuse", adapting it to a case study on the Northeast of Hasselt city center, Belgium. Along with it, another project was done. This last one was an exercise which the goal was to create a space or multiple ones, where people with all sort of disabilities could live more independently and enable them to diminish their need of exterior care.

The work developed in the University of Hasselt, Belgium, in my last year of the architecture program enabled me to complement my learning at ISCTE-IUL with both a new vision on architecture education and the possibility to visit and inhabit several interesting cities in central Europe.

Key words: Conflict, Industrial Heritage, Shrinking City

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Introduction

Hasselt city, considered the capital of Limburg province, is located in the northwest of Belgium. The fact that Albert canal passes through the city, enabled Hasselt to be connected to the main industrial cities in Belgium - Liège and Antwerp - and created the possibility for Hasselt to grow as an industrial city. Due to this geographic position, Hasselt grew on size and wealth, stablishing as a multicultural city whit a very dynamic cultural environment.

Before moving to Hasselt, I did a research, and it was interesting to find that Belgium has a massive industrial history. This history goes back to "...Belgium being a gateway for the Industrial Revolution flow into the European continent...", until today's problems, such as their shrinking cities. Being a subject of interest, going to Hasselt was a great opportunity to study on site. It is also relevant to mention Hasselt location, since it is located on the northwest of Belgium. This location, gave the possibility to quickly reach the main cities from the close by countries and enlarge my architectonic and social knowledge about this area. Studying in University of Hasselt was a bonus, since the curriculum courses were of mine interest, giving me a complete insight of Belgium environment.

Going through this document is possible to understand what is the University of Hasselt curriculum plan for master students of architecture. My courses in Hasselt University included two main design projects in each semester, alongside with other theoretical and technical curriculum courses. Group work was always present in different stages of the design process. All of the exercises tried to search the essence of the city/ village and culture of the country in order to fulfil a better answer for the indicated problem.

During the first semester, the main projects were located in Nungwi, Tanzania and Heerlen, The Netherlands. Similar to the sites, also the problems found and the design strategies were different. In Nungwi the problem found was the tourism boom that the village is facing and in Heerlen it was the shrinking problem that the city is currently facing. Nungwi, located in Zanzibar, Tanzania is being observed by the massive

industry of tourism. In order to decrease the negative impact of tourism, the city took in motion a policy plan, around 2014, With the help of qualify studio professors and two local architect students from Zanzibar, it was created a team of international students that could come with suggestions to improve this policy plan. Heerlen exercise was a proposal made by the IBA Parkstad, an organization that aims at developing a city through small and big interventions, which asked to give a possible answer for the problem shrinking city that Heerlen is facing.

On the second semester, the subjects on both design projects, were more complementary to each other, although there was not a direct link between them. It was made a research paper on the matter of industrial heritage, "Industrial Heritage: conflict between contemporary Industry and Adaptive Reuse", and simultaneously, a project of designing a center care, on a former industrial location. The research paper is a study of the usage of former industrial areas. The case study is an area where industrial facilities were always present, due to its location near Albert canal. In the beginning of the XXI century, some of the vacant industrial buildings were being reused to implement in the area schools, offices and other cultural typologies. With that, a more diverse environment could come along, connecting better that area with the city. This contrast may have created a conflict between these distinctive identities, which this exercise tried to clarify. The last project was located on Treebeek village, in The Netherlands. With a former industry being active in the past, the area where industry facilities were placed is now cover with a massive green park, creating an independent element from the village. The exercise tried to respond with the goal of connecting both village and green park elements together.

1. SEARCHING IN HISTORY -The Industrial Revolution of Belgium. (2015). [Consult. Sept. 2017]. Available at: <https://searchinginhistory.blogspot.pt/2015/03/the-industrial-revolution-of-belgium.html>

Architectural Design 4A

2. **Course:
Strategies
for the
Essential**

Strategies for the Essential

12

13

Strategies for the Essential

2.1 Syllabus

IBA International Studio constitutes an experimental partnership initiative between European Academies to support new methodologies and tools for spatial and urban design within the Internationale Bauausstellung (IBA) context. The aim is to establish a common dialogue and a shared platform of knowledge, presenting its results to the attention of the European Commission for Cities and Regions, nowadays involved in promoting a new Urban Agenda for sustainable growth and policies' innovation. In specific the EU Urban Agenda, which has been established in May with the subscription of the Pact of Amsterdam by the European National Ministers, aims to promote cooperation between member states, in order to stimulate growth, liveability and innovation through cities in Europe. By adopting the Urban Agenda, the Public Authorities would encourage better public governance, support urban experimentation, and would answer to the increasing demand of citizen participation.

The International Studio is an experimental project that links, according to the goals and the guidelines of IBA, research and education, constructing a more general/critical reflection on design strategies for Parkstad area. The objective of this Studio is to enforce a broader academic framework on an international level capable to act with a positive impact within the IBA Process. The activities of the International Studio, seminars and student workshops, are finalised to explore key issues for Parkstad (Heerlen) and its cross-border condition; key issue are approached through the IBA perspective, i.e. the encounter between theory and design. Participant universities will focus on the general topic of Revitalisation by Reconciliation: Cross Border Strategies. For Parkstad (Heerlen) the objective is to enlighten a new narrative made by re-composition of the fragmented urban landscape, reconciling over impressed and layered territorial frames into a revitalised meaningful unity. It also regards the development of an operational exemplary method to address urban cross- border regional problems and to disclose new economic growth potentials.

2.2 Introduction

From all Parkstad area which conjugates several cities from the Limburg province, Heerlen city was given as a study case. Having a strong Roman past, along the years that important past has been cover. It was then asked to explore those layers and revitalize Heerlen.

Heerlen has been suffering several transformations through the years. We can see a city damaged and divided by historic values and economic priorities.

Since its transition from “village to city in 1900”² Heerlen faced a grown of two times more of inhabitants. Since the city (village) was not prepared for this large population growth, were not properly conceived and housing and public spaces were insufficient and not adapted to the future inhabitants. A good example of these bad management strategies and investment in the city were some of buildings designed without a previous study of the site, well as the repercussions that brought to the present that Heerlen is facing today. Today these buildings of seven or even more stories high are vacant and completely out of context towards the city environment. As Souto de Moura once said “...the whole history of architecture was made with a spirit linked to power, only formerly there was political, religious and financial power and at the moment there is only one, the financial power...”³

Heerlen has strong ancient Roman roots. It was an important city during that period because it was the connection between several cities such as: Maastricht, Xanten, Cologne and Aachen. Since it was a city with such value, on economically terms it was a wealth city and, more important than that fact, it was a bustling city.

Over the years the city has been on a roller-coaster in terms of population growth. It went from a main bustle roman city to a small agricultural village. Then, with the industrial period happening, more people were moving into the city, creating wealth and housing for all inhabitants and future ones. Now Heerlen, is facing its shrinking, a phenomenon that most of the industrial cities are facing. A phenomenon that made people look for jobs and better living elsewhere, since during

² HEEMKUNDE - Aspecten uit de geschiedenis van Heerlen. (2016). [Consult. Oct. 2016]. Available at: <http://heemkundeverenigingheerlenstad.nl/algemeen/aspecten-uit-de-geschiedenis-van-heerlen/>

³ SOUTO DE MOURA, Eduardo - A arquitetura que eu estudei acabou. (2016). [Consult. Nov. 2016]. The translation of this text was made from the text quoted from the original (toda a história da arquitetura é feita com um espírito ligado ao poder, só que antigamente havia o poder político, religioso e financeiro, neste momento há só um, o financeiro) Available at: <http://www.diarioimobiliario.pt/Entrevistas/A-arquitetura-que-eu-estudei-acabou>

that period they lived in poor conditions. While looking elsewhere, people were not just looking for a better house to live in but also searching for a quality neighborhood where people feel invited. (J. Gehl, 2011)

The process of this project design will follow the principles about the simplicity; the basic elements; the minimum of things that can bring freedom of usage to a person in his quotidian, for a creation to other possibilities and new ways of inhabiting. (J-P. Vassal, 2016)

F01 Heerlen train station - 1913

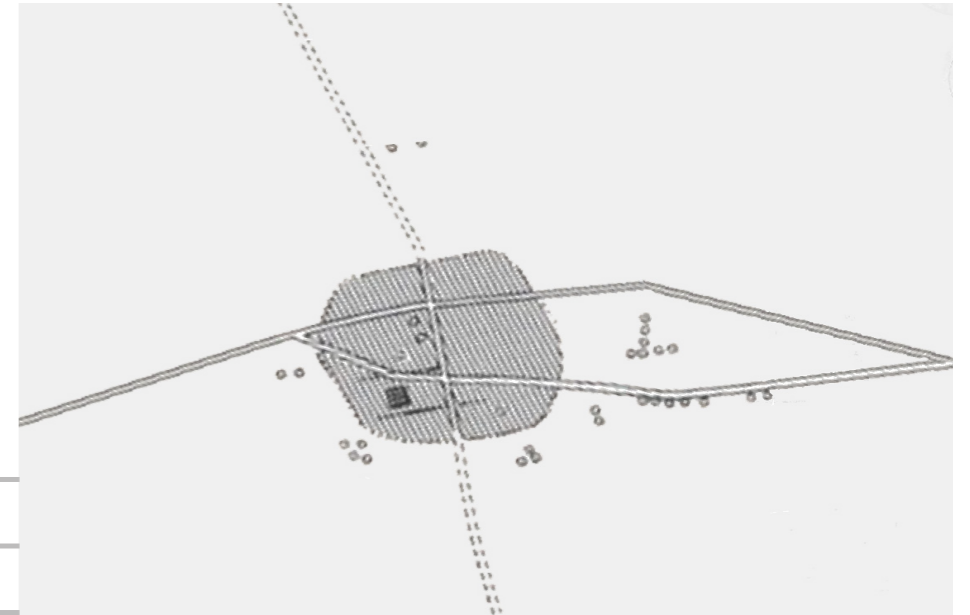
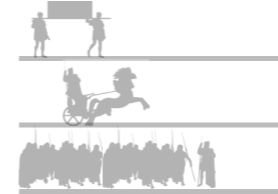


2.3 Analysing the City

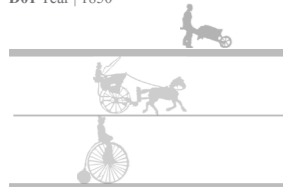


F02 Geleenstraat, Heerlen 1920

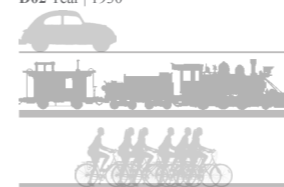
F03 Heerlen - Year | 300



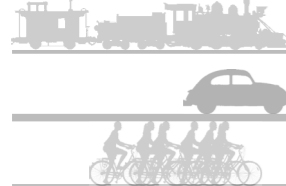
D01 Year | 1850



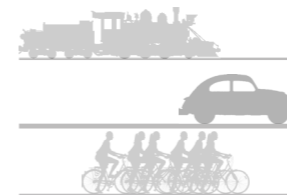
D02 Year | 1930



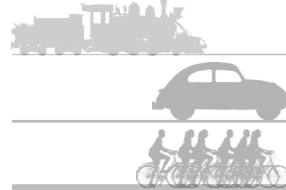
D03 Year | 1975



D04 Year | 1995



D05 Year | 2015



D06 Year | 2???



Like any other historic city, Heerlen buildings and public spaces help to understand the city evolution and what it is today. As we go through the history course, one of the essential elements of a city is the road. It is an essential element that provides a connection. It is part of the anatomy of a city or between cities.

Even through a city transformation along the years, is it possible to comprehend its past which Calvino completes, saying, "...the city, however, does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratings of the windows, the banisters of the steps, the antennae of the lightning rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls..."⁴. Through Calvino sentence it is possible to understand that exist some elements on a city that, even without the same character, it is possible to recognize their essence. Some roads with such characteristics are still present in Heerlen which provided something bigger over the Roman Empire years.

The concept of road already has had existed several years before the Romans, but it was during that time that was needed the most. Since the Romans have traveled long distances by foot, it has been necessary to create roads with better conditions. These roads were built in such good conditions that nowadays, in some areas around the world, it is still possible to find intact Romans roads.

It is possible to consider existing roads as a ruin, an intact ruin which through time was being modified to adapt the existing conditions. As Rossi once wrote: "...form persists and comes to preside over a built work in a world where functions continually become modified; and in form, material is modified..."⁵, which was witnessed in the 19th century, when the roads have taking another form and another use. With the Industrial Revolution came the railways which has provided a better means of transportation for merchandise and people. The growth and expansion of the industrialized cities, has led to a rapidly increase of the local population, looking for better job opportunities, and as the cities

4 CALVINO, Italo - Invisible Cities. I Series. 1974. ISBN 0-15-645380-0, p.11

5 ALDO, Rossi - A Scientific Autobiography. II Series. New York. 1981. ISBN 0-262-18104-5, p.1

grew, so has the peripheral areas.

These industrialized cities were not prepared for the massive population growth, so there was a need of a fast and cheap housing construction. In order to accommodate a larger number of people in one area, the back-to-back terrace housing (F04) concept was implemented. These houses "...had no garden and the only part of the building not connected to another house would be the front..."⁶, being the only entrance. Other issues were the materiality and the conditions of the houses. The materials used were the cheapest, there were no private bathrooms and there was no basic sanitation. Instead, there was six toilets for every block with 40 houses. With an average of 9 people living in each house, would mean that 6 toilets served 360 people (C. N. Trueman, 2015). Quoting Calvino, "...for eight hours a day you work as a cutter of agate, onyx, chrysoprase, your labor which gives form to desire takes from desire its form, and you believe you are enjoying (it) wholly when you are only its slave..."⁷. People would feel trapped even inside their house, a space that should provide comfort.

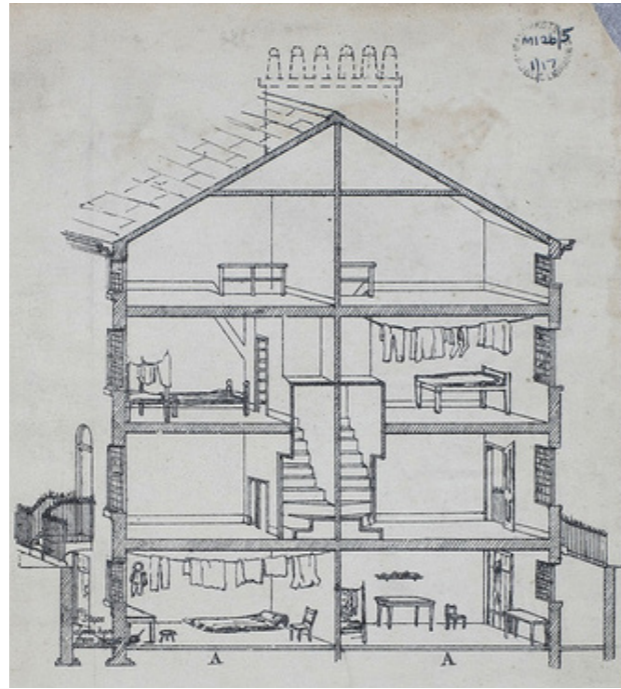
The same problem it happened in Heerlen, which now is facing a post-industrial moment since the end of the 20th century, for the past fifty to sixty years, Heerlen have faced population loss, low levels of employment and with the combination of those, the economic sector have been affected.

It is possible to understand the relation between these problems and the lack of profitability of the mills, which combined have resulted in a high level of unemployment. The lack of solutions to turn this situation around, have resulted in the population abandonment of the city. It is a cycle difficult to solve, and nowadays it is possible to see the result in the city center throughout the abundance of vacancy housing and commerce.

6 TRUEEMAN C. N.-Life in Industrial Towns [Consult. Oct. 2016] Available at : <http://www.historylearningsite.co.uk/britain-1700-to-1900/industrial-revolution/life-in-industrial-towns/>

7 CALVINO, Italo - _Invisible Cities. I Series.p.12 1974. ISBN 0-15-645380-0, p.12

F04 Section of Back to Back House



D07 Heerlen city center
■ vacant
▨ partial vacant



2.4 Learning from Others



F05 Heerlen Town Hall Frits Peutz
1936/42

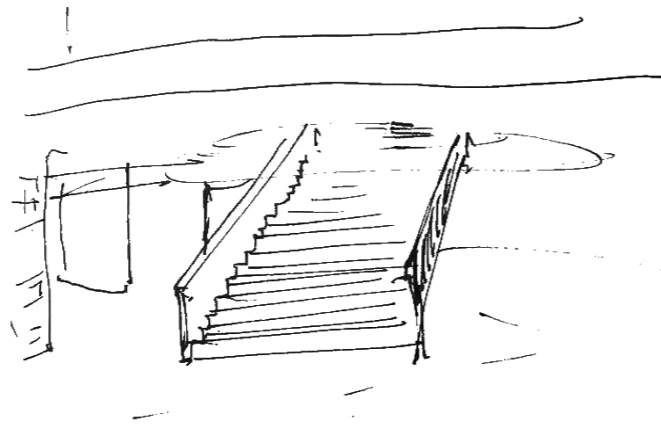
Learning from others is a statement or, being subtler, is an idea that is impossible not to consider every time we are trying to achieve something. It is an essential basic way of humans to learn. Like Picasso said once *‘Learn the rules like a pro, so you can break them like an artist’*. First, it is necessary to understand how it was made so we can achieve another level of knowledge. When discussing the concept of 'Learning from Others', related to architecture, the most common are the references, as all the architects, no matter in what period of their lives are in (internship, junior architect, etc), have the need to see what was made before them. It is essential to do it, because the architects work implicates a scale that could transform one entire city. Either a new building designed for a consolidated area or a new building in a new area, or a big public space or even just a small-scale house. Everything has a direct influence on people and that, has to be always on the architects' scope of work.

With this references approach, Lacaton&Vassal play an important role in my project's process. Not being the only references, the French architects team have a clear and subtle involvement in my project design process.

It is not only one specific Lacaton&Vassal project, since going through their work, it is not relevant how they design a certain element but how they relate it to the inhabits. They based their principles on the essentials, the conditions environment that is already present on site, letting people live in, without any extra element that would interfere. That is architecture. Analyze a problem and apply a solution which results on the wellbeing of population and not to feed the architect's ego.

If we go through this firm work, we can see a similarity on them, “...a space for living must be generous, comfortable, adaptable, flexible, luxurious, affordable...” (...) “offering as much extra space as programmed space to promote relationships within spaces, to bring about pleasurable situations...”⁸ It is not about the same materials, or same spaces; it is about the same posture facing a problem, even if it is a big scale design project

⁸ VASSAL, J.P - Cambio de Clima. (2016). [Consult. Oct. 2016]. Available at: <https://vimeo.com/arquisoc/cambio-de-clima/video/176623421>



or just a plaza improvement.

Every space built by man has a reinterpretation through time. Over the years the shape; space; program, eventually its transformed mostly because of its presence or value that starts to be questionable. A good example of this reinterpretation concept is described by Aldo Rossi: "...material of a bell is transformed into a cannon ball; the form of an amphitheater into that of a city; the form of a city into a palace..." demonstrating that exists certain elements that define a city or vice versa.

During the Roman Empire, certain elements existed in the city that really characterized it and define how people spent the day, like the Thermal baths, Theatre and the Market. The Market was possibly the structure that had the most value in a roman city since it was the social space and the space where people could gather to do trades or just socialize. It was the heart of the city. Through time these spaces have difficult to maintain its essence, since our society changed, the spaces changed as well.

Before, the principal roads determined the Market space, nowadays it is chosen squares/buildings where roads lead to it. The principle it is the same, only the process it is not. In Heerlen, for example, the market takes place behind Glaspaleis, of Frits Peutz's Architect, on a square, built with temporary structures. On the other hand, in Lisbon there is a Market, called Ribeira, which around XIX was a space to preserve maritime merchandise, because of its perfect location, nowadays it is a fresh market and food market for the same reason. Like in Madrid, el Mercado San Miguel or even in Barcelona, with the Mercado de la Boqueria. The interesting thing of the concept of market it is, the power of attract people to it.

2.5 Actors & Economics



F06 Mercado da Ribeira | Lisbon



F07 Heerlen Coal Mine 1974

It is well known for an architect that a design project is a process. A long process which is divided in several situations and moments. And those moments are linked to the involved people on the process. For those involved “...who is issuing the indictment? What office is conducting this affair? Are you officials?”¹⁰ On this situation, Kafka refers to who has really the power to do something. Placing this question/statement on Heerlen project it is understandable to have doubts about the real meaning of Actors and Economics.

The relation between power and architecture has have been connected throughout different century's. Not trying to impose a right or wrong impression of this idea but if we relate to the present it is clear that nowadays only the Economic element is present in architecture, so it is certainly questionable placing actors and economics on the same sentence.

Different historic examples dictate that connection between power and architecture. A historic example, is the religious architecture. Through that type of architecture, people could associate to religious. Parallel to that power, is the power led by dictators. One example is the Palazzo della Civiltà Italiana, an icon of the Fascist Architecture, led by the dictator Benito Mussolini. A design project planned for the 1942 world exhibition. During the same period, in Portugal, António Salazar was leading another world exhibition, where architects were involved, to celebrate his mandate.

Like it was said before, Souto de Moura refers to architecture as an economic element. Everything that is designed is only to make money or run by money. There is the need to search for the essentials. “...Architecture was one of the ways that humanity had sought to survive; it was a way of expressing the fundamental search for (people) happiness...”, and through the years this statement has been set aside.

¹⁰ KAFKA, Franz - O Processo. Lisboa: Relógio D'Água Editores, 2015. ISBN 0-262-18104-5, p.17

¹¹ ALDO, Rossi - A Scientific Autobiography. II Series. New York. 1981. ISBN 0-262-18104-5, p.2

Economy has been changing over time. The way that people do shopping nowadays is changing and cities are not prepared.

Since the evolution of the Ecommerce, people are buying products from the comfort of their homes, leading to a mentality change of the entrepreneur, instead of opening a physical place in the city center for its business he will simple launch a company's website and sell directly through it. This leads us to, what happen to the actual vacant shops that are in the city; Stay Vacant? Demolishing? Sell it to Mcdonalds or other big companies?

“It is no longer possible to do anything about it: to modify the misery of modern culture, a great popular movement is necessary, and the misery of architecture is the expression of this knowledge”¹²

¹² ALDO, Rossi - A Scientific Autobiography. II Series. New York. 1981. ISBN 0-262-18104-5, p.23

**2.6 Structure,
Program &
Materiality**



D09 Roman Empire Connection Roads



F08 Heerlen Coal Mine
Extraction Site - 1950

For this design project, the focus was on the former industrial workers in Heerlen and the essential services that once was placed on their daily basis, such as a cobbler; knitting; woodcrafts; welders; stone sculptor; artists; bicycle shops; etc.

These former careers are taking place once again in our society since we are again giving a sentimental value for what is made with our own hands. For that, we have to give space for that to happen. Since the centre of Heerlen is partial vacant of people, is necessary to recover to what we have and built something with the physical elements present on place. On Heerlen's skirts, the scenario is completely different. Houses fully occupied with some good quality life. That quality life should be able to get a place also in the city center. For that it is necessary to get focus on the actual people. it would be interesting to transfer these Heerlen's skirts atmosphere to the actual Heerlen center.

The living situation in the city center would have an extra element, an element that we can call a front yard. Since some of the stores are vacant, to that space, it is possible to add another semi-covered space for people that want to open a space for putting in practice his services. That way, on the following years, more spaces like these would appear along the streets. These means, that would be possible to create a green street for the public and a private garden for the owners, which they could open on certain days to create workshops or showing the products to the public. It would be an environment that people would appreciate and feel the attraction to open a business in such street.

The cities as we know are changing. We are going back to the essentials that once took place. Creating spaces for people live the city without worrying at what would happen, for example, to the element car.

Since the appearance of the car, cities have been built in order to provide quality space for it, instead of the actual people. Brasilia's city it is a great example for this matter since it was mainly design for the car with enormous distances between buildings. In order to dislocate to a certain point, it is necessary to use a motor vehicle. Another example, is

Ahmedabad's city in India, where streets are bigger than the sidewalks (which sometimes does not exist) showing the predominance of the car in a city. It is necessary to focus on what really matters in a city in order to provide quality space for the inhabitants.

What would happen to a city with no cars? That is a question that is no longer far to need an answer. With that question, follows others more like: With no car, what will happen to the sidewalk? There would no longer be necessary that separation between car and pedestrians. What will happen to parking lots? to housing garage? To Parking garages? To underground parking?

There are already some cities dealing with those issues in order to provide that kind of quality. Denmark, it is the pioneer of one of the most successful implementations of a car-less, the streets have been growing in size in order to provide space for bikers to ride to their destinations over the idea of car usage in a city. We architects and urban planners will have to have these questions in mind since we will be designing a possible future with less cars in it.

Herzog&de Meuron are already giving the first steps on finding solutions for some of these problems. With their project in Miami, the 1111 Lincol Road, they are already questioning, in a smooth way, the existence of the car. The project is a vertical parking garage, but it is not an ordinary one. It is possible to find other programs inside such as shopping mall, restaurants, skate platforms and housing. Being a project so transparent it is possible to Miami's city be pulled to this space and also the other way around.

In Heerlen, it is possible to question the existence of the car. Or at least the progression of downsizing the importance of these element.

2.7 Project Design

The project, focus on a space that once was an essential element for Heerlen inhabitants and their visitors, but it is possible to question its existence on the following years. The structure is a parking garage. A parking garage that collides with the intersection of the roman roads that once were present. We can assume that on that era, it was a Market placed there. A Market where people would do trades or just socialize. A placed filled with life.

The new program for the parking garage aims to achieve the possibilities that the Market once provided: gathering, learning, socialize and trading.

Being an industrial city, many inhabitants stayed jobless, creating a city full of highly qualified people. To potentiate these people's abilities, the parking garage will provide work spaces for people with these certain skills, so they can combine two concepts, share their knowledge and at the same time, produce items and goods that can be bought. This way, it can attract two kinds of public, either the ones who want to learn or the ones who want to buy. This way the economics will have a chance to grow.

The design will provide a central main space which will be the space with the heavy machinery for wood and steel work. Attached to it, will exist spaces to support the main one, such as: private work spaces, storage rooms, toilets, still some parking spots (since it is a process of downsizing the use of the car, the parking spots will coexist until being replaced with other spaces or maintain as parking spot for other vehicles like bicycles) and living spaces. Having still doubts about having some kind of housing on the design when there still exists vacancy on Heerlen, maybe by creating new ways of living can trigger people to come and live for a certain time. On that matter, each sub-work space has an attached room which can be adapted to a resting space or meeting office.

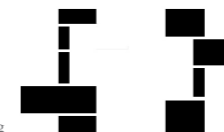
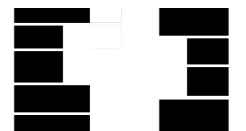
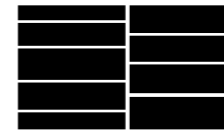
Maintaining the circulation that parking garage provides, it is possible to connect all these spaces. Reaching to the top of the parking, people will not find a main space or big program, they will find a space



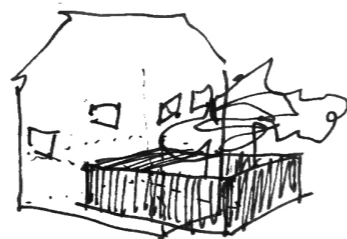
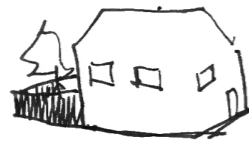
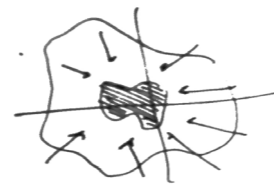
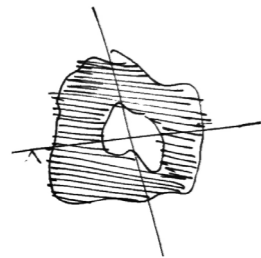
F09 1111 Lincoln Road Parking Garage by Herzog and de Meuron

where everything culminates, an empty space for socializing or just relax.

By referencing Lacaton&Vassal again, Nantes School of Architecture have top floor with just an empty space. A space where everything and nothing can take place. Empty spaces are also architecture. On the ground floor, linked with Jo Cohen Library, an exhibition space is going to take place, where roman remains and these new hand made projects will meet and tell a story through Heerlen history.



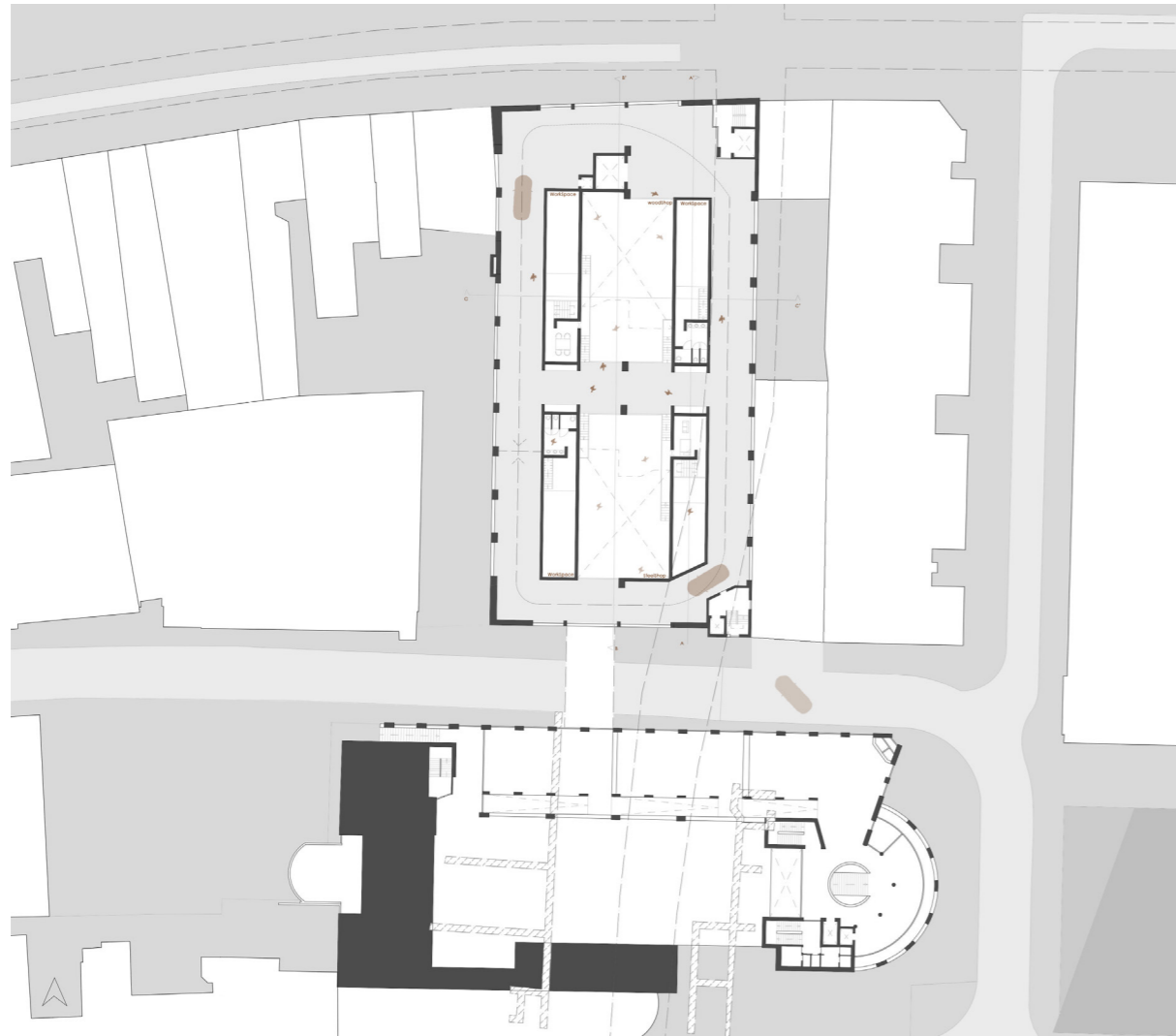
D10 Diagram of the Process of the Parking Garage



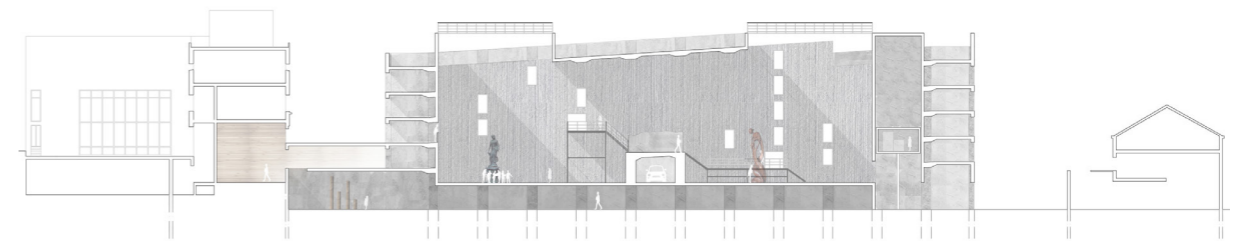
D11 Diagram of a possible structure for Heerlen center housing



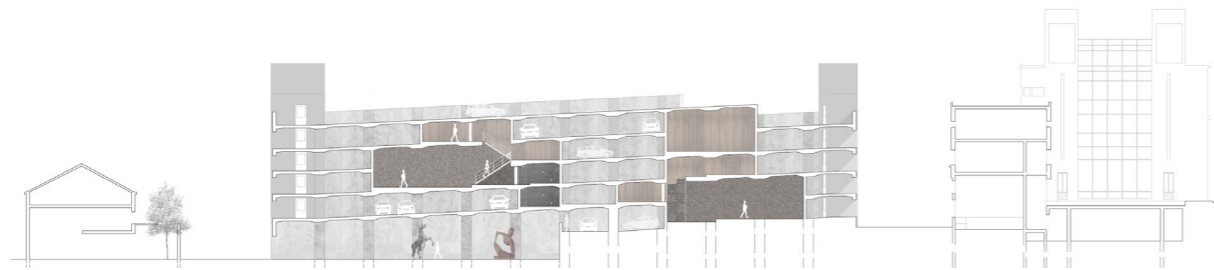
D12 Master Plan



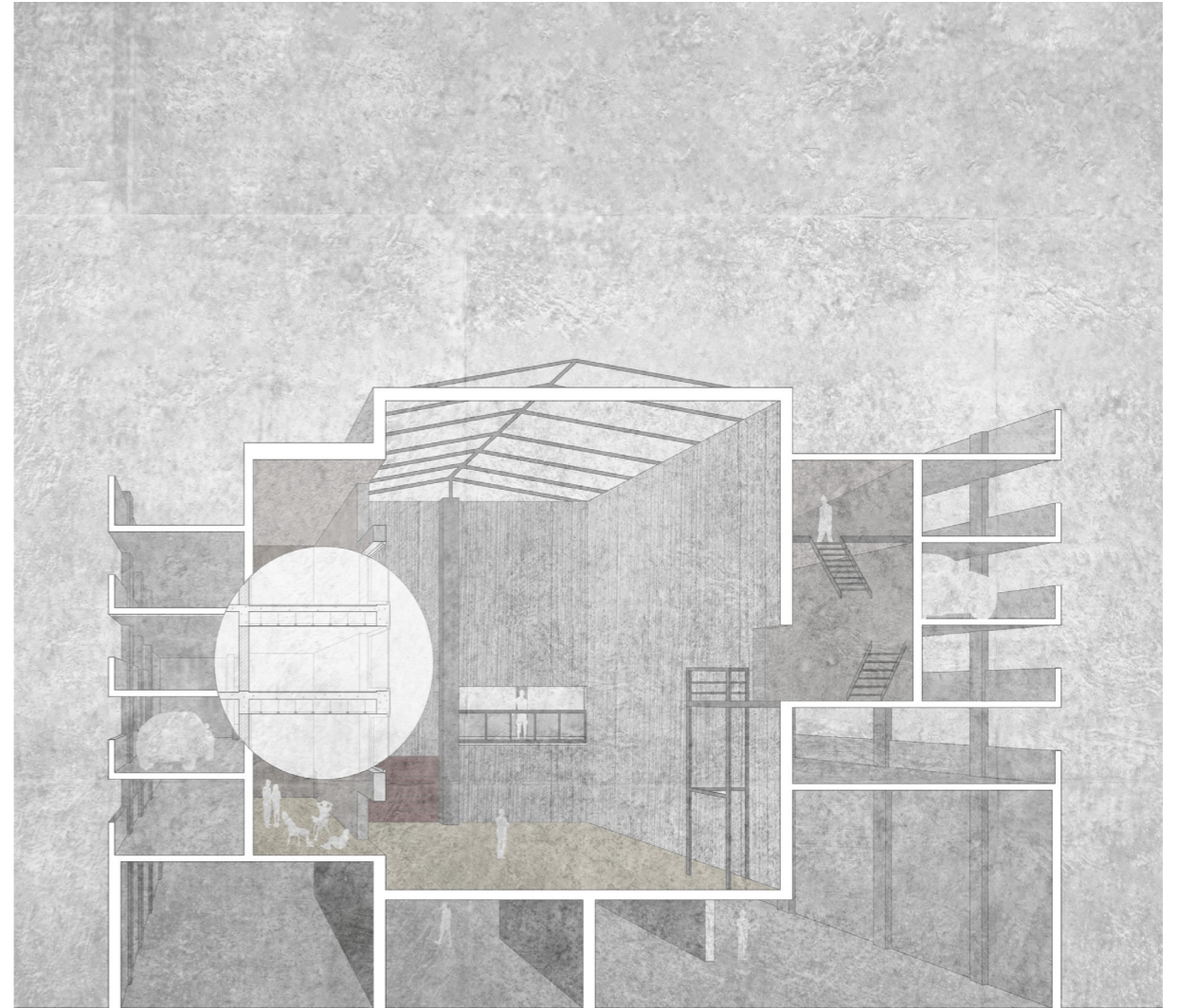
D13 Floor Plan



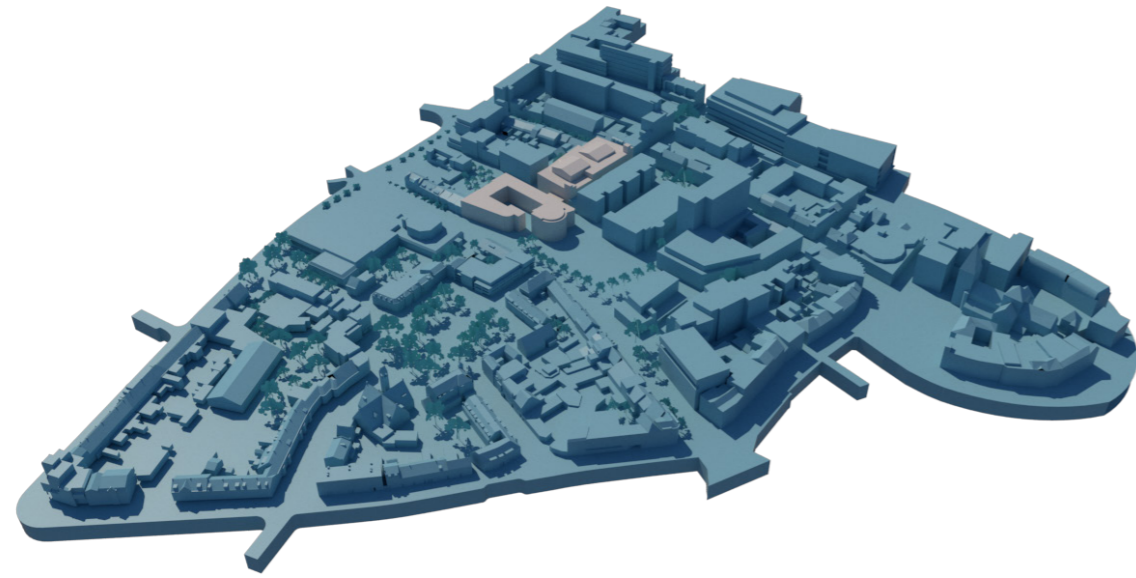
D14 Section AA'



D15 Section BB'



D16 Section CC'



D17 3D Model of the site



D18 Photomontage of the proposal



D19 Photomontage of the proposal



D20 Photomontage of the proposal

3. **Course:
Seminar
Urban Design**

3.1 Syllabus

The ambition of the international Seminar Urban Design 2016-2017 is to critically review and evaluate the spatial planning policy of Zanzibar and to propose strategic urban planning projects to initiate and foster sustainable spatial change.

In August 2016, Dr. Muhammad Juma, Head of the Department of Urban and Rural Planning of the Government of Zanzibar, asked prof. em. Han Verschure for advice. In 2014 and 2015 a national spatial development strategy for Zanzibar was elaborated and local area plans for some settlements in Zanzibar were developed, with support of the Ministry for Foreign Affairs of Finland. A stack of reports is produced, but are they any good? And what is next? How to bring these urban planning principles and ideas, and these paper plans, into practice? How to convince and engage stakeholders? How to create political commitment to implement these plans? Furthermore, in these plans, it is indicated that a master plan and/or an integrative urban development plan for an area should be finished before any further building can take place. **So where and how should Zanzibar start?**

In these questions, Prof. em. Han Verschure sensed an opportunity for the faculty of Architecture and Arts of Hasselt University to expand their work in Tanzania. Tourism is a major economic sector in Tanzania and it is an important economic activity to fight poverty. The industry is booming. At the same time, rapid tourism facility developments (hotels and resorts) driven by quick profit threaten the environment and result in unsustainable spatial development. Both natural and cultural ecosystems are put under pressure. Recent work in the design studios of both architecture schools has shown that architects can play an important role in envisioning innovative future scenarios to establish green growth in this major economic sector. Tanzania's game reserves and Zanzibar are the main tourist attractions in Tanzania. Hence, fac. ARK welcomes the challenge to evaluate the spatial policy plans of Zanzibar and to generate ideas for masterplans and strategic projects.

3.2 Introduction

The subject of the Seminar Urban Design 2016-2017 was Zanzibar, an island of Tanzania, Africa. It is a place where Tourism industry is growing fast, leading to several issues of housing capacity and space used between locals and tourists. These events threaten all Zanzibar culture and people from no longer be possible to live in harmony with their environment.

On a critical point of view, a group of students from different fields, nationalities and backgrounds analyze a policy plan implemented on the island and we as a group, tried different approaches of redesigning this important policy plan or just give new visions in order for the locals and tourists to take as much joy of this amazing place.

The methodology of this process consisted of giving certain expertise to each student in order to provide different solutions for improving Nungwi's policy plan.

It was asked to each expert to idealize two design projects in order to improve Nungwi inhabitants and tourists' life conditions. Being an expert of Housing, it was taken more into consideration Nungwi inhabitants. Setting this, it was decided to propose two design projects, with a reference in mind for each one, that would have in consideration the housing problems.

- F10 Planning zones**
- A - OLD TOWN NUNGWI
 - B - REDEVELOPMENT AREA
 - C - NUNGWI NORTHERN SEAFRONT
 - D - RAS NUNGWI
 - E - NEW NUNGWI TOWN CENTRE
 - F - SETTLEMENT EXTENSION
 - G - TOURIST AREA
 - H - ECONOMIC ACTIVITIES AREA
 - J - PLANTATION FOREST
 - K - AGRICULTURAL LAND AND CORAL RAG
 - L - MUAMBALE - KIGUNDA CAVES CONSERVATION RESERVE
 - PROTECTED AREA
 - PROJECTED AIRSTRIP
- Connectivity and transport**
- Public transport stop
 - Transit oriented development
 - Main Road
 - Secondary Road
 - Urban Street Road
 - Proposed main road
 - Proposed urban street road
 - Proposed secondary road
 - Lighthouse
 - Projected airport
- Administration**
- Shehia Boundary
- Landscape features**
- Beach
- Protected areas**
- Green corridor
- Facilities**
- Diko
 - Communication tower
 - Educational building
 - Health Facilities
 - Institutional building
 - Market
 - Well
 - Site of historical significance
- 1 - Muambale caves
2 - Kilindi baobabs
3 - Jondweni port



3.3 First Exercise

The first reference project was related to the materiality of Nungwi village house. The typical house in Nungwi it is built with wattle and daub or masonry in coral stone, mud and lime with steep roofs covered with palm leaves, which it is called of makuti. Over the following years the houses were being more modernized by replacing mud and coral with square cut coral stone blocks or cement blocks and makuti with metal roof sheets. Keeping the same layout of the typical house of Nungwi, what kind of materials could replace the existing ones with others more environment friendly?

We all know the plastic crisis that the world is facing. One persons on average generates two kilograms of plastic per day. So how would be more interesting if combining this plastic issue with a more sustainable Nungwi House?

There is a Colombian inventor that invented a system of re-using the plastic in a build house system. It is called Bloqueplas and it is changing the way we see and use the plastic. It is a module system, consisting of compressing the plastic , then introduce it into specific forms which have the design of blocks that fit in each other to form walls. There is also forms of beams and pillars. This system of pilling gives a certain similarity to the game lego blocks. With this process, it is possible to adapt to the existing housing of Nungwi, but with a more sustainable material.

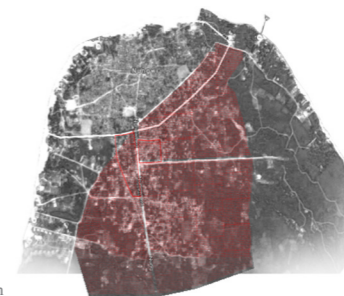
With this reference, it was also possible to try a different approach on how to organize better the village. Through the police plan, it is possible to visualize a certain area dedicated for housing structures. By zooming on different points of Nungwi, it is seen some spatial disorganization which could be more organized in order to create different elements along with the housing.

The exercise consisted of picking a certain area and organize as it shows on the below drawing (D22). With this solution would be possible to arrange green areas, street passages and cultivation areas on the same space.

Of course, this solution has its downs, since Nungwi it is not organized by blocks. This solution may show a bigger connection with other elements like green areas but gives a impersonal space to Nungwi people.

The policy plan says it will be implement four or five housing stores in order to provide housing to the following inhabitants. Through some discussions and exchange of opinions with all involved in this process we conclude that it is possible to establish the low-rise buildings that already exists and offer housing to following visitors.

D21 Nungwi habitation footprint
F11 Illustration of the Bloqueplas system



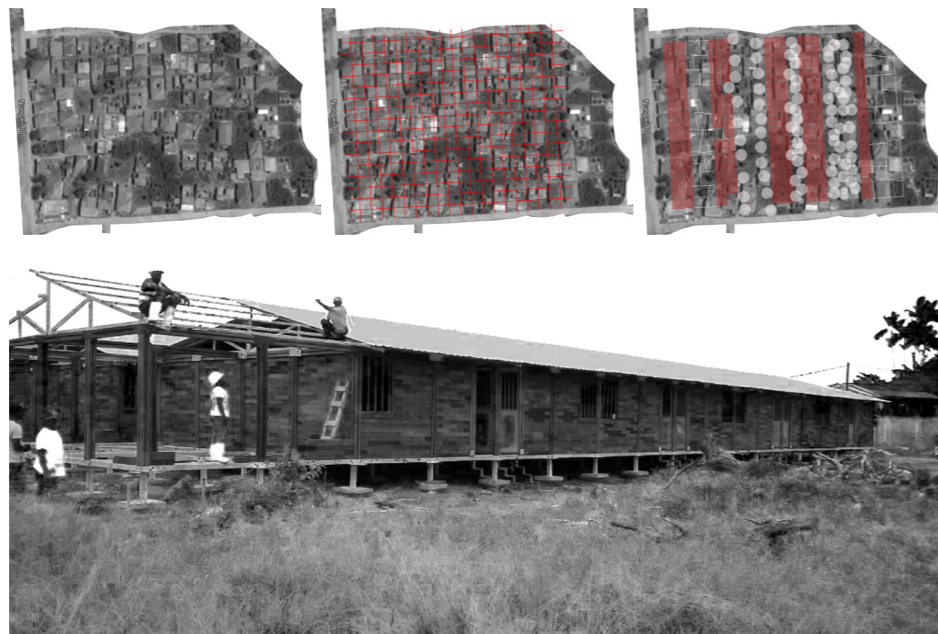
3.4 Second Exercise

The second chosen reference, was a project from the German architect Frei Otto, located in Berlin city. It was an experimentation housing for the International Building Exhibition to respond a post war period which would give the ability to people create their own houses. The project consists of platforms made of concrete and pillars in order to sustain these platforms. People would buy a space and built their own houses, giving them the freedom of creating their own spaces. This way, on the outside, would give these abstract and free space along with the green vegetation.

This exercise consisted of trying to implement this Frei Otto system into Nungwi Village. In order to do that, it was chosen a certain area.

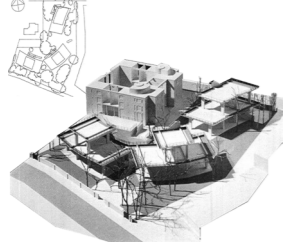
The procedure was followed by an acupuncture exercise. Acupuncture is known for his medical procedure with needles inserted in certain points of the human body in order to produce a feeling of relief or local pain treatment. By doing these analogy, is possible to create quality spaces in Nungwi by inserting, in certain areas, these structure elements contributing for a better spatial organization. With these platforms would be possible, for the inhabitants, built their own house by using local materials or innovated ones, giving a personal gesture.

With the following years some structures would remain intact or vacant, which could give a space for other programmatic features or by giving, to Nungwi, a more historic element.



D22 Implementation on the site
F12 Bloqueplas habitation

F13 The Ökohaus inhabited
F14 The Ökohaus site implementation



D23 Photomontage of the Proposal
D24 Implementation on the site



Architectural Design 4B

4. **Course: An Ambivalence Connected**

An Ambivalence Connected

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An Ambivalence Connected

4.1 Syllabus

Through the design task 'care recreation' we want to research how and in what way architecture may have a meaning for people with a disability.

The design process is an investigation into the meaning of architecture for 'design for all' as well as a critical attitude towards conventional solutions. Sustainable design and design for more is a self-evident basic attitude within the Studio Care.

The location is the Emma park, located next to the former mining district Treebeek [NL]. The Emma- park, originated after departure and then demolition of the Emma State Mine [1911 - 1973]. The mine was situated in the [Dutch] Limburgs, agricultural landscape. Where ever the farmer plowed his land for agricultural products, then the mine occupied the ground and the ground underneath [up to 1,000 m depth] for the raw materials. It will be at this location the develop of new forms of care and recreation.

The task is to spatially a care design with a recreation program; an adventure park for people with mental and / or physical disabilities. In addition to the recreational form to be designed, which is a public function, there is also a privately related program in the form of a collective living form, whether permanent or temporary housing, such as a care hotel or equivalent. This is the "worry": take care of people with a limitation, but also a moment of rest for the family and friends of the target group. This combination of programs should generate innovative solutions that may be new typologies can lead.

The master design studio wishes to complete some basic competencies with the students match the combination of four keywords: context, content, concept and construction. This will include skills in the field of design, research, management, communication and teamwork linked.

4.2 Introduction

Treebeek, at the end of the 19th century was still a junction of agricultural terrains. A village was not still created to be lived as an urban space. There were small farms that divided the fields and rural roads that connected those small lived elements. It started from being a normal rural area where abundant vegetation was present to start to become, in the beginning of the 20th century, an important industrial area. Treebeek, as village, started to emerge.

With the industrial era growing, Nederland's was growing also with it. There was the need for creating spaces to place these industrial factories and connect them to each other's. Treebeek village (named after Emma mine be placed) was created around this industrial 'village'.

Small housing was being built to give a roof to these mine workers. Shelters to give them some illusory comfort after a full day underground. Since it was a coal mine, most of their time was spent in tunnels under the surface. These workers new the essence of this place. The roots of Treebeek. It is quite ironic that the essence of a place is an industrialized machine and then on the present day there is no signal that this element ever existed since all area was covered with housing and a large green park. Green park that is now dividing the housing area to the modern industry facilities space.

With the ending of the industrial period, Treebeek village started to become vacant and the project in hands have the purpose to reestablish the dimension of density that Treebeek had before. With that in mind, a new masterplan had to be design in order that Treebeek village and the connections towards could improve in a significance way economically and even on social aspects.

4.3 The City of Treebeek



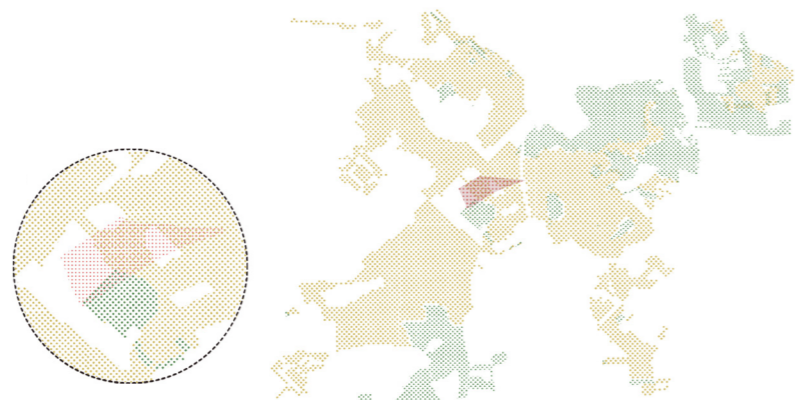
F15 Treebeek Neerlandals
Shaft - 19??

In the end of the 70's, beginning of the 80's the coal mine placed in Treebeek, was having its last days, like most of the industrial areas around it. Being underused, the owner decided to shut down. The most impressive thing was, on the 90's that field was completely empty. On a visual perception, was visible an empty area but, underneath, there was still piles of remains from the former mine and tunnels that was used to extract the coal. Nowadays we have the perception that something enormous was there but it is not quite understandable what. Mostly because on present day, is seen a green park covering most of the area and new housing on the rest of it. A green area with such proportions that, being on the site, feels an island between the village and the rest of it. Hiding the industrial history, by placing a green field on top of it for future generations could not have the perception that something (good or bad) happen there. We can assume it was an economic solution which was easier for everyone. But in terms of urban quality solution, it did not solve anything.

There were some masterplans which tried to create a better connection with village and that green area. By creating more housing, economically speaking could improve the area. A solution a bit controversial since after the shutdown of the coal mine, people were moving out to find another job. The effect shirking city was already present.

Through the following visual maps it is possible to see the evolution of Treebeek and the exact area under study.

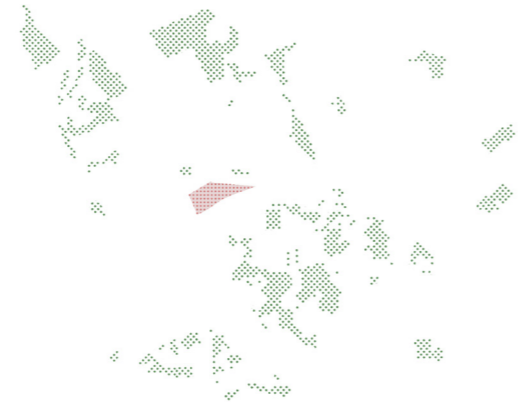
D25 Year | 1840 | Landscape
Fields (Agricultural)
Green (Trees)
Project Area



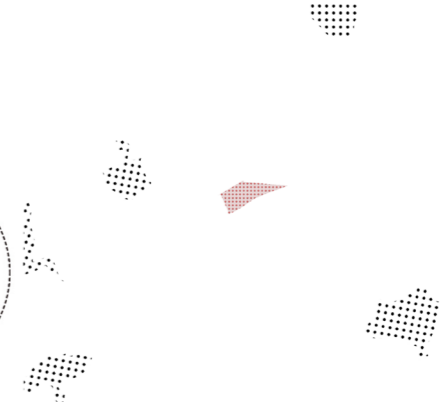
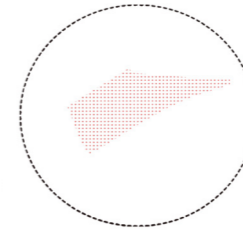
D26 Year | 1911 | Landscape
Fields (Agricultural)
Green (Trees)
Project Area



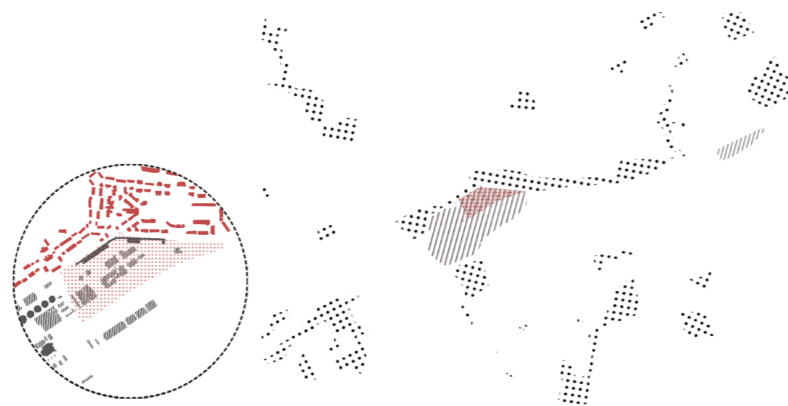
D27 Year | 2017 | Landscape
Fields (Agricultural)
Green (Trees)
Project Area



D28 Year | 1840 | Housing
Housing Area
Industrial Area
Project Area



D29 Year | 1911 | Housing



An Ambivalence Connected

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D30 Year | 2017 | Housing

-  Housing Area
-  Industrial Area
-  Project Area



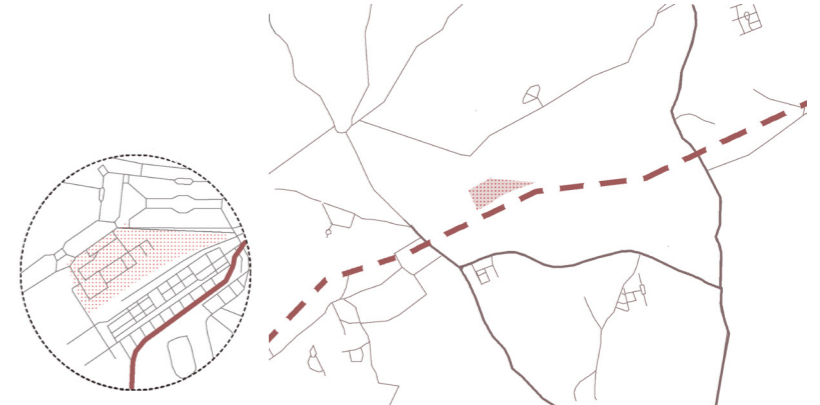
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An Ambivalence Connected

D31 Year | 1840 | InfraStructure
— Main Roads
— Secondary Roads
- - Train Road
Project Area



D32 Year | 1911 | InfraStructure
— Main Roads
- - Secondary Roads
- - Train Road
Project Area



4.4 The proposed Masterplan Macro-scale

D33 Year | 2017 | InfraStructure
— Main Roads
— Secondary Roads
— Train Road
■ Project Area



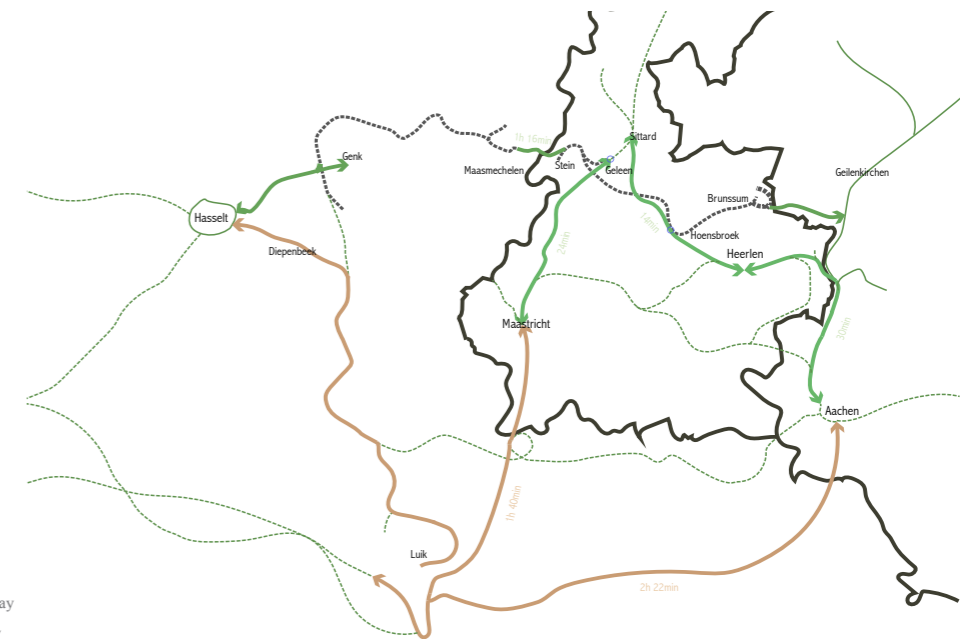
D34 Treebeek Neerdelands
PhotoMontage

Through all these divergences, the group had to come up with a possible solution that could bring something more valuable than just a green area with some trees on it. By crossing old maps of the site and on a wider spatial zone, it was possible to understand what had to be done.

In order to transport from a place to another, Emma's mine had a railway that could connect with another industrial zone. But through that period, there was plans to connect that railway to a further city, which was Genk. Genk, a Belgium city, was also an industrialized city and by connecting both railways (that both mines provided) could strength both countries economically. For some reason that connection did not happen and a gap was imposed.

As a solution, it was decided to bring back that idea and apply on the present day. The solution is bringing back the former railway that existed in Treebeek, linking Genk railway and form a strong connection between cities and countries. Prolonging this linked railway through Germany nearest city, it would be possible to link both three countries and travel faster through them.

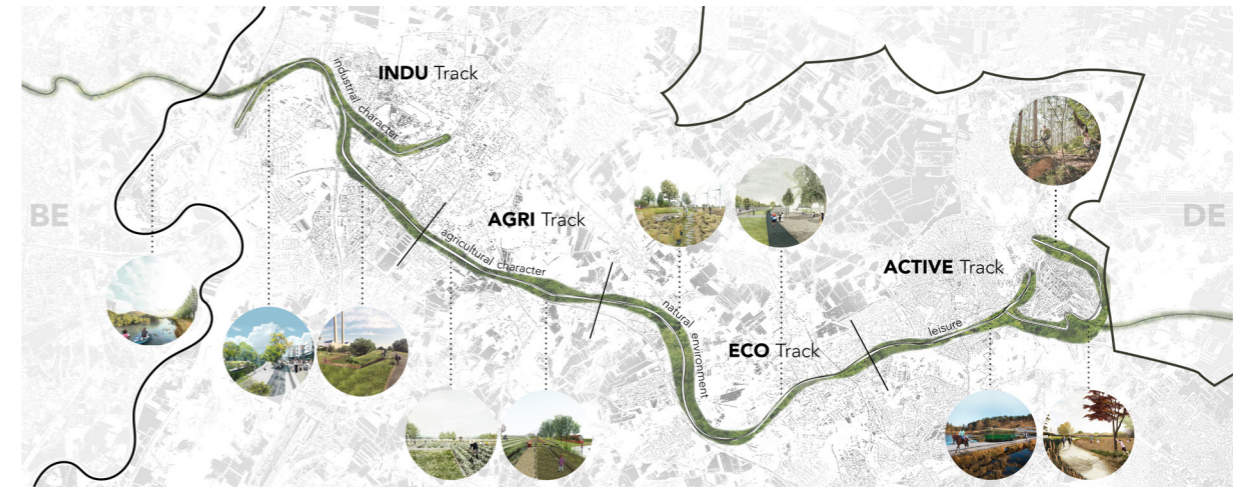
By creating this junction, it would also be possible to empower the areas with some diverse values such as: Industrial, Agricultural, Ecological and Cultural. By doing this, Treebeek would gain another value and importance like it had before with the existence of the former coal mine.



D35 Some of the connections via railway through Belgium-Nederlands-Germany



D36 Proposal of a new railway connection from old railways



D37 Proposals along the new railway connection

4.5 Design Proposal

Focusing again on Treebeek zone, this area was chosen to be part of the ecological and cultural activities.

It is not possible to decline the idea that this industrial machine existed in this area. It was part of Treebeek history and a big role on the economy of the village and country.

The proposal is bringing back again this machine. A machine that can provide something to the project itself, to the village and maybe on a larger distance.

To be able to do it, it was given a set of words in which we have to base our program to build a structure. These words were: Submarine, Bike, Nudist Park, Cave, Graveyard, Thermae, Education, Music and Sight. Going through them, one by one, was possible to demystify and go deep on their true meaning, creating then, quality spaces and environments for people with more necessities to enjoy the spatiality.

It was then created a lake, in the center of the park, with the aim of being an area of reflection on the industrial history that exist before. Connecting with the existing industrial remains, creates a space of memory and at the same time, a space of relaxation. Around this lake it was created a built structure that would be allowed to maintain some flexibility towards future solutions that could happen in a longer period. In order to maintain that in mind and still create a project for a near present, the structure consisted of a platform supported by pillars along the lake. The idea was to maintain this platform for bicycles on top and to be filled with programs that would not interfere with the bicycle lane. That way this area would not be any more divided by this massive green space but everything would be linked by this bicycle lane structure.

This way, both identities can be connected through it, creating a more united area. This design will also give a new main square which will give new commerce and a new way to live the village. Also with this new built structure placed, it will be possible, in some years, to reallocate some industrial facilities existed in the area, in order to give a greener area to Treebeek.

4.5.1 Demystification of the Words

Being given a set of words, as a project starter, it was necessary to give a special attention to it. Search the true meaning and not just searching a physical space where these words could fit.

When designing a center care, like any other design project, some challenges cross our path, but through this process, we give more attention to the small details. Details that could change a person life that has a motor disability.

Of course, technology can help on that matter but with architecture, when working with the surroundings, can have a bigger impact on a person's life.

There is an excellent example explaining the power of architecture in peoples' life. Alvar Aalto designed a tuberculosis sanatorium in Finland, in the nearly 30's, with the purpose of building spaces, where people could forget for some moments their disease and enjoy the little things in life.

Going through the project, you can see small details that can help these people, with certain conditions, going through the day. It goes from an especially designed sink till the ultimate feature of the project which is the top floor balcony. This space has the perfect wide to place beds where patients can have the feeling of being laying down on top of the trees. It is details like these that technology cannot provide and where architecture has the total responsibility to turn it into reality.

Through the set of words given, there was certain art and architectural elements that helped to mestify their meanings. On example is the painting “The Schools of Athens”. This painting from the XVI century had already a power message to give and it is interesting that this same message is still present nowadays.

The painting represents a place of knowledge. A place where everyone is welcome to share their ways of thinking. At the center of the painting, there is two important philosophers of that time, “Aristotle and Plato”. Like any renascence painting, exists several moments happening at the same time. Which is possible to see different layers. It is visible the round platform where the highest education is happening and then the rest trying to reach, somehow, to that point. It is interesting also that this stage where Aristotle and Plato are placed, we can understand that is located at the middle point of the space. Sanzio it is very explicit on his message. Education is in the center of everything. Learning is the most important thing in society. Being informed on what is happening around us. It is a long way (like the man with blue clothes sitting on the stairs resting, processing all this moment) but is necessary to do it.

The lake, imposed on the project, it is a reflection of this painting. A center element that is not reachable by everyone but, it is possible to contain something from it. The thermal baths, that make part of the program, are conducted by this center element.



F16 The School of Athens The Signature Room, The Vatican, Rome_ Rafael

“The circle is the synthesis of the greatest oppositions. It combines the concentric and the eccentric in a single form and in equilibrium. Of the three primary forms, it points most clearly to the fourth dimension.”

Wassily Kandinsky

This Montessori Kindergarden school is situated in the suburbs of Tokyo. A school which was created to break all boundaries that exist in general schools. By designing on a circular shape, gives the kids an opportunity to use the all school without even noticing.

Having this concept, creates a more fluid environment for them and a different kind of freedom that schools still face it. Freedom that are represented on the inside, where there are no barriers between rooms, creating a better communication between different students.

Being with this shape gives also the kids an endless outside area, with a variety of opportunities for them to enjoy it.

Even giving the feeling of enclosure, since the building has this shape, all this atmosphere of being a kindergarten full of kids, all that feeling disappears.



F17 Montessori Kindergarden Tezuka
Architects -Tokyo, Japan

To designing a center care, it is necessary to create spaces that create moments, feelings and emotions. Things that Zumthor always follows during is process of designing.

Going through the thermal Vals spa, we can experience something. Something that explores our sensations in order to fully experience the spaces.

By working with elements such light, water and regional materials, gives the sensation of being in the nature. Adding to that feeling, the project is integrated in the landscape, creating an illusion that is the environment that creates the inside spaces. People actual have the feeling of being inside this heavy and almost claustrophobic element.

In terms of spatiality, the project has several different spaces where people can experience it and it is interesting on how people use it. Even being several people using the same spaces, they find reserved spots where they can relax and have a personal experience.



F18 Thermal Vals Spa Peter Zumthor
Vals, Switzerland

Carrilho da Graça when design this project, had in mind that all spaces should breath music. Every corner of it, every hall and even in outside spaces, should have a connection with music. The program was simple, creating a music school with some administrative areas. Being located in an area where noise was a problem, the school was created around a cloister. That way, the school was a sound barrier against the bustle of the city.

Trying to provide the best quality space and take all is sound potential, Carrilho's school roof go higher and higher around the cloister, giving a solution for creating different rooms space in order for lower and higher sounds can be better played.

Being the music rooms on the top level and the administration programs on the below level, in between, it is possible to admire a central element. A stair that can be staged as an outside auditorium, where live music can be played.



F19 Escola Superior de Música do Instituto Politécnico de Lisboa Carrilho da Graça - Lisbon, Portugal

4.6 PROGRAM & STRUCTURE



D38 MasterPlan of design proposal
1:3200

On the superior level of the project, is possible to see the bike lane on top of the building, connecting with the other bicycle access through the floor ground.

Having the built structure connected to the site, the small hills that exist, are invading the project, in a way that creates another connection to the building, creating also a spiritual connection to the former industry since those hills are hiding remains of it.

Having a space for music in the project design, this space creates a visible ramp on the outside. With this shape on the exterior, creates different types of ceiling sizes in the interior providing different acoustics for the different musical instruments.

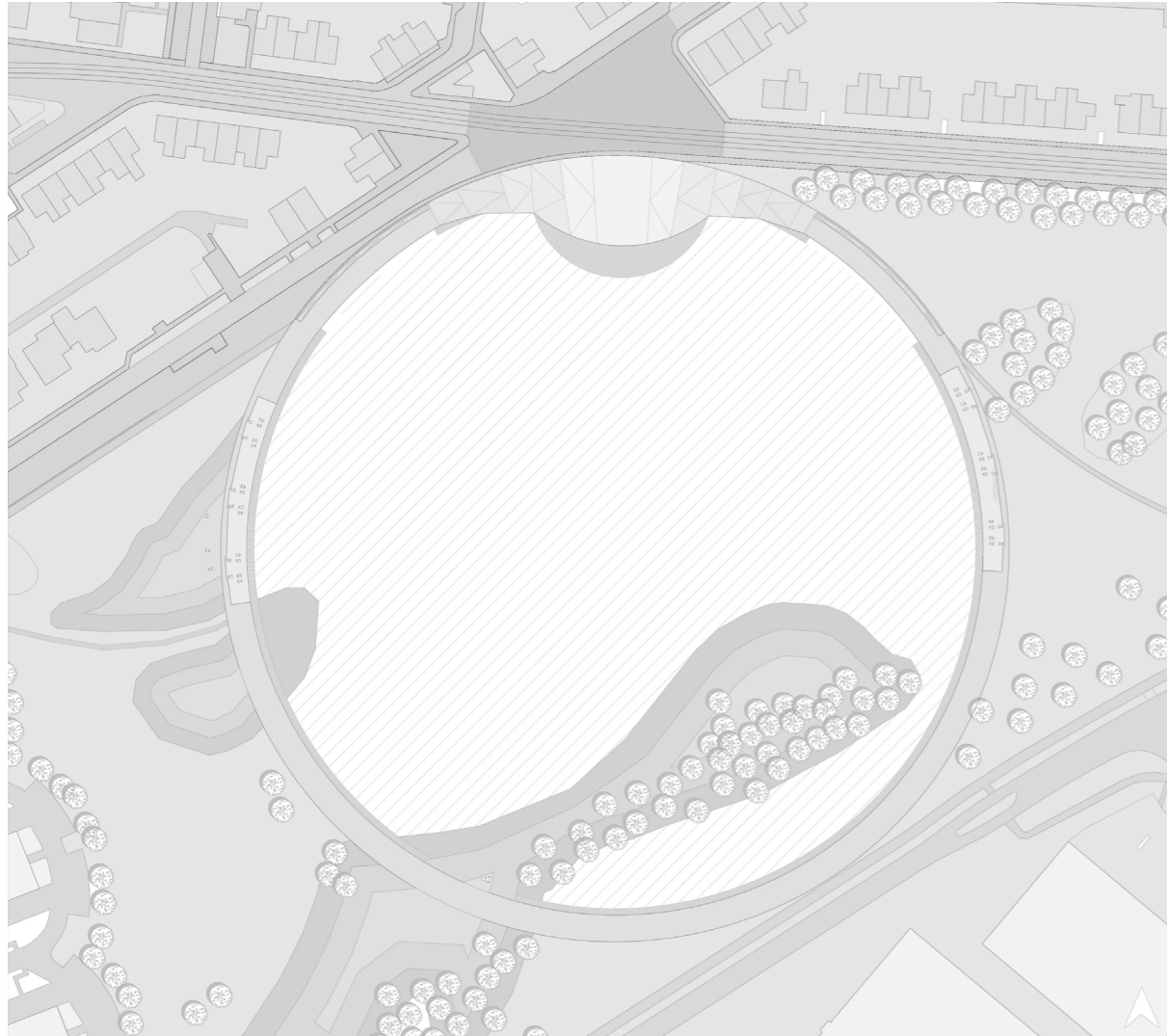
On the same level is situated the temporary rooms. These rooms can be entered by the bicycle lane or through the floor below, where the thermae are situated. It is also visible the extension of the square towards the inside lake. Inside the volumes there is space where people can rest. A space where the lake it is always present; Through visual, sound and even by touch, when using the Bath thermae on the ground floor.

On the ground floor, is possible to visualize the link between the lake and the thermae. Having these thermae inside, there is a sensation of in an infinite pool. Having the project design a connection with the hills, formed by the industrial remains, it was possible to create some spaces inside, like an amphitheater, private thermae and an extension of another possible space.

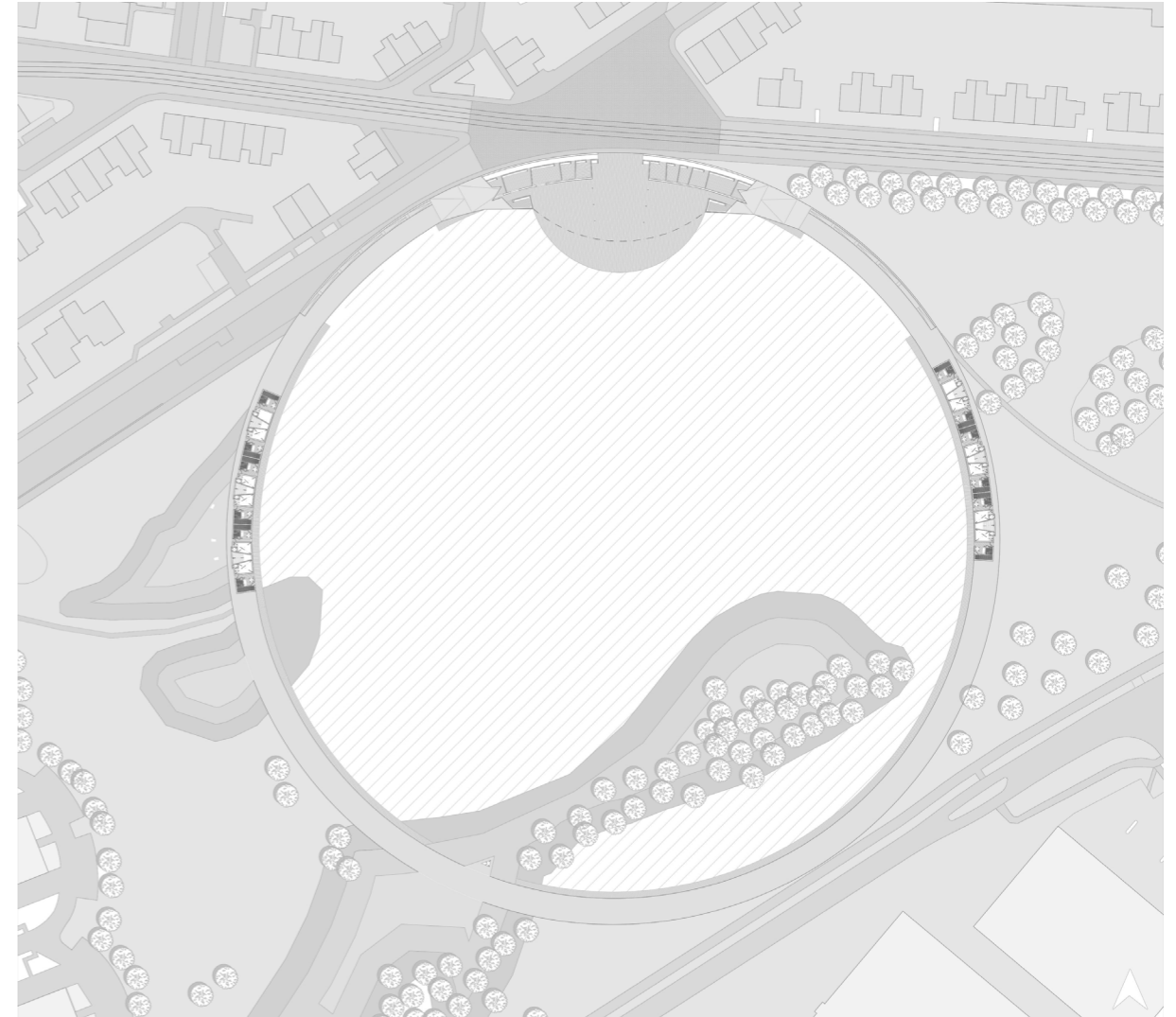
There is a connection with the following two spaces below. Between those areas, the connection between them creates also a moment of reflection and appreciation towards the sounds played by the musicians.

Each room of the school music have different types of ceiling sizes, creating different acoustic for the different instruments and even different spaces so more people can join the same space.

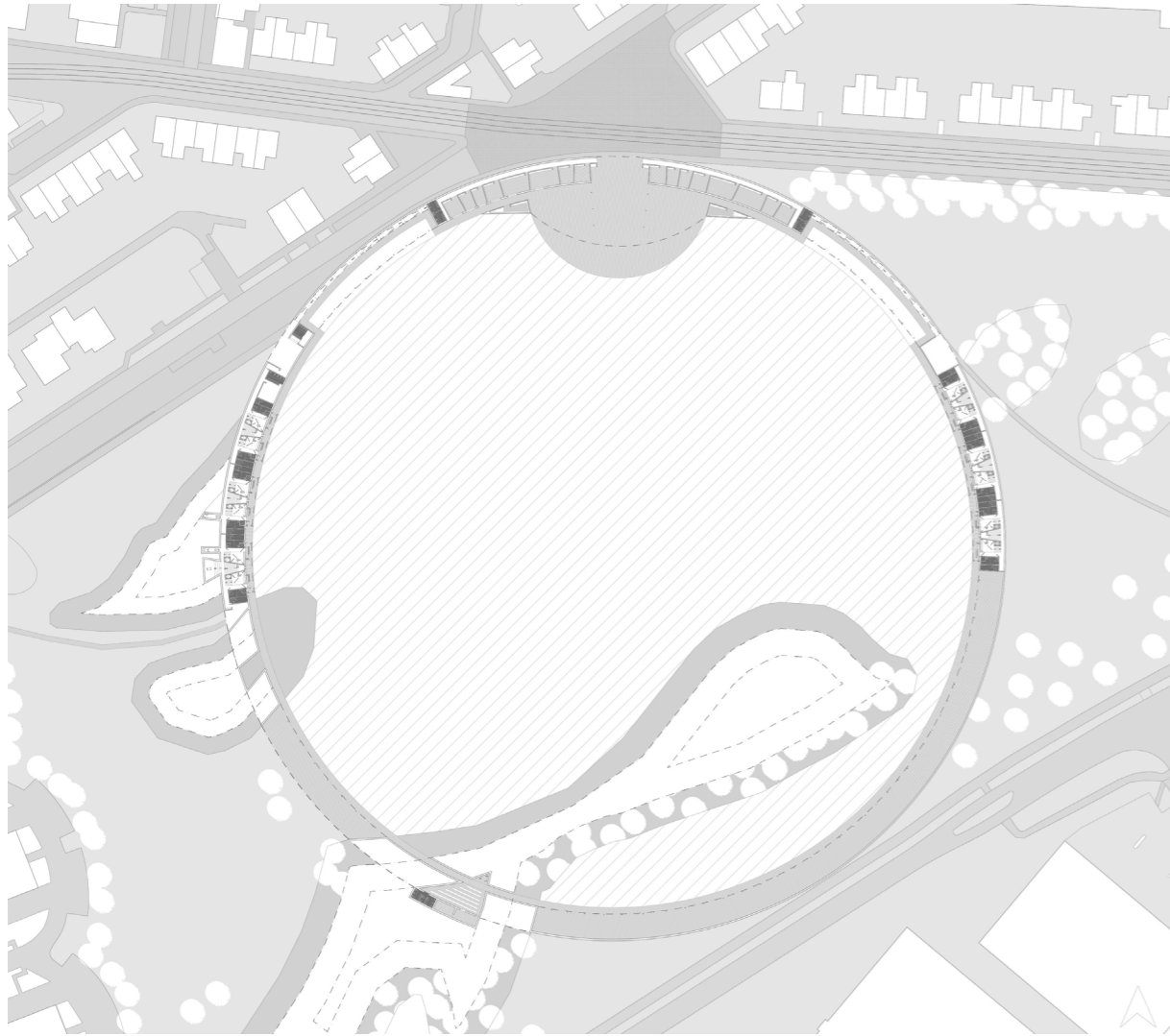
Below the lake, encounters a private area, where only the residents living in the temporary rooms, can have access to it and have a sensation of being under water. A space where is possible to play musical instruments, creating sounds that can propagate through the entire project design. By being under water, the sound will be different, creating different ways of listening the same musical instrument.



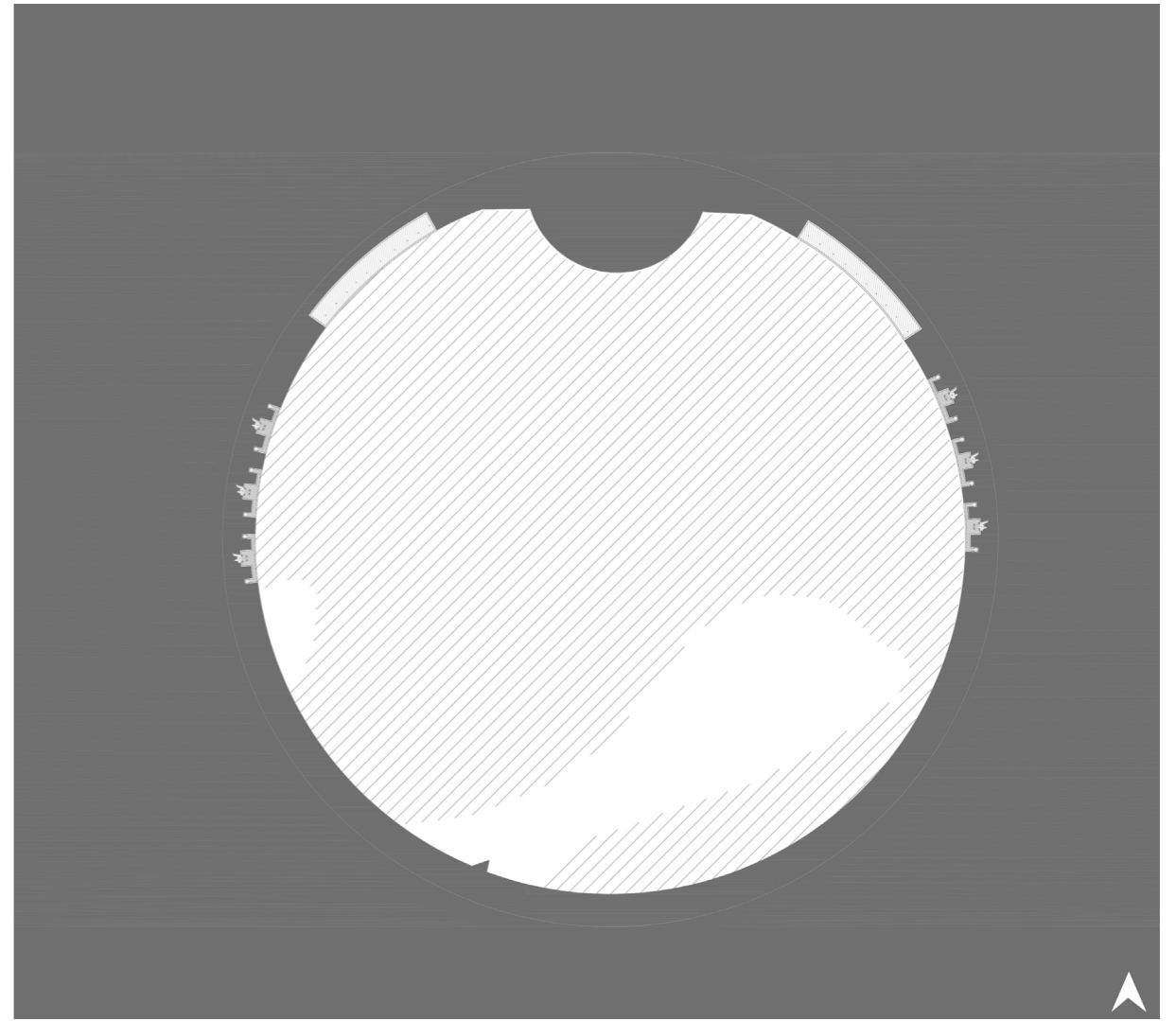
D39 TopFloor Plan 1:650



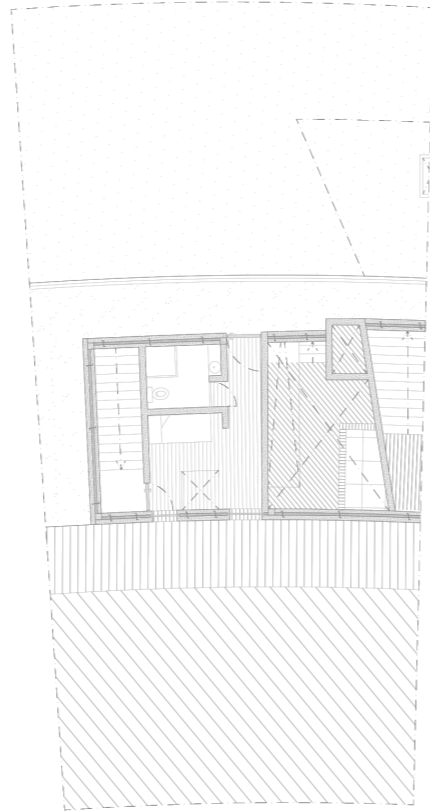
D40 Habitation Floor Plan 1:650



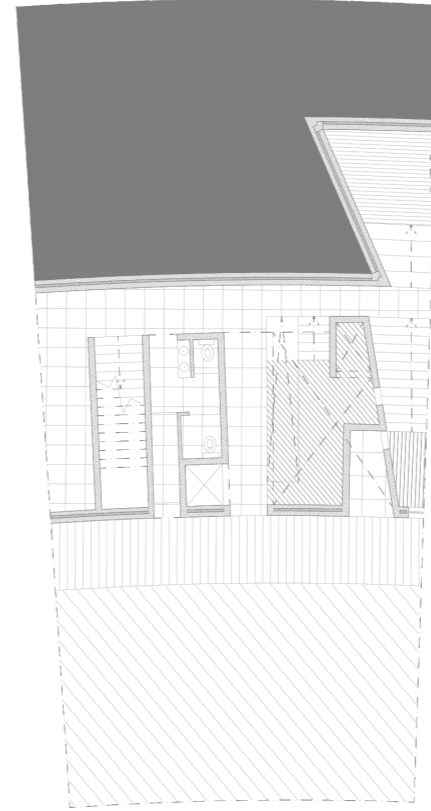
D41 Thermal Floor Plan 1:650



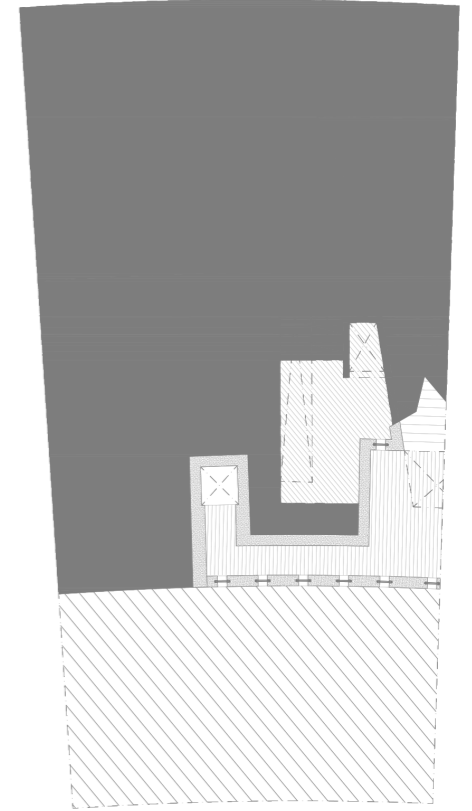
D42 Underground Floor Plan 1:650

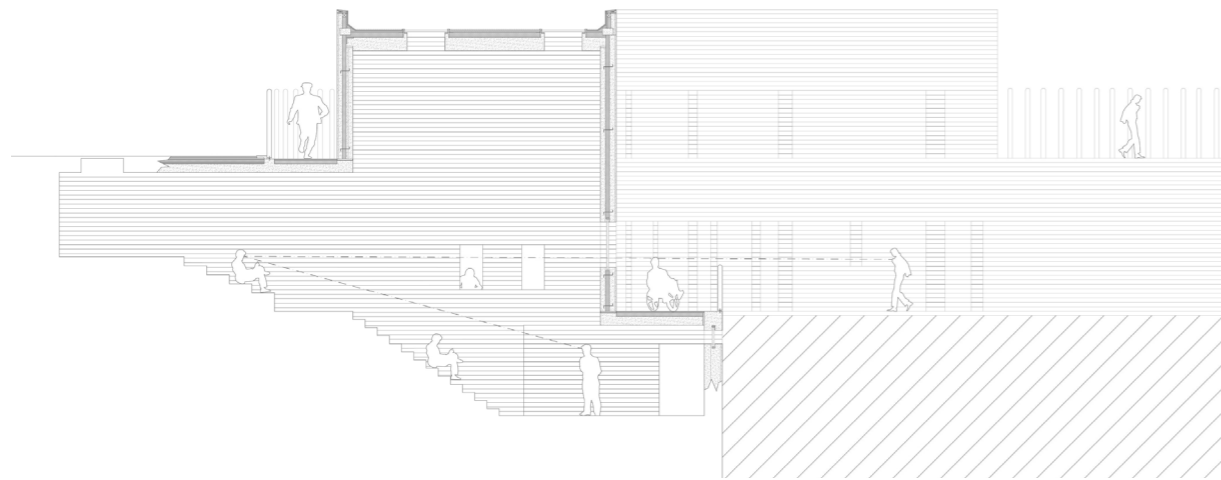


D43 Habitation Floor Plan - Detailed 1:100



D44 Thermal and Underground Plans - Detailed 1:100

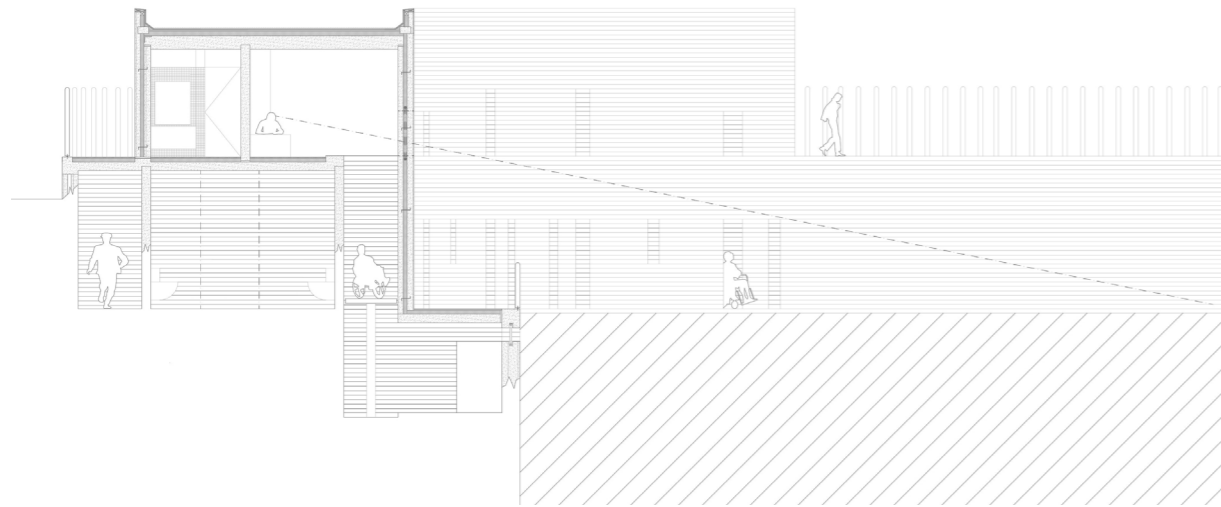




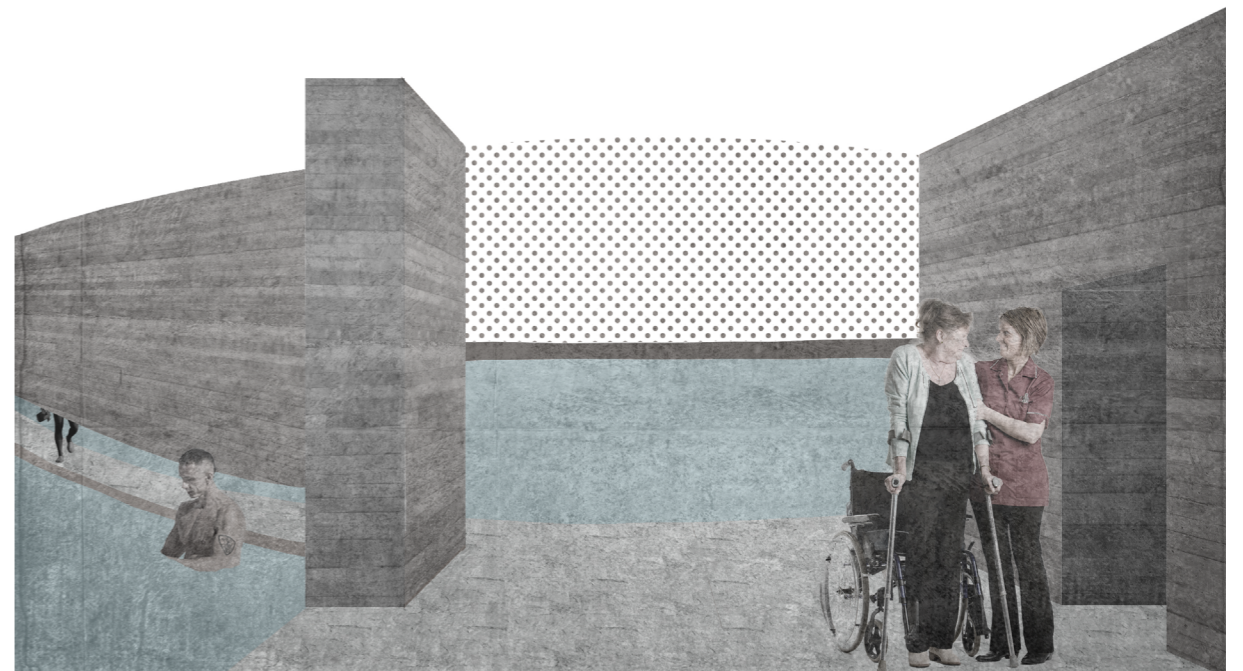
D45 Section AA' - Detail 1:50



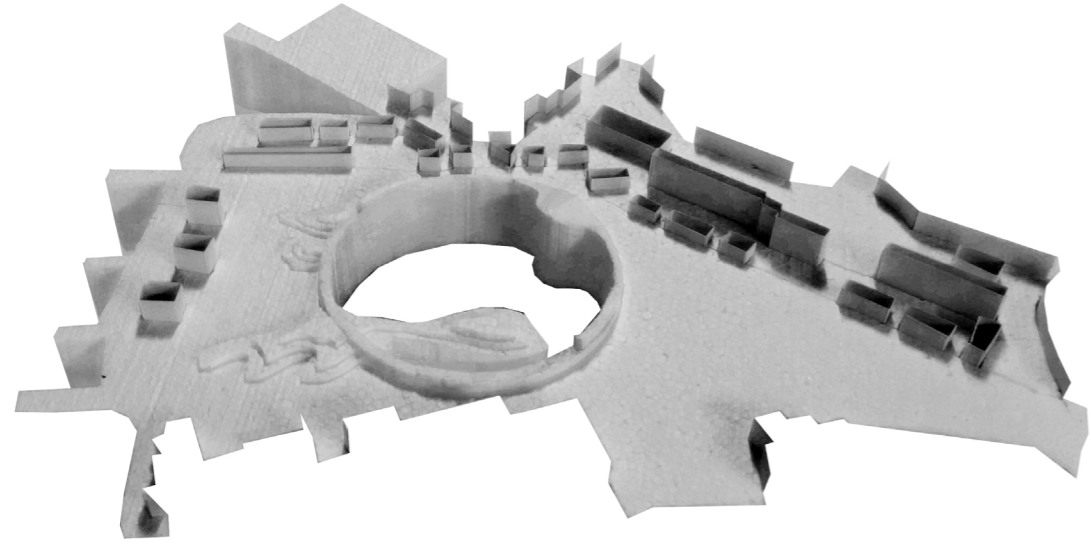
D46 Section BB' - Detail 1:50



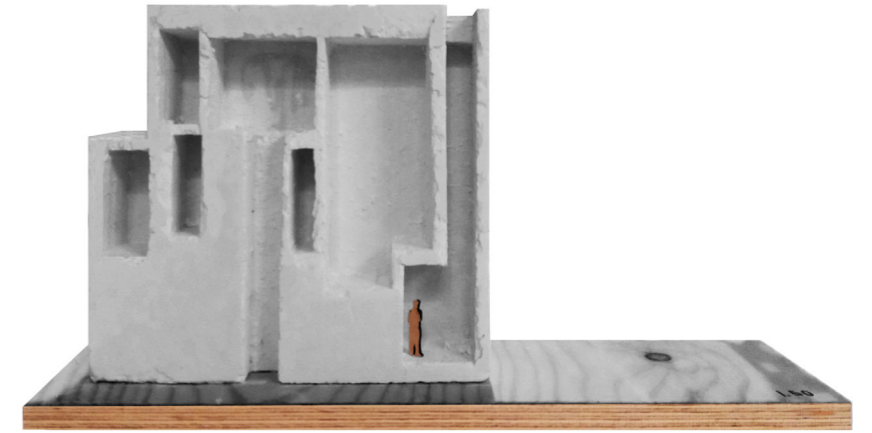
D47 Section CC'- Detail 1:50



D48 Photomontage inside the Thermal



D49 3D Model of the site 1:1500



D50 3D Model Detail 1:50

Research Training

Conflict Between
Contemporary Industry &
Adaptive Reuse

5. **Course:**
Industrial
Heritage

Industrial Heritage: Conflict Between
Contemporary Industry & Adaptive Reuse

Industrial Heritage: Conflict Between
Contemporary Industry & Adaptive Reuse

1. Syllabus

The course ‘Research Training’ is part of the exchange programme and involves an in-depth study of architecture and interior architecture as research domains, with both a theoretical component (epistemology, methodological frameworks) and practice-based learning, as the student is expected to execute an individual research project. The course consists of two main parts:

1. **Book club:** we will do a collective reading of some methodological literature (in 2016-2017: several chapters of ‘Architectural Research Methods’. We will have regular meetings with the ‘book club’: everybody is expected to have read the designated text and each meeting a smaller group of students will prepare a presentation and lead the group discussion during the meeting. The goal of these sessions is to allow students to get a firm grip on important concepts, theories and principles regarding research, which should also allow them to relate these aspects to their own research project.

2. **Research project:** each student is expected to execute an individual research project. This means going through the complete cycle of a research process (i.e., problem statement, research question, data collection, data analysis, evaluating and concluding, and reporting) on a self-selected topic and under supervision by one of the members of the research group ArcK. Note that there are in principle no restrictions on the type of research (i.e., exploratory, descriptive, theoretical, empirical, ...), the methodology (i.e., artistic, quantitative, qualitative, research by design, ...) or what exactly “data” can be (depending on the topic and research question, this can be anything from photos, plans, designs, or interviews, over sketches, questionnaires, and observations, to literature and your own ideas...). Of course, within a specific domain, research tradition or epistemological framework, the standard quality criteria should be taken into account. In addition, we will have regular class meetings to discuss your activities and to reflect on different aspects of research, also in relation to the theoretical elements that were addressed in the book club. The output of this part should be a research report describing all the phases of the research.

2. Introduction

The Industrial Heritage of an area is one part of its cultural heritage. Many cities started from an industrial site and, when dealing with such heritage, it is necessary to have a sensitive approach. “Industrial heritage is not only about identity and memory, traditions, and labor movements; it belongs to cities, sites and their transformations”¹³; “Industrial heritage recycling is a necessity from the viewpoint of environmental sustainability”; “Current practices of industrial heritage management, particularly in Western societies, combine preservation, sustainable conservation and adaptive reuse with the need to generate an income”¹⁴. Now, the industrial heritage and its preservation is an urban issue on which any procedure made will have an impact on people’s life and their surroundings.

Urban planners and politicians still have a long path to go on how combining successfully such sites with peoples’ life. Indeed, some of the areas occupied by industrial heritage are or poorly designed or, based on political values, completely renovated for tourist demands (Stoler A.L., 197, 2008). Although cities have the necessity to financially explore recognized good architectural sites politicians and planners need to act with balance.

By these means, conflicts are created and it is not only about “... preservation versus change of industrial heritage sites...”¹⁵, it is also how people live and interact with these spaces, inside and around it. These spaces are no longer islands in the middle of the city, they make part of it and, with it, comes the necessity to adjust to the needs of the people. Nowadays, it is quite dangerous for a city to have vacant expecting areas because it can generate a concentration of homeless or people doing some illegal activities. And vacant industrial spaces tend to be like that since these are areas usually dislocated from the city and enclosed into themselves. With such in mind, also comes the question of how needed is to preserve such spaces (H. Oevermann and H. A. Mieg, 202, 2015).

¹³ OEVERMANN H., MIEG H. A. - Industrial Heritage sites in transformation and clash of discourses. Routledge New York, and London, p.4

¹⁴ CHILINGARYAN, Naira - Industrial Heritage: In between Memory and Transformation Exploratory Research into Transformation Processes of Former Industrial Complexes of Leipziger Baumwollspinnerei (Leipzig) and Mattatoio di Testaccio (Rome). Germany: Faculty of Architecture and Urbanistik Bauhaus Universität Weimar, 1984. Dissertation to conferral of the academic degree Doctor philosophie, p.55

¹⁵ OEVERMANN H., MIEG H. A. - Industrial Heritage sites in transformation and clash of discourses. Routledge New York, and London, p.5

2.1 Description of the Situation

Many cities nowadays face enormous difficulties on dealing with the presence of large areas of industrial heritage and some Belgium cities are still struggling with it. Hasselt city, part of one of the cities linked by the Albert canal, is one of these industrial cities in Belgium.

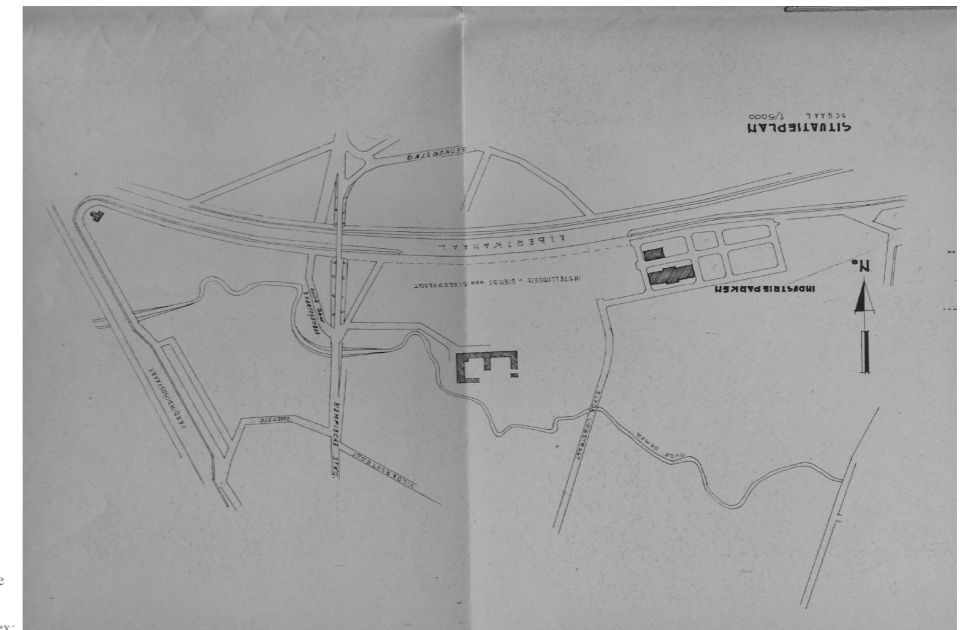
The location of the case study is situated on the north part of the second ring of Hasselt city, Belgium. More precisely, the area in question is placed between the Albert canal and Gouverneur Verwilghensigel avenue. Due to this privileged location, a big part of the existent industrial facilities was being implemented in this area around 1938.

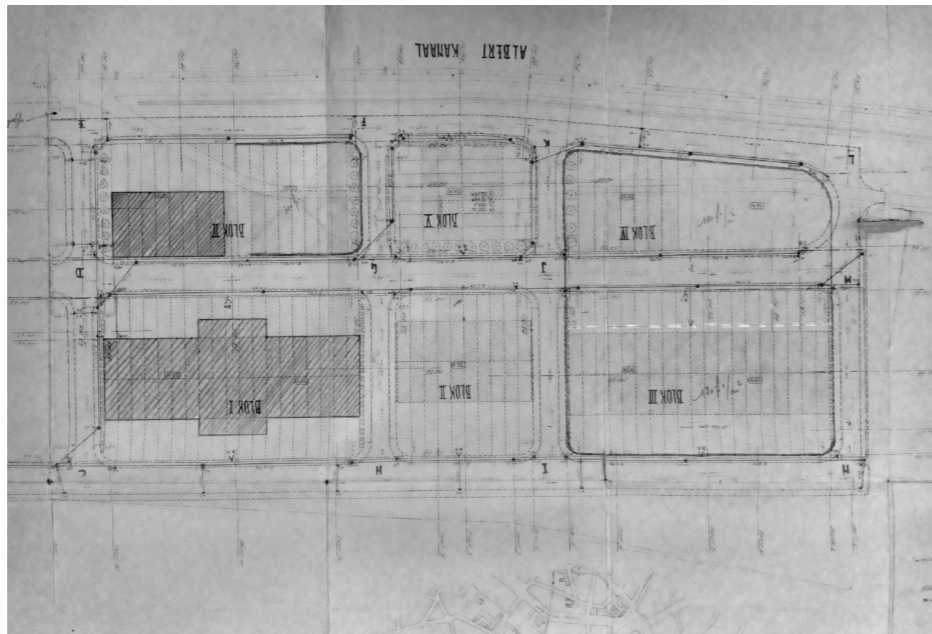
A masterplan of the industrial site under study was designed around 1940. Previously the area was empty with only roads dividing the space. The masterplan divided the area into six lots and two warehouses were built, a flower mill of 20m tall, that was settle in one of the six lots near the canal in 1958 and a second one, built in the same year, on another lot. Between 1964 and now, the lots and the adjacent terrains have been developed into industrial and commercial facilities. On the year 2000, the industrial area was getting smaller due to growing of recreational and cultural redevelopment (M. Weijer, 4, 2017).

Due to the location, near the river that links several cities and close to a highway, this area was condemned to be an industrial area. Economically speaking, a better location it is not found in Hasselt for such facilities. So, industry still kept going in this area but there was the need for more.

For some people, industrial areas are considered foreigner lands (H. Oevermann and H. A. Mieg, 205, 2015) and this area was no exception. Being an area with only industry going on, this part of Hasselt city became again an island on peoples' view. There was a need to integrate this island again in the city and the solution was reusing some industrials buildings by transforming them into culture spaces. By doing it, it gives a sort of metaphor which means a vibrant downtown urban culture (H. Oevermann and H. A. Mieg, 215, 2015), that attracts more people to this part of the city. The programs in question are: an architecture office, a cultural space,

F20 Map of the area around 1938 where it is possible to see the start of the implementation of the industrial complex;





F21 The division of the area in six slots

a music school, a nightclub, a carwash space, a café and a concert hall. Such elements that can bring the city to this area, “...help(ing) the city to retain its identity...”, “...an identity where new things (can happen) ...”,¹⁶ by doing it, people would no longer feel dislocated from it. However, some of these interventions may have been driven, essentially, by the functionality and financial purpose. Which can lead us to the question - what is the best option to preserve an industrial heritage? Which can follow to questions like: “Why do I conserve it? Do these sites have a strong urban significance, are structures and façades worth conserving? Do they have a strong technic- historical significance that would require conservation of the technical infrastructure? Are they objects that must be conserved in their cubature due to their emotional value?”¹⁷

Trying to find a singular explanation perhaps it is a bit naïve since every case it is unique (T. Edensor, 474, 2012). All cases differ from city to city, urban values and people’s needs, “...the essential consideration is that we cannot conserve industrial heritage sites only by means of the Charter of Venice (1), additional approaches are required...”¹⁸ By not following truly these demands, is possible to achieve greater things and is quite remarkable that a capitalist space that signified “...power, hierarchy and exploitation...”, turned into a source for “...creativity and cultural expression...”¹⁹.

16 OEVERMANN H., MIEG H. A. - Industrial Heritage sites in transformation and clash of discourses. Routledge New York, and London, p.215

17 OEVERMANN H., MIEG H. A. - Industrial Heritage sites in transformation and clash of discourses. Routledge New York, and London, p.217

18 OEVERMANN H., MIEG H. A. - Industrial Heritage sites in transformation and clash of discourses. Routledge New York, and London, p.218

19 CHILINGARYAN, Naira - Industrial Heritage: In between Memory and Transformation Exploratory Research into Transformation Processes of Former Industrial Complexes of Leipziger Baumwollspinnerei (Leipzig) and Mattatoio di Testaccio (Rome). Germany: Faculty of Architecture and Urbanistik Bauhaus Universität Weimar, 1984. Dissertation to conferral of the academic degree Doctor philosophie, p.5

2.2 Research Question

With this in mind, the site in question was subjected to modifications and transformations which may have led to a conflict between what was there and what came after. With the contemporary industry already implemented, other cultural elements were placed and, through this paper, there is a need to answer the following question:

-Does it exist a conflict between the contemporary industry, and the new adaptive re-used buildings designed?

It is interesting that these two different identities may find a space to coexist, but somehow looks like that one of them is trying to prevail over the other. It is difficult to understand if this industrial site is overlapping the cultural spaces or if it is the opposite. By implementing these different cultural elements in the middle of this industrial zone, seems that this area is changing and, perhaps one identity will prevail.

3. Methodology

Industrial Heritage has been a subject often debated since the end of the Industrial period. Former industrial cities were/are facing enormous obstacles with dealing with such vacant sites which, previously, were the heart of the city.

As was said before, by trying to develop a sort of understanding towards this issue, it was chosen an industrial zone in Hasselt to analyze. A special case since there are two different identities living in the same area, that deals with a more contemporary industry, still in function, and the matter of re-using former industrial buildings. Since these buildings are being re-used by introducing more culture programs, they have to deal every day with this heavy pressure that industrial activities place on the site.

The methodologies applied on this matter, will have the purpose to analyze this site in order to understand if there is a conflict between these two identities. The following methodologies were taken in consideration through the analyses of the book 'Architectural Research Methods' and to give a clearer answer for the research question imposed above. These methodologies are Literature Review; Mapping and Observation.

It was taken into consideration the methods Observation followed by Mapping because both have a correlation to achieve a clear answer for the research question. Being able to do observation, was possible to go wider on gathering information that the place in question give to the reader, and with it, is possible to assemble it into the methods of mapping, giving a clear and visual perspective about the information compiled from the observation method. The methods are:

-Literature Review: To give a general view around the topic of Industrial Heritage, for a better understanding of the case study analyses;

-Observation: Through the micro scale map, strategic days, hours and locations will be chosen to analyze the coexistence of these two identities. The hours chosen were between 8am-12pm; 1pm-6pm; 7pm-10pm. The exact spots were near the concert hall; PXL Music school; Carwash facility and forty-five club; a2-architecten office;

This method was executed by making sketches, photography and walking/biking around the chosen places.

-Mapping: Several maps that gives different perspectives of the problem in take;

-Macro scale: To understand the link between these Industrial cities in Belgium;

-Meso scale: Layers between former industry and present industry and other elements necessary for the comprehension of the case study;

Micro scale: Gives the exact location of the case study and the exact spots where the observation took place;

-Several maps demonstrating the conflicts /non-conflicts between the two identities present, resulted of the observation that took place at the site.

3.1 Industrial Heritage and its Interpretation

Industrial Heritage refers to Industrial buildings which are often found in rural, suburban and urban landscapes. They are the example of the first movement of technology and function following the structure itself, which maybe have led Louis Sullivan, with he's way of designing, saying the mythic expression 'the form follows the function'. Even Alvaro Siza Vieira, in an interview said, 'the beauty it is the pinnacle of functionality; the beauty it is the functionality key for the architects'. With these words, we almost can feel some opposite feelings for such atrocity that the industry period brought to workers of the factories, which can lead to a bad reading of preserving an industrial area. There is the necessity of truly understand because "...these structures are rallying points for the heritage movement, and their preservation serves to raise public consciousness...".²⁰

It is difficult to interpret a past and imagining a possible future, which both past and future appear to be two distinguishable processes and Industrial sites, with all its components, gives a testimony to a specific past (H. Oevermann and H. A. Mieg, 5, 2015). Everyone involved have a different perspective of the situation, and affects all of them in different ways and in a demographic aspect too. New generations tend to reimagine its heritage in response to a new understanding and new experiences. The interpretation of it differs from the past which may lead to conflicts. What most of the times causes this, is our motivations and expectations towards it, and as William Shakespeare once said, 'expectations are the root of all heartache'. This can lead us to a, probably, naïve and rhetorical question, of how much it is necessary to maintain the original in order to preserve its memory and initial urban context? It is a question that it is well answered when the issue is a historic urban landscape which has mainly been discussed for historic city centers rather than industrial heritage sites, even when both maintain interesting similarities (H. Oevermann and H. A. Mieg, 5, 2015).

Among several examples of modification and re-use of industrial heritage, there is the need of explaining two different examples of .

20 MOSHAVER, Ava - Re Architecture: Old and New in adaptive Reuse of Modern Industrial Heritage, 2011. Dissertation of Masters, p.14

modification and re-use of industrial heritage, there is the need of explaining two different examples. There are two industrial zones, with similar dimensions, that had two different approaches and methods to accomplish new ways to live that specific space. Those examples are (which now, the area goes by the name C-mine) in Genk, Belgium and State Mind Emma in Treebeek village, Nederland.

Both were important coal mines back at their time and they were very influent towards the city itself. It was because of them that both cities expanded and grown to what they are today. Each industrial zone had different endings and to adjusting to a more contemporary city, there was a need to do something, since both had a historic meaning. We reach to a point where some questions intercept our thoughts like: "...When transforming, how can we maintain the character of the Industrial heritage site?"²¹

In C-mine area, it was made a museum with former industrial buildings. A museum that shows the history of the former miners. In Treebeek, the mine vanished completely. It was a made a tabula rasa, like nothing existed on that site. Demolishing and replacing what was before for a new designing, "could actually preserve or enhance the character of a conservation area", but by doing it, would maintain the memory of the place?

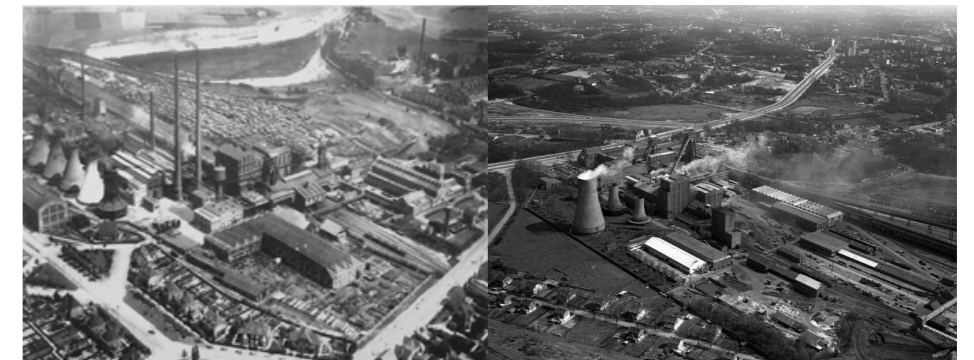
After Winterlag mines closed there was already a pressure to enhance its societal presence towards its heritage/industrial archaeology, giving a different path from the 'tabula rasa' applied on state mind Emma mines.

Two completely different approaches, but is it possible that one is more correct than the other? As was said before, it is always necessary to see the context as they are insert. Many "...ex-factory workers are happy to see their places of former employment destroyed and removed from the landscape..."²³ because it was difficult times and they want to put the past behind those years (P. A. Shackel and M. Palus, 65, 2006), but avoiding that memory it is a respectable solution? According to Shackel/

21 OEVERMANN H., MIEG H. A. - Industrial Heritage sites in transformation and clash of discourses. Routledge New York, and London, p.211

22 OEVERMANN H., MIEG H. A. - Industrial Heritage sites in transformation and clash of discourses. Routledge New York, and London, p.208

23 SHACKEL, Paul A. and MATTHEW, Palus - Remembering an Industrial Landscape. International Journal of Historical Archaeology, Vol. 10, No. 1, March 2006 DOI: 10.1007/s10761-006-0004-4, p.65



F22 From the left- Winterlag mine (C-mine Genk, Belgium) | State Mind Emma Treebeek, Nederland

Palus, telling the story of a former worker can make the preservation of industrial facilities more therapeutically (P. A. Shackel and M. Palus, 66, 2006). Heritage conservation is based on the basic values of heritage like the materials and their sites, but, even a green space covering the shadow of a factory, does not mean that there is no memory in that space. The space only has impact with people in it, and for it, there is no need for actually physical elements.

3.2 **Observation**

One of the methods applied was the observation. The observation method, with some varieties, have the intuit to interpret, a situation that occurs on a daily basis. Architects in general, while dealing with a design project, have to observe all the surroundings in a way that their design can have a positive impact on an urban scale.

Observation method will only interpret, without giving a proper architectural solution, but an awareness of the situation. It will only have the intention of giving an understand of these two different identities living in the same space. As was said before, certain days, hours and locations were chosen, for so this observation could be better understood and take some conclusions towards the objective proposed.

During the process, it was taken into account the dislocation towards the site, such as bicycles; public transportation; car and by foot, that the public living on daily basis that space uses. It was taking into account also the carpark and bicycle park spaces, the different working class coexisting in simultaneous, the traffic which involves all kind of vehicles and pedestrians, noise pollution and air pollution that may affect the surroundings and extra activities that may had occur during the process. The selected days were based on workable days where it was possible to fully understand the situation in take. On workable days, it was also considered after hours to see if also happens during that period. Having these considerations before going, it was clearer to proceed with the chosen method.

The observation method started on the second week of May of 2017. The observation happened between the 8th of May and ended on the 20th of the same month. It was decided that more days would not add more valuable information and it was possible to conclude some aspects about the area in question. It is also important to refer that the observation method was not used during all time in one just location, but divided into three chosen locations. Due to the lack of collection data during the period between 7p.m and 10p.m, it was not possible to proceed with more detail information related to, how people behaved during this period.

3.2.1 Implementation

To obtain a better result through the observation method, three strategic locations were chosen. Through these, it was possible to obtain a better and greater information about the case study.

Each strategic location was chosen with the intention of ascertaining whether there were conflicts between the new functions attributed to the old industrial facilities and the existing industrial facilities.

First Location

On the first location, it is already visible the conflicts. In this strategic point is possible to see the main road and perpendicular street (where it is possible to visualize the entrance of the cultural space, Villa Basta), and the opposite side another entrance/exit for the actual case study. On the main road, it is possible to see the majority of the industry facilities; one of the entrances for PXL music school and the carwash facility.

Through all time spend in this location it was noticeable that the wider trucks take more place during morning hours, to unload and load the materials into the industrial facilities. In the meanwhile, there is no designated parking area, so these trucks park in second row. Since this area was designated for industrial facilities, the roads were adapted for that enormous scale. But today there is different vehicles passing by too, so traffic jam starts to happen. Fortunately, during the period of observation, nothing serious happen but there are massive probabilities of some accidents may happen. Since all area does not have traffic signs, some car accidents (involving cyclists and pedestrians) almost took place.

Before 9a.m, students start to arrive and most of them arrive by bicycle. Being used to the situation they contour the obstacles easily and they usually come from the avenue entry.

It is possible to see also, the nonexistence of any sidewalks, bicycle lanes and cross roads. During the process of observing, it was noticeable a bus stop on the perpendicular road towards the main road.

The only bus that passes this area is the H3 and it shows up at 8a.m, 8. 15a.m, 8. 45a.m, 9a.m and so on; having a low affluence during the day. During the period between 8a.m and 12p.m, the affluence of people getting out and in of the bus it is low and the majority of those people were workers of that area and some students of the PXL music school. Seeing this agglomerate of people walking on the road towards their destination gave a tremendous feeling of insecurity and uncomfortable moments since there was passing by trucks and cars at the same time. The nonexistence of carparking in the area, people park their cars on the sidewalk, giving no space for people to walk in a secure and comfortable way. Is possible to see a sidewalk around the PXL music school, forty-five club and carwash establishment. As was said before, this block, with PXL music, the club and car-was establishment, which was part of the old mills factories was re-adapted to this new culture functions. It was possible to verify that this block, in fact, exists a sidewalk where people can find a safety place to walk. Unfortunately, the carpark issue brings a new definition of usage of the space. Instead it is found cars parked on that space which was meant for people walking.

It was also possible to verify some movements of merchandising between buildings. The struggle of the workers was real. Since there are no sidewalks, the worker in question was in the middle of the road transporting the material.

Another situation occurred during on one of the periods during the 8a.m and 12a.m near the Vila Basta. Since it is space where multicultural events take place, a bus, full of kids with the age between six and eight years old, parked, in second row. Since this road is narrower than the main road, trucks could not pass to continue their journey. The situation was not that dangerous since the bus driver parked in a way that the kids could get out and walk in safety.

In the opposite direction of Vila Basta, closed to the bus stop, it is situated a gas station where trucks are allowed to refill their deposit. On the same area, it was possible to see also some workers urinating,

showing already what kind of environment that that area transmits to people.

In terms of pollution, the most visible or the one more present in this area it is the noise pollution, by cars and trucks when pass by. It is interesting that, while being inside the PXL music school, no sound from outside it is audible. It is possible to assume that the same principal it is used on the concert hall.

It is also perceptible that this area is used to cut traffic. Cars that come from the avenue, cut into this area and follow another road to reach their destination.

During the period between 1pm and 6pm nothing relevant happens. Some cars and trucks pass by but not with the same affluence as in the morning time. Reaching 5pm, people start to leave their work and the area starts to become emptier. Possible it is the only time that sidewalks become visible and people can start using it.

On concert nights or when there are some events in forty-five club (which is on Thursdays, Fridays and Saturdays) this area starts to have a new life. Not having a conflict with the industrial elements, allows people creating a new environment out of this grey zone.

Second Location

On the second location, is visible the former mill, re-used into an architecture office and a café on the ground floor. It is also possible to visualize a road that intersects the main road.

It is a quieter area comparing to the rest of the zone. The only time that is perceptible that industry is present, is when trucks come to load or unload at the nearest industrial building. It is still visible the inexistence of carparking and sidewalks or even bicycle lanes. On the road, parallel to the entrance of the architecture office, already exists an agglomerate of cars parked on the road, creating a block view towards the architecture office entrance. Traffic jam also is present since it is a street with two

sides. During the period of observation, some workers from the architecture office were struggling to have a minute break while leaving the building. They had to move somewhere else where cars were no visible.

Fortunately, the café present, it is well located. It has an esplanade facing the Albert canal, making it a spot of relaxation in the middle of this industrial area. During the morning period, the café is not used so often. Only some people during brakes, around 11am, come to eat or drink something. During lunch hour, is the time where all these different identities joins together in the same space without any conflict. This café is a metaphor for bringing all these different identities together without conflicts. On the end of the day, if the weather allowed, people often come to this area to enjoy it.

The café closed at 8pm, giving this area a no invitation to come since there is no other activities happening.

Third Location

Perhaps the most livable space of this area. Is an area that give the liberty to have a general view over the back of PXL music school, the concert hall and the carwash establishment.

Probably the only street where industrial vehicles do not invade. The only time trucks pass this street is to make a maneuver to take another street.

During the day, there is a considerable number of cars using the carwash (on Tuesdays is close to the public). With this establishment placed here, gives more security since there is a constant movement. This establishment, is responsible for a greater movement taking place, even if it is only for some limited period.

On the opposite side of the block, sidewalks are taken by cars. Probably does not affect that much since the block, where all these re-used programs take place, have a sidewalk.

During the morning, the students start to arrive around 9am. Some

by car, other by bicycles. The students that arrive by car, park or in the front of the building (main road) or in back of it. The school has outside steel stairs, where below students park their bicycles.

During the period between classes, students often go to the back of the building to do a brake. Students have to use the sidewalk for that, since there is no qualified space for that purpose. By meeting with some students, it was often discussed the fact of them being isolated from the city, giving them a lack of options to go in between classes or even having lunch; the non-existence of a bicycle lane and being apart from the city center.

On the end of the day, the carwash place starts to have more costumers, since it is the period where people have time to go. Even being able to wash two cars at the same time, in some days, the number of cars were so immense, that started to create a traffic jam. At the end of the day, industrial activities no longer take place, creating any conflicts with the other functions.

During night, this area gives space to a new environment. On special nights, concerts are taking place in the concert hall and on the weekends, people enjoy the forty-five club. Some people come by car, other bicycles and the same problem exists. The non-existence a proper space for that, people park their cars on the sidewalk.

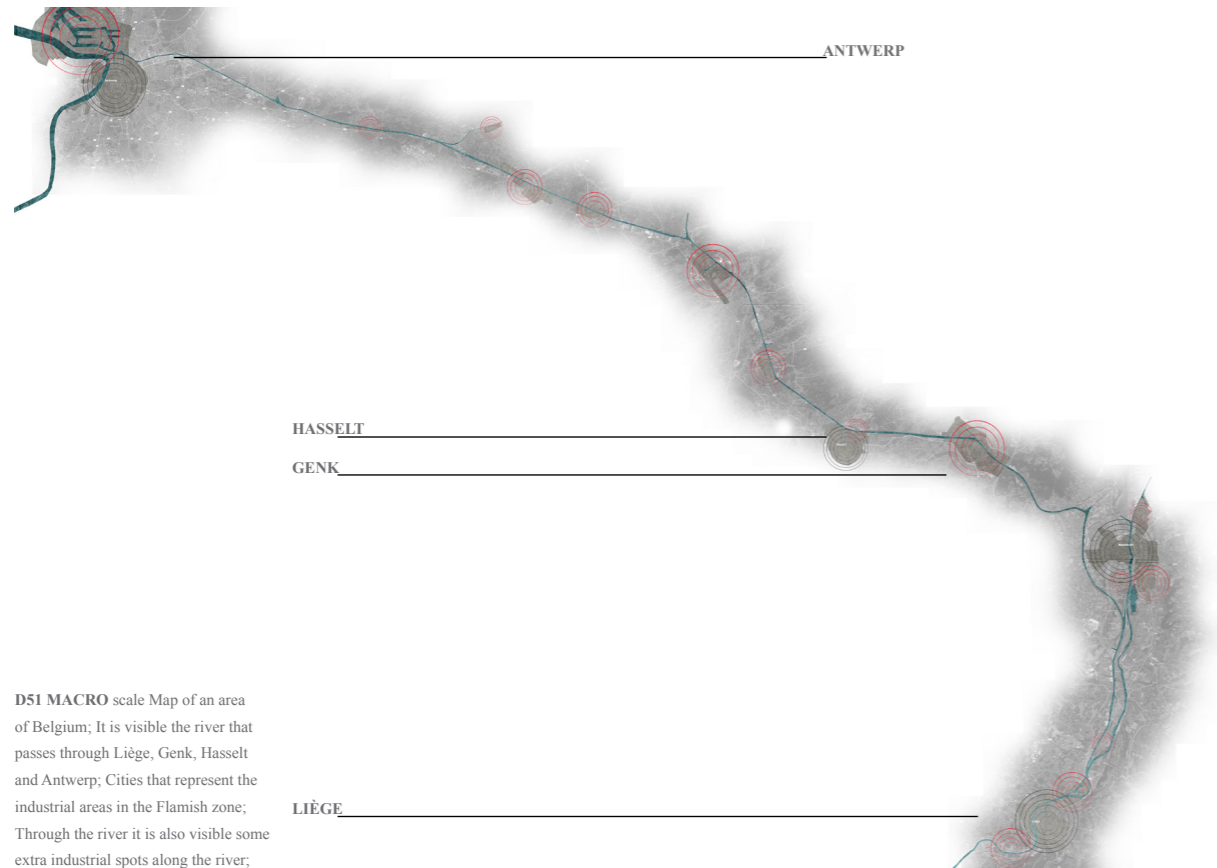
3.2.2 Analyses

This area faces a monotony on is daily basis. Like any industrial facility running through a normal day. Due to its location, with a wide avenue in between the city and the study area, gives the perception of a non-approachable area, creating a metaphoric barrier around this extension of the city. A barrier that existed in industrial sites, which only the workers could enter. Seeing as an outsider, it appears a grey area which is vacant and not accessible. It is interesting what happens when we really trespass into this area and see these two different universes coexist.

The site does not create many different situations that could emphasize what already happens there but, the situations that already happen every day is more than enough to understand that there are some conflicts between these two elements.

An area that it is used mostly for industrial activities, is understandable that some aspects are not adaptable for the other new functions.

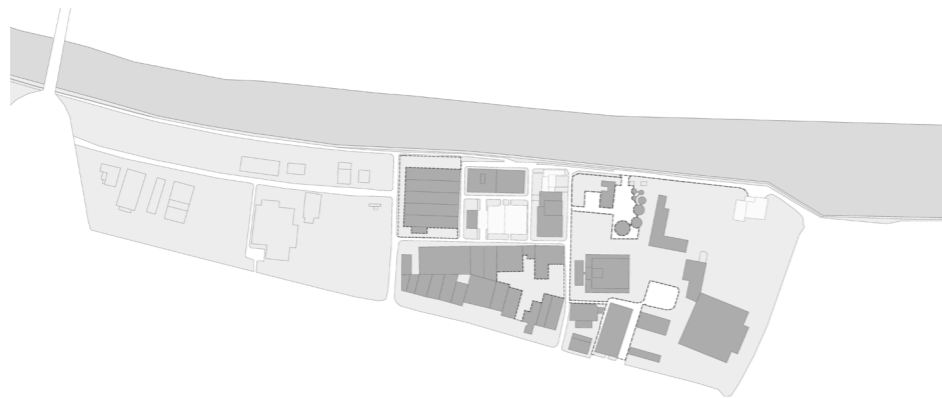
The observation was divided into three different strategic locations which were possible to view all the possible scenarios. In Appendix II, Photographies, is possible to visualise some of the examples mention above in the Implementation chapter.



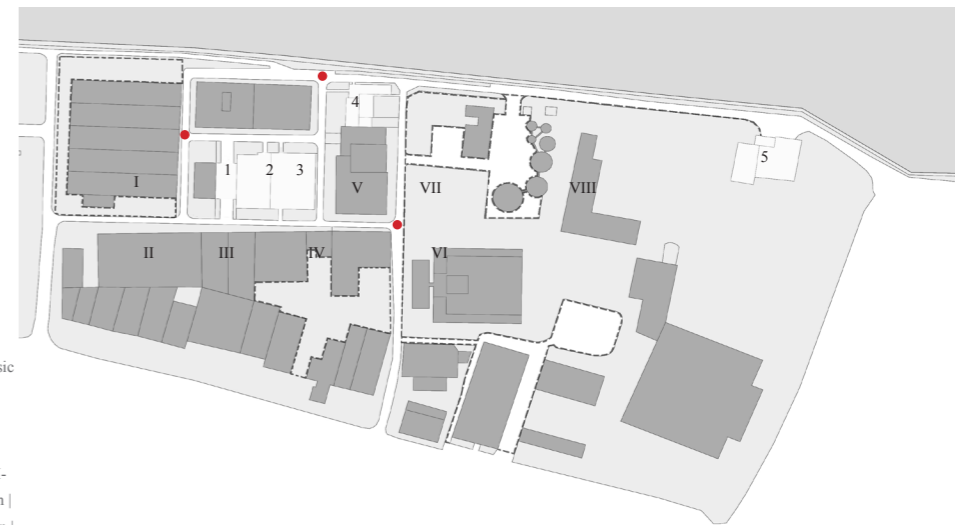
D51 MACRO scale Map of an area of Belgium; It is visible the river that passes through Liège, Genk, Hasselt and Antwerp; Cities that represent the industrial areas in the Flamish zone; Through the river it is also visible some extra industrial spots along the river;



D52 MESO scale Map of Hasselt, where it is perceptible, on darker grey, the industry areas that exist around the city and the actual city, on lighter grey; On blue, it is the Albert canal; On Northeast of Hasselt it is possible to see the case study area;



D53 MICRO scale map: Show a more detailed area; a darker color we see the contemporary industry-private spaces; a white, along with the streets, the reuse buildings-public space



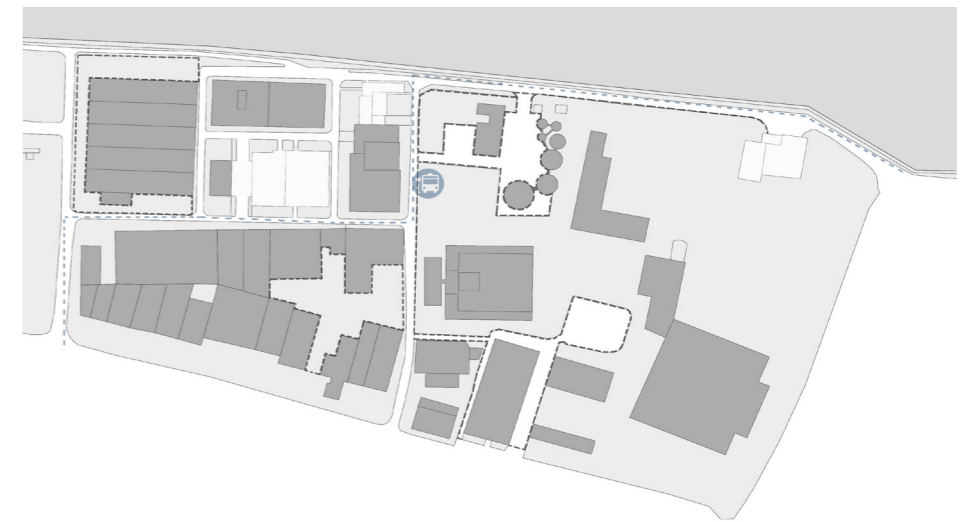
LEGEND:

1-Carwah | 2-Concert Hall | 3-PXL Music School | 4-A20 Architects Office; Villa Basta; Bar Albert; Offices | 5-KAA116;

I-Sternotte Warehouse | II-Sternotte | III-HANSA Flex | IV-Ceramic Pro Belgium | V-Servilux | VI-VDAB | VII-Gas Station | VIII- Alcomat Hydraulic Service



D54 Illustration of the different work classes that exist and which buildings they are insert in; On dark grey, it is possible to see the parking area that is occupied by cars; Possible to see the boundaries created by some of the industry, giving a sensation of more private areas;



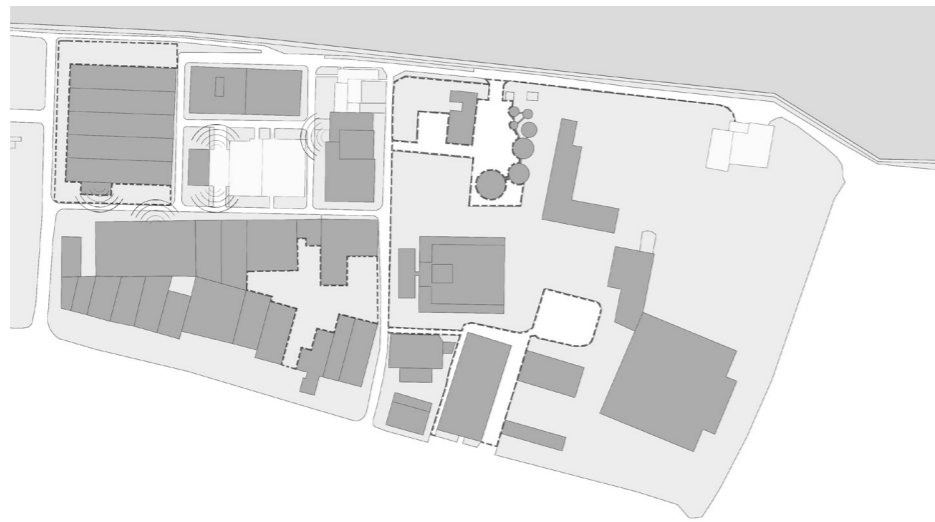
D55 Illustration of H3 bus route and their stops in the area



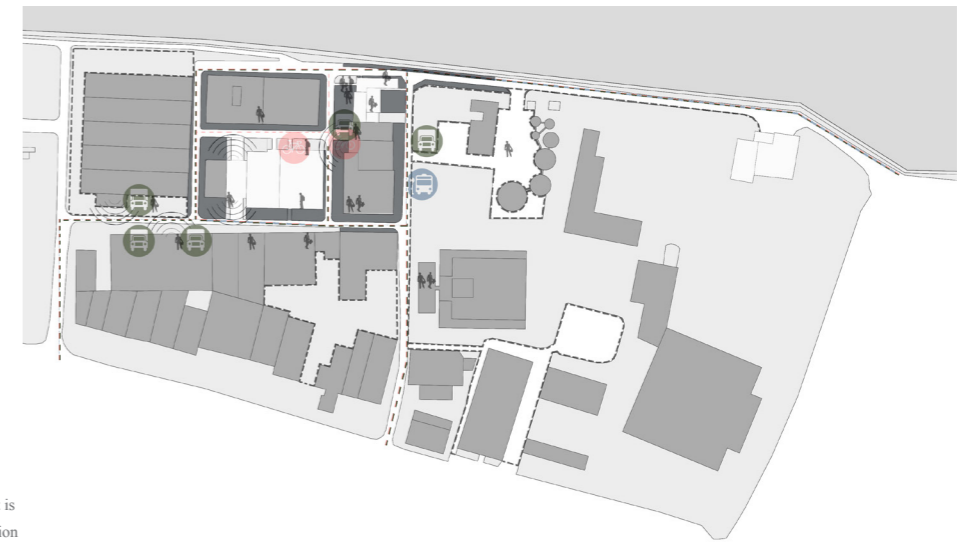
D56 Illustration of the routes of the Trucks that pass by; Spots where the trucks park in second lane; At the back of px1 music, the road it is not use for any industrial truck;



D57 Illustration of the bicycle route taking by the students and some workers; spots where the parking for it are placed;



D58 Illustration of the sound produced by the different elements situated on the area;



D59 Illustration of all maps combine; It is possible in some situations, the interaction on paths;

4. Conclusions

Hasselt is an area where some industrial activity took place and by the obsolescence of some industrial areas and the fact that they started to become vacant the need to re-use them was urgent. Combining such urban issue with the fact of being a place of memory, gives planners a big challenge to solve.

Referring to the case study research, is possible to understand that this area is reserved for industrial activity, creating an isolated space of the city. Over the years, the industrial activity has been reducing, creating in this area the opportunity to adapt abandoned structures to new functions. In this way, a greater link could be created between this area and the city. However, this was not the case.

After the applied research methods, the results indicated that there was a greater affluence to the site. With the opening of a music school, concert hall, offices, various types of establishments to the public (Café, shops, car wash) and even an urban bus route, this area has gained a new atmosphere, which previously did not exist. But, the urban design in this area is still adapted to only industrial activities and is not yet ready for this larger influx of people or these diverse functions.

Observing this area, the parking areas are almost non-existent, being the sidewalks, the space chosen to park the vehicles, supposedly for pedestrians. What is visible is, pedestrians walking between parked vehicles and those on the road. Another missing element is a bike path. The non-existence of this element creates the need for cyclists use the road, creating a conflict with the other vehicles present in the area. Another issue is the lack of road signs, such as zebra crossing or stop signs, which may lead to some unpleasant situations.

Although, this area has gained new activities the idea of non-habitable is still present. The absence of these basic elements, that creates security, still gives the sensation that this area is not part of the city.

In spite of the fact that there is no formula on how to adapt these vacant areas, the most important aspect to take into account is the surroundings and the people in it, in order to provide a habitable space.

6. Other Courses

Other courses

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Other courses

6.1 Art Nouveau and Regional Modernism in Belgium

This course had the purpose of giving an introduction of the period Art Nouveau in Architecture along with the artists that followed this style in their artwork. The course was divided with basic texts, of this specific period along with discussions, and site visits. The lectures were given by professor Koenraad Van Cleempoel.

The course started with the demystification of Art Nouveau period. Between its beginning, around 1890 till its ending, around 1915, there was a shift from figurative art to abstraction. Modern artists wanted to feel free from the representation of space on a flat surface, the realistic use of colors and the realistic imitation of men and objects. It was a process of total abstraction to search the essential. To better understand this shift, it was given paintings, sculptures and architectural designs examples to the students for them to analyze. One of the examples given to analyze were the painting William Anderson with two Saddled Horses, 1793 and Horse Race, 1875 from Édouard Manet. On the first example we see glorification, emphasized emotions and static elements, being clear what we see. On the second one we see movement, saturated colors and not clear elements like the first example. Not a complete abstracted painting but going towards it. On Piet Mondrian paintings, it is also visible that sense of movement and the transition for the full abstraction. Comparing the painting, Red Tree, 1908 with the composition No. II, with Red, Blue, Yellow and Black, 1929, is visible on the second example, the strict lines.

Moving to Architecture, in a general design, Art Nouveau was inspired for the easy access to industrialized materials such as iron and glass. With that, it was possible to do some experiments and create diverse design projects. Victor Horta, was one of the pioneers of this movement. From his design projects, such as houses and furniture it is possible to see the shapes on every element. In Tassel house, 1894 Brussels, the facades, columns, the furniture, the windows, the stairs and even the doors have industrialized elements that indicated movement. Another example is the architect Antoni Gaudi. His projects like Guell Palace 1984, Barcelona, which all elements inside are strongly worked and shaped to create

movement.

Like in art, that transition in architecture it is also visible since the abstraction from the shapes, was being reduced to vertical and horizontal lines. That transition is visible on the project Frederick C. Robie House 1906, Chicago, from Frank Lloyd Wright. From the exterior is visible the strict horizontal and vertical lines.

To fully know the knowledge of each student, at the end of the semester, it was given an exam to do.

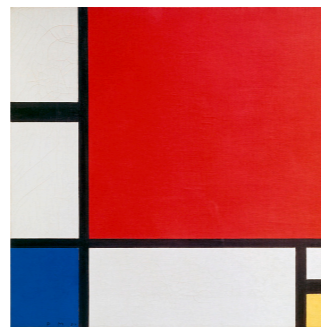
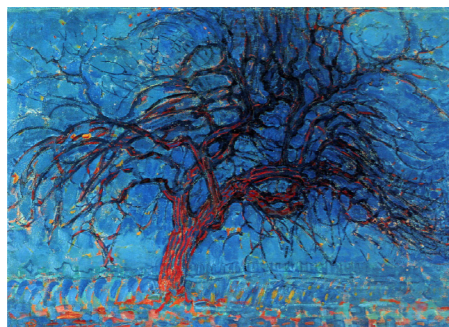
From Left to Right

F24 William Anderson with two Saddle-Horses Painting, 1793

F25 At the Races - Édouard Manet, 1875

F26 The Red Tree - Piet Mondrian, 1908

F27 Composition II in Red, Blue and Yellow - Piet Mondrian, 1929

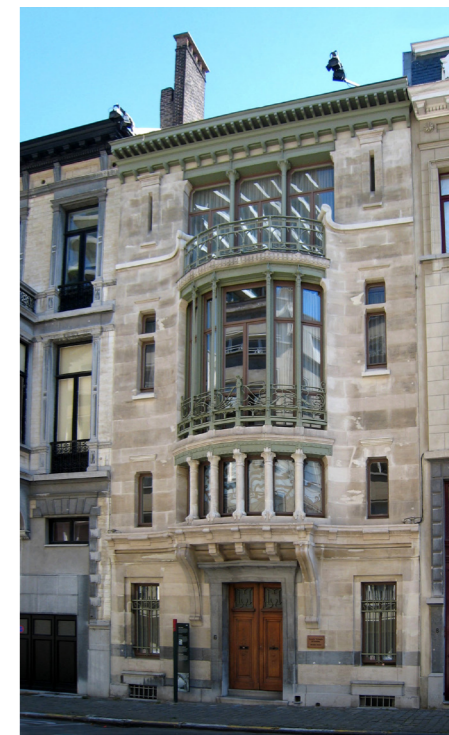
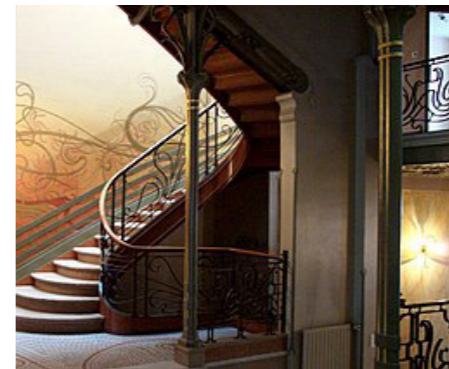


From Left to Right

F28 Stairway of Tassel House, Brussel - Victor Horta, 1894

F29 Facade of Tassel House, Brussel - Victor Horta, 1894

F30 Robie House, Chicago - Frank Lloyd Wright, 1906



6.2 Building Construction 4

This course was based on a design assignment in a group work. It was given the opportunity to choose a building, already built, analyze it and renovate it into a more sustainable design project, taking in consideration the context, the constructive elements regarding the energy, water and material use. Along with the investigation, external professors/professionals would give extra knowledge about construction methods. Parallel to this group work, another group work was done, which had the purpose of visiting a construction site every week and analyze the process that was made. The lectures were given by professor Bart Janseens and professor Griet Verbeeck.

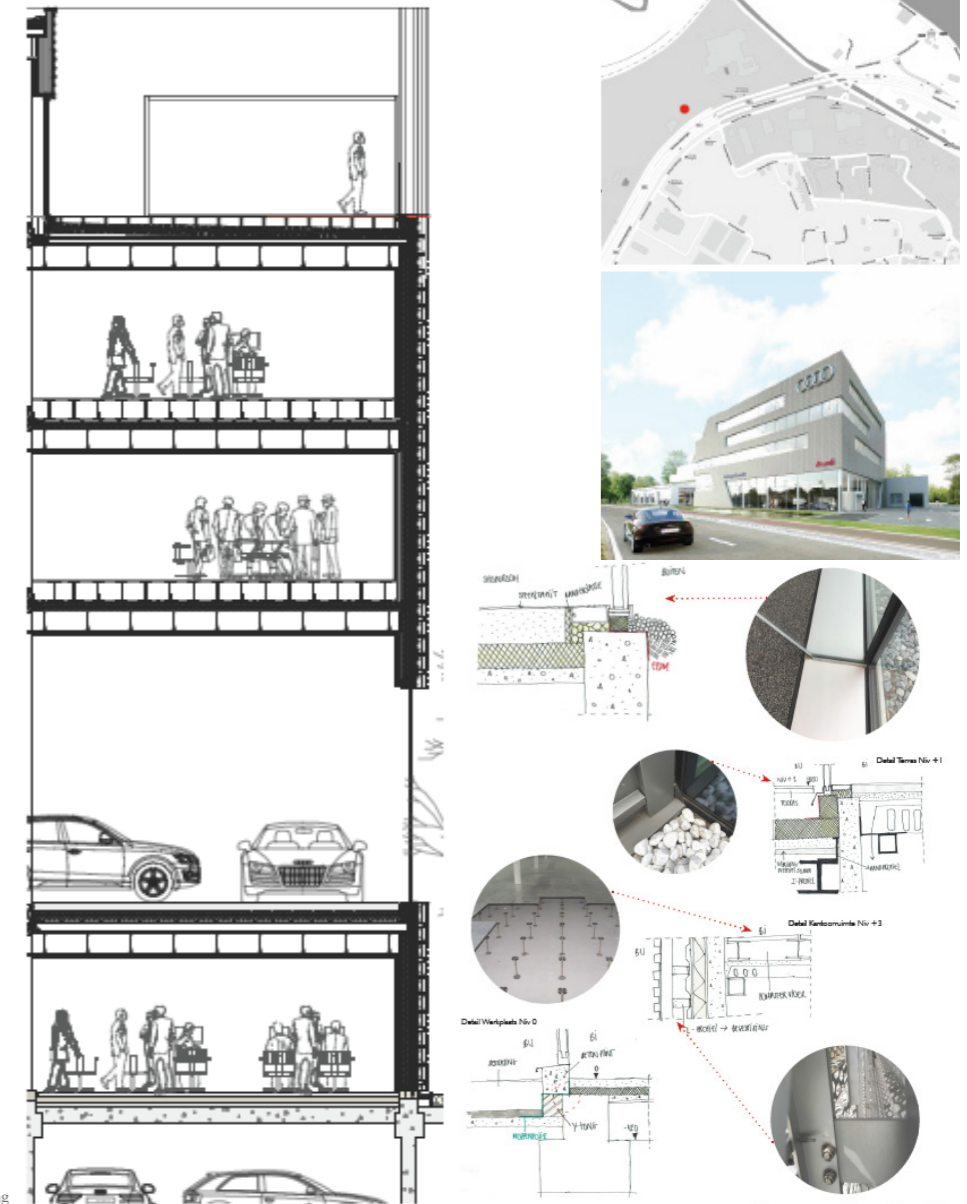
The chosen building, located in Hasselt, is a project from the architectural office MaMu. The project is an Audi show room with offices and other administrative rooms.

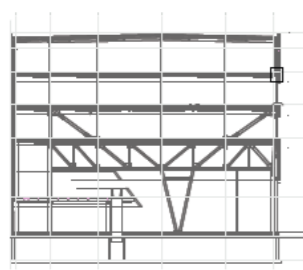
With the help of MaMu office, it was possible to have access to all the process drawings of the project design, giving the full disclosure of the building. Being analyzed by the group, a renovation had to be made. Through the analyses, the building is based on a concrete structure, which on the bottom of the building is located the basement. This concrete basement is supporting the entire steel structure that holds the next floors of the building.

With the analyzes done, it was decided to replace all steel structure with bamboo wood. By doing this, since the proprieties of this material are high durability and easy to work, the building would have an ecological identity.

As support of this investigation, it was done a 1:1 scale model of a specific detail, drawing details and a brief presentation.

D60 Section of Audi Building;
D61 Plan of the location;
D62 Photomontage of Audi Building
D63 Different materials of Audi Building

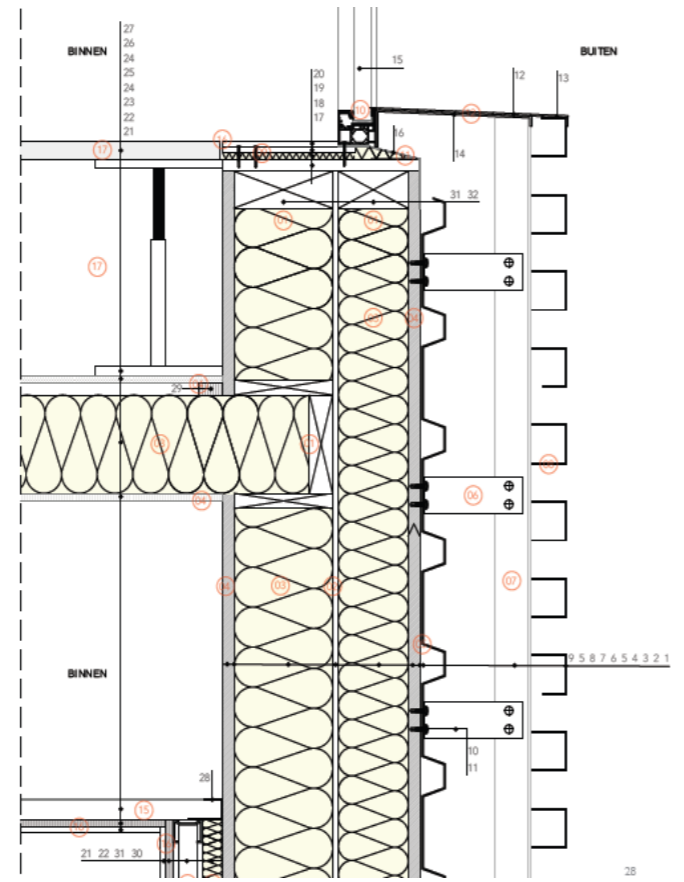




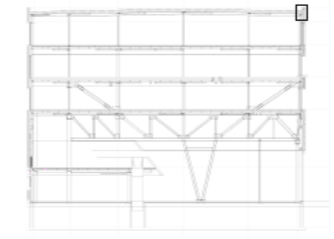
BENOEMING / DIMENTIE / FUNCTIE / MATERIAAL VOLGORDE WERKEN

01. Geperforeerde, geperforeerde plaat / (62,5 x 62,5 x 2mm) / Siegevel / Aluminium
02. T-Profiel / (60 x 60 x 3mm) / Verticaal dragende onderconstructie / Aluminium
03. Geperforeerde plaat / (172 x 40 x 3mm) / Verticaal dragende onderconstructie / Aluminium
04. Folie / (1mm) / Waterkerend / EPDM
05. Beplating / (20mm) / Afdichting / Spaanplaat
06. Isolatie + Balk / (120mm) / Isolierend + Drager / Stro + Bamboe
07. Tussenplaat / (10mm) / Compartimentering, Brandwering / OSB
08. Isolatie + Balk / (170mm) / Isolierend + Drager / Stro + Bamboe
09. Dampscherm / (1mm) / Dampdichtend / PE
10. Fablock / (30mm) / Bevestiging / RVS
11. Hoekprofiel / (172 x 60 x 3mm) / Bevestiging / RVS
12. U-profiel / (20 x 275 x 3mm) / Afwerking / Aluminium
13. Vertijning U-profiel
14. Eindprofiel (Bevestigdaan raamkade) / (20 x 350 x 3mm) / Afwerking / Aluminium
15. Vast raam; dubbele beglazing
16. Waterdichtingslab / (2mm) / Waterkerend / EPDM
17. Afdichtingsplaat / (40mm) / Dragend / Multiplex
18. Randslatte / (20mm) / Isolierend / PUR
19. Kader / (20mm) / Verankering / Multiplex
20. Raamkader / (10mm) / Afwerking / Aluminium
21. Beplating / (10mm) / Afwerking / Gips
22. Gipskartonplaat / (12mm) / Afwerking / Gipskarton
23. Metalstuf / (60mm; h.o.h. 400mm) / Ophangstructuur / Aluminium
24. Beplating / (12mm) / Afdichting / Bamboe
25. Balk + isolatie / (160mm) / Dragend + Akoestisch isolierend / Bamboe + Stro
26. Verstevigings Vignol (compeniloos) / (35mm) / Dragend / RVS
27. Tegels / (30mm) / Afwerking / Nonant Rubber
28. U-profiel / (120 x 35mm) / Bevestiging / Aluminium
29. Demper / (40 x 20mm) / Akoestische demping / Rubber
30. Isolatie / (35mm) / Akoestisch isolierend / Glaswol
31. Metalstuf / (60mm; h.o.h. 600mm) / Ophangstructuur / Aluminium
32. Balk / (60 x 170mm; h.o.h. 600mm) / Drager / Bamboe
33. Balk / (60 x 120mm; h.o.h. 600mm) / Drager / Bamboe

GEVEL DETAIL schaal: 1/5



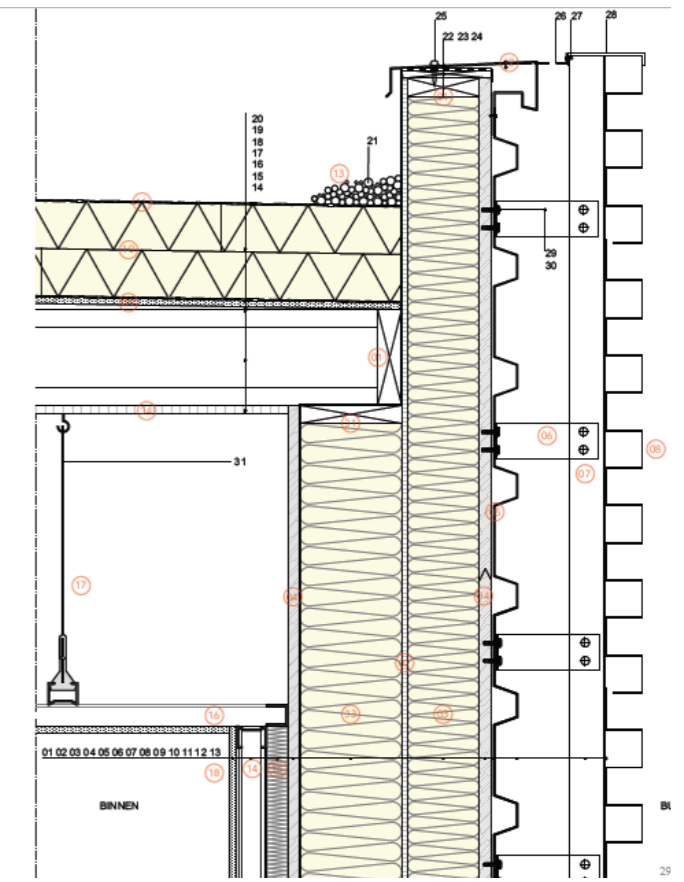
28



BENOEMING / DIMENTIE / FUNCTIE / MATERIAAL VOLGORDE WERKEN

01. Gipskarton / (10mm) / Afwerking / Gipskarton
02. Frame / (50mm) / Bevestiging gipskarton / Aluminium
03. Isolatie / (35mm) / Akoestische Isolatie / Glaswol
04. Beplating / (20mm) / Afdichting / Spaanplaat
05. Dampscherm / (2mm) / Dampdichting / PE
06. Isolatie / (170mm) / Isolierend - drager / Stro - bamboe
07. Tussenplaat / (10mm) / Compartimentering, Brandwering / SOB
08. Isolatie / (120mm) / Isolierend - drager / Stro - bamboe
09. Beplating / (20mm) / Afdichting / Spaanplaat
10. Folie / (1mm) / Waterkerend / EPDM
11. Geperforeerde plaat / (172 x 40 x 3mm) / Verticaal dragende onderconstructie / Aluminium
12. T-Profiel / (60 x 60 x 3mm) / Verticaal dragende onderconstructie / Aluminium
13. Geperforeerde, geperforeerde plaat / (62,5 x 62,5 x 2mm) / Siegevel / Aluminium
14. Beplating / (15mm) / Bevestiging / Spaanplaat
15. Ligger / (160mm) / Drager / Bamboe
16. Dampscherm / (2mm) / Dampdichting / PE
17. Hallingsplanken / (2%) / Halling / Ciemer
18. Beplating / (12 mm) / Ondersteuning / Spaanplaat
19. Isolatie / (160mm) / Isolatie / Stro + cement (dultvast)
20. Dakafdichting / (2mm) / Waterkerend / EPDM
21. Ballast / (30mm) / Gewicht / Grind
22. Houten regel dakopstand / (30mm) / Bevestiging / Bamboe
23. Spouwafdekking / (15mm) / Afdichting / Bamboe
24. Muurkap / Waterkering / Aluminium
25. Houfabc / (6,5x38mm) / Verbinding / RVS
26. Geperforeerde plaat / Waterkering / Aluminium
27. Popnagel / (4,5x10mm) / Verbinding / RVS
28. U-profiel / (20 x 275 x 3mm) / Afwerking / Aluminium
29. Fablock / (30mm) / Bevestiging / RVS
30. Hoekprofiel / (172 x 60 x 3mm) / Bevestiging / RVS
31. Hanger / Ophangingsvals plafond / Aluminium

DETAIL DAKOPSTAND schaal: 1/5



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6.3 Culture Sciences 4

Cultural Sciences was a course where national and international architectural discourse took place. Along with the classes, guests would come to present their work or their view on architecture, and at end debates and dialogues would happen. To evaluate each student, several components were taken into consideration, like a group work, being participative on classes discussions and do a final report about any theme debated in class. Site visits were also organized. The lectures were given by professor Koenraad Van Cleempoel and the professor Tim Vekemans.

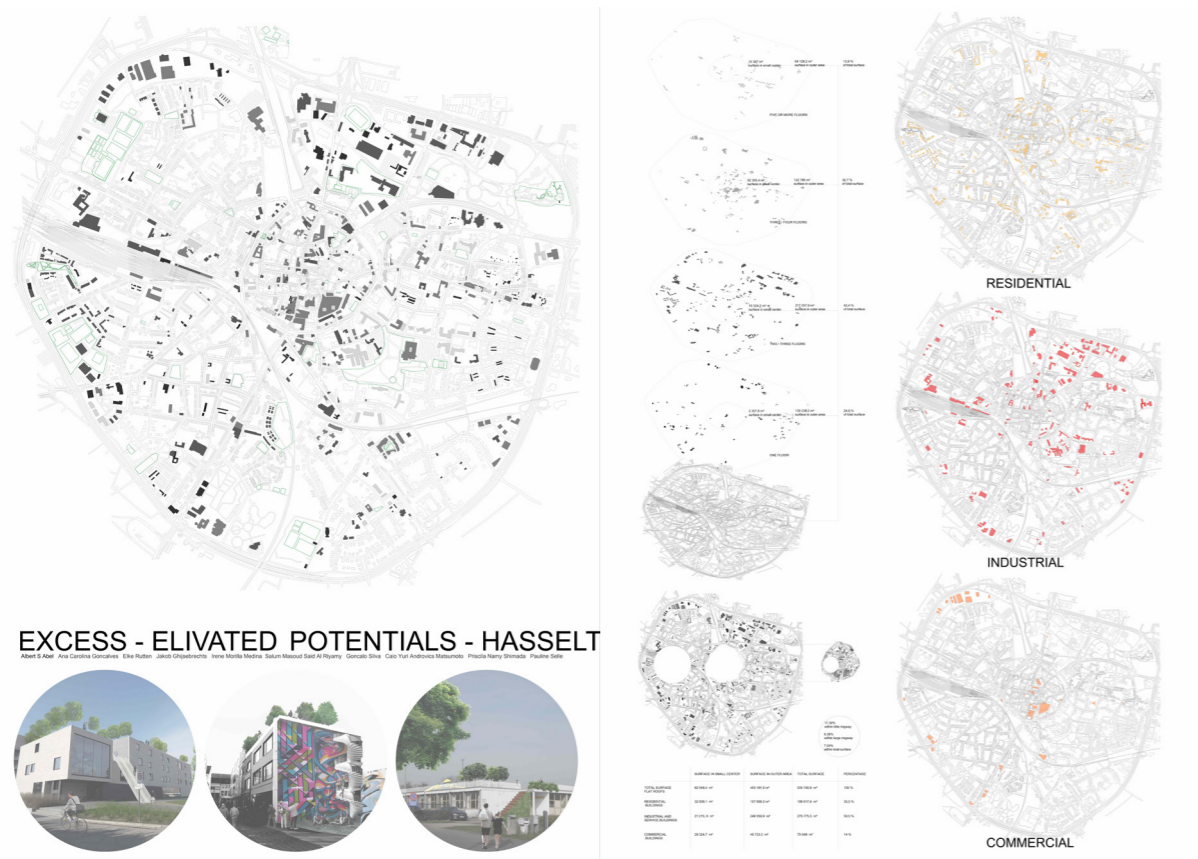
The guests that were invited to give a lecture, were architects based in Belgium, with different backgrounds. The lectures were about the insight of their works as Architects. The architects were, Petra Pfermenges from the Office Alive Architecture; Jeroen Provoost from Studio Thys Vermeulen; Wim Goes from Wim Goes Architectuur and Raf Snoekx from De Gouden Liniaal Architecten. At the end of each lecture, the speaker was open for questions or doubts from the present students.

The group work was an investigation to determinate how much flat roofs there is in Hasselt and understand which ones can fully be adapt into public space. Taking into reference the project Stairs to Kriterion from the MVRDV, the group tried to implement that concept in the city, to access those empty roofs, that could bring a different environment to the city.

At the end, it was asked to do a small report about any subject discussed in class. It was chosen to write about the lecture of the architect Petra Pferdmenges. She defends that architecture it is not about building something but a mix of factors that contribute for the wellbeing of a target public. To better understand, one of her projects was to give awareness of what was happening in a specific street in Brussels. Being a street where cars prevailed over people, she closed for one day the street and implement some food boots and other types of commerce to give that space again to people. Small interventions that give awareness to what is important in a city.



D66 Photography of the 1:1 Model



D67 Panels of group work proposal

Final Remarks

Having completed my last year of Master's Degree in Architecture through the Erasmus+ program, it made me realized that there is still a long way to go as a young future architect, specially since its a constant evolving profession. This experience abroad have made me believe that there is an immense range of possibilities and knowledge, that can only be obtained throughout these experiences outside our comfort zone.

Being a student, and have experienced the end of a cycle through the Erasmus+ program, it has been an undoubtedly added value to my academic journey. It is known that, as an architecture student, traveling and experience other cultures and others realities, enhance the understandment of architecture as a whole.

This Erasmus experience enabled me the possibility to travel to a number of cities in the nearby countries and to obtain a wider knowledge about those realities, that in so many ways are different to my one ones.

Studying and living in Hasselt city, has given me the necessary tools to pursue this research about European Architecture and how it has evolve during the past decades. Most of the curricular units chosen were based on the subject industrial period and what followed after. Being Great Britain the wellknown pioneer of the Industrial Period , it was really important to learn Belgium's position during this period, and how signifiative it was, acting as an important entrance gate to the rest of the European continent to all the revolutionary concept that was happen in Great Britain. With this information, it was possible to deepen my knowledge on this topic.

The experience that the architecture master degree that the University of Hasselt have provided me for the last year, have had consolidated and deepen my strive for obtain continuous knowledge of what is Architecture, since, I have learned during this academic journey, as an architect, there will always be something new to learn, always something new to find and always something new to absorb.

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Appendix I

Notes from Observation

	8am-12pm
Monotonous Situations	<ul style="list-style-type: none"> - Bus H3 do his route, stopping at the bus stop every 20 minutes (starting point 8am); The same goes on the opposite direction (starting point 8.10am); Low affluence of people going in and out of the bus; - Between 8am and 9am big car affluence on the main road; only the noise of them passing by, brakes the abusive silence in the area; - On the back of the the servilux store, it is the warehouse of it – between 8.30am/9am, four people start to arrive from bicycle and park them on that area; - Around 9am the sidewalks start to be filled with cars; - At 9am the carwash establishment opens; - Between 9am/9.30am some students approach the PXL music school by bicycle; - All students parked below a metal stairs on the side of the school, where it is located a bicycle park – between 9am/10am was already full; - Being a site where traffic signals do not exist, it is the good sense of people that determines if there are car accidents or not; - It is possible to see some cars getting out of the carwash; -Around 11pm all sidewalks (with space to park the car) completely full; - Between 11am/12am a police car passes by;
8th of May	<ul style="list-style-type: none"> - Between 8.30/10.30 two trucks parked in second lane along the main road-Being a road with two directions, started to create some traffic congestion; The trucks still being parked in second lane, the students on bicycles contour without conflicts; - Between 10am/12pm a truck arrived, parked on a designated area, unload/load, and departed – during that process, there was no conflicts; - At 10am a bus, full of kids around 8/11 years old, parked in second lane in front of Villa Basta; Being again a road of two directions, a truck and two cars had to wait to pass it - At 1pm the bus that transported the kids, parked at the same spot before - this time no cars were passing by – to pick them up; - Around 11am a member of the a2o team, went outside to make a break – the break was in between the cars parked in front of the entrance; - Around 11am, a commercial car parked, in second lane, near the bar Albert; two men got out of the car and went in direction of the bar; after fifteen minutes, they got back to the car and drove away; - between 11am and 11.30, two trucks entered the gas station to refill the deposit; - Around 11am and 12pm it is possible to see some students on the back of the school, having a brake and talking with each other; the sound of the carwash did not appear to disturb – loud music was played inside the carwash, which was possible to be heard outside; - At 12pm it is possible to see people going in to the Albert bar to have lunch – four suited man entered – sometime after, two more casual workers entered too;
9th of May	<ul style="list-style-type: none"> - Around 8am/9am three people got out of the bus to go to their jobs and PXL school; - Carwash it is closed on Tuesdays- creating a low affluence of cars in the area; - Around 9am trucks parked in second lane, along the main road – Leaving around 11am – Again creating some traffic jam (not as much when the carwash is open) - Around 10am, two trucks entered in the steel warehouse – for that, they had to do a maneuver, where created a small jam; - Around 11am, a person riding a bicycle passed by – went through all main road and continue towards the path near the canal; - Around 11am, a commercial car parked, in second lane, near the bar Albert; two men got out of the car and went in direction of the bar; after fifteen minutes, they got back to the car and drove away; - Around 11am and 12pm it is possible to see some students on the back of the school, having a brake and talking with each other;

10th of May	Around 10am, a car was parked on the sidewalk, near the final destination of the driver, even with parking lots still available near the PXL music school – Along with it, two more cars parked on the same sidewalk; Around 10.20am some students got out of the bus at the bus station, walk all the way on the road – no cars were driving at the moment; Around 11am one truck entered the steel warehouse – for that, it had to do a maneuver, where created a jam; Around 11.30am students were outside doing a brake;
11th of May	Not present (Classes between 9am/7pm)
12th of May	Not present (Classes between 8am/12.30pm)
13th of May	Being a Saturday, there was not much movement around; Around 10am there was some activity going on at Villa Basta – some people were entering with kids; With the car wash working, some drivers were used it were using it;
15th of May	- Around 8am/9am three to five people got out of the bus to go to their jobs and PXL school – the non-existence of proper sidewalks, these people had to walk on the road; - During all period, some trucks entered and got out of the steel warehouse – one during the maneuver almost hit a person that was passing by bicycle; - Around 11am, a commercial car parked, in second lane, near the bar Albert; two men got out of the car and went in direction of the bar; after fifteen minutes, they got back to the car and drove away; - Some people inside Albert bar (it was not visible how many)
16th of May	(Monotonous situations)
17th of May	Not present (Group work)
18th of May	Not present (Classes between 9am/7pm)
19th of May	Not present (Classes between 8am/12.30pm)
20th of May	- Present between 11am/12pm - With the car wash working, some cars were using it; - Some activities were happening in Villa Basta since there was some cars parked near by;

	1pm-6pm
Monotonous Situations	- Between 12pm/2pm it is lunch time – there is not much affluence on this area; - Low affluence of cars; - Being the car parking in front of PXL music school full, people start to park on the sidewalks around it; -Between 5pm/6pm the sidewalks start to become empty derived by the workers of the site starting to leave; - Between 5pm/6pm there is a big affluence of cars using the carwash establishment;
8th of May	Around 2pm there was some workers trying to transport from building to building some merchandising with a hydraulic trolley – since there is no sidewalks, this had to happen in the middle of the road – a car had to contour; Around 2pm/2.15pm a truck stopped at the gas station and the driver stepped out and started to urinating on the bushes; Around 3pm a car stopped at Villa Basta carpark and four people enter the facility; During the same time, there was 2 persons waiting for the bus; Between 4pm a car parked in second lane consequent of no more available parking spots;
9th of May	Not present (Classes between 1.30pm/3.30pm) Around 4pm there was some workers trying to transport from building to building some merchandising with a hydraulic trolley – no cars passing by during that period of transportation; Around 5pm a bus comes to pick up a group of children – parked in second lane – created a small jam until the kids would enter the bus;
10th of May	Not present (Classes between 1.30am/3.30pm) (Group Work)
11th of May	Not present (Classes between 9am/7pm)
12th of May	Around 4pm there was some workers trying to transport from building to building some merchandising with a hydraulic trolley – no cars passing by during that period of transportation;
13th of May	(Not Present)

15th of May	Not present (Group work) (Monotonous situations)
16th of May	Not present (Classes between 1.30am/3.30pm) (Monotonous situations)
17th of May	Not present (Classes between 1.30am/3.30pm) (Monotonous situations)
18th of May	Not present (Classes between 9am/7pm)
19th of May	(Monotonous situations) around 5.30pm, with the affluence of cars using the carwash, it created a row of cars – being the end of the day it did not created many problems to the good well function of the main road; Being a good weather, some people enjoyed the sun on the Albert bar terrace;
20th of May	(Not present)

	7pm-10pm
Monotonous Situations	-Low density or even null of cars or people passing by; - Complete silence between 8pm/10pm; - Police was visible in the area;
8th of May	Present between 9pm/10pm - around 5 cars passed by; No people around;
9th of May	Present between 7pm/8pm – some cars passed by – some students leaving school by bicycle and car;
10th of May	Between 7pm and 8pm people started to arrive, by car and bicycle, to a concert that would happen in the concert hall; cars were being parked where was space available;
11th of May	After 10pm people were starting to arrive by cars and bicycles, parking where there is space available, to enjoy a night in forty-five club - It was possible to see that was more students going in;
12th of May	After 10pm people were starting to arrive by cars and bicycles, parking where there is space available, to enjoy a night in forty-five club – more diverse in terms of age range;
13th of May	After 10pm people were starting to arrive by cars and bicycles, parking where there is space available, to enjoy a night in forty-five club – more diverse in terms of age range;
15th of May	Present between 8pm/10pm – Some cars passed by
16th of May	(Not Present) work for studio
17th of May	(Not Present) work for studio
18th of May	Between 7pm and 8pm people started to arrive, by car and bicycle, to a concert that would happen in the concert hall; cars were being parked where was space available; After 10pm people were starting to arrive by cars and bicycles, parking where there is space available, to enjoy a night in forty-five club;
19th of May	Being good weather, some people enjoyed the sun on the Albert bar terrace; Between 7pm and 8pm people started to arrive, by car and bicycle, to a concert that would happen in the concert hall; cars were being parked where was space available; After 10pm people were starting to arrive by cars and bicycles, parking where there is space available, to enjoy a night in forty-five club;
20th of May	After 10pm people were starting to arrive by cars and bicycles, parking where there is space available, to enjoy a night in forty-five club;

Appendix II

Photographs

At the entrance of the area it is possible to see, written on an information sign, what the public can find in this area; Mostly of the information it is relative to the existing industry; PXL music school, Villa Basta and the concert hall are not mention on it



The non-existence of sidewalks and bicycle lane are visible; all the possible sidewalks are fill with cars; Light along the street, transmitting some safety during the night; At the end, it is possible to see trucks parked on the road; Even being a wide street, if two trucks are parked in both sides, a traffic jam happens; A situation where a man is moving material from building to building using the road – a car crossed his activity and waited until was finished



Area where it is the place for trucks
unload/load but also a space where the
workers park their bicycles



At the end a truck it is doing a maneuver to
enter its parking space; All sidewalks are
full of cars; A car parked in second lane
for the driver go to the Albert Bar; At the
right, it is possible to see a structure which
was designated to be a public area for
people enjoying it, it is now full of cars



Bicycle park on the back of PXL music school; Being the proper space already full, bicycles were parked in front of it



Situation where a worker, to be closer to the entrance of the building, parked on the sidewalk, while there was still parking spots available





Cars parked in the road, and every space that is available



Cars parked along to a possible sidewalk;

The bus stop with a gas station behind it; on the end it his visible a bus with kids parked on second lane, with a truck waiting;



Sketch map of the area and some of the situations that happen;

