



**CENTER OF TOURISM AND RECREATION IN FORMER
TEXTILES FACTORIES AS A NEXT RECOVERY IDEA FOR
THE CITY OF COVILHÃ.**

Magdalena Czapluk, 2010

Universidade da Beira Interior and Gdańsk University of Technology –
Integrated Master Degree in Architecture – Dissertation project to obtain
Master Degree in Architecture

2009/2010

TABLE OF CONTENTS

1. INTRODUCTION	1
2. CHARACTERISTICS OF THE CITY, REGION AND COUNTRY	1
3. HISTORY OF COVILHÃ DEVELOPMENT	2
4. METHODS FOR RESCUING THE CITY	6
4.1. OLD FACTORIES ADAPTED FOR THE UNIVERSITY FUNCTION.....	6
4.1.1. POLO I.....	7
4.1.2. POLO II.....	8
4.1.3. POLO IV	8
4.1.4. LIBRARIES	8
4.2. MUSEUM OF WOOL, WOOL TRACK.....	9
4.3. LIVING COMPARTMENTS	11
5. CITY PROBLEMS & IDEAS FOR FURTHER CITY RESCUE	11
5.1. URBAN DESINTEGRATION OF THE CITY	11
5.2. EMPTY POST JEWISH OLD CITY	12
5.3. NEXT UNIVERSITY BUILDINGS.....	13
5.4. NEW TRANSPORTATION SYSTEM	14
5.5. TOURISTIC POTENTIAL	16
6. ACTUAL SITUATION OF THE CITY	17
7. URBAN SITUATION.....	18
8. SITE PLAN	22
9. HISTORY OF FACTORIES	24
9.1. TINTE VELHO	26
9.2. TINTURARIA ALCADA	27
9.3. ANTONIO FERNANDES FINO	27
10. TECHNICAL HERITAGE IN XXI CENTURY	28

11. ARCHITECTURAL PROJECT	30
11.1. PROJECT SITE PLAN.....	32
11.2. FUNCTIONS	35
11.2.1. LOBBY	37
11.2.2. CAFÉ	37
11.2.3. CHANGING ROOMS AND SPA	38
11.2.4. RADICAL ACTIVITIES	39
11.2.5. FITNESS AND WEIGHT SPACE	40
11.2.6. GREEN PUBLIC SPACE.....	41
11.2.7. TOURIST INFORMATION	42
11.2.8. OFFICES.....	43
11.3. SUSTAINABILITY.....	44
11.4. ACCESSIBILITY	46
11.5. CONSTRUCTION PROCESS	46
11.5.1. PREPARATORY WORKS AND DEMOLITION.....	46
11.5.2. PRESERVED ELEMENTS	46
11.6. FACADES	47
11.7. INTERIOR MATERIALS.....	48
11.8. STURUCTURE	49
11.8.1. FOUNDATIONS	49
11.8.2. WALL STRUCTURE.....	49
11.8.5. ROOFS.....	50
11.8.8. DILATATION	51
12. CONCLUSION	51
BIBLIOGRAFIA	52
ANNEXES	54

**ARCHITECTURAL PROJECT OF REHABILITATION:
CENTER OF TOURISM AND RECREATION IN FORMER TEXTILES
FACTORIES AS A NEXT RECOVERY IDEA FOR THE CITY OF
COVILHÃ.**

Abstract

I bring out in this dissertation a city of Covilhã and its history as a perfect example of city which found a solution to overcome the production crisis in XX century.

Its idea to use industrial heritage and create a University become very interesting solution which brought to the city many young people. On the basis of this idea and many others, city started to develop in very good direction still remembering about it industrial heritage.

Because the University is prospering very well I propose expansion in new direction to make the city famous by its natural heritage. As it is city situated in the heart of highest Portuguese mountains tourism should become one of main branches of development.

I would like to begin this process by proposing project – center of Tourism and Recreation as a main future for city with beautiful natural environment of mountains Serra the Estrela.

Keywords: *Architecture, rehabilitation, tourism, industrial heritage*

LIST OF PICTURES

Picture 1 Localization of Covilhã city	1
<i>http://www.portugal-virtual.net/english/general/map.htm</i>	
Picture 2 City of Covilhã area in the Middle Ages	2
<i>http://historia-esfhp.blogspot.com</i>	
Picture 3 Deing process in one of factories in Covilhã.....	3
<i>http://cidadedacovilha.blogs.sapo.pt/2711.html</i>	
Picture 4 Maps of Wool track	3
<i>www.arqueotex.ubi.pt</i>	
Picture 5 Covilhã in 1929.....	6
<i>Żurowska M.: Future of City Covilhã. Master thesis 2009</i>	
Picture 6 Covilhã in 1971.....	6
<i>Żurowska M.: Future of City Covilhã. Master thesis 2009</i>	
Picture 7 Covilhã in 2000.....	6
<i>Żurowska M.: Future of City Covilhã. Master thesis 2009</i>	
Picture 8 Rua Marques d’Avila de Bolama in former times.....	7
<i>http://cidadedacovilha.blogs.sapo.pt/4783.html</i>	
Picture 9 Rua Marques d’Avila de Bolama today.....	7
<i>Photography made by author</i>	
Picture 10 Factory before adaptaction.....	8
<i>http://cidadedacovilha.blogs.sapo.pt/4783.html</i>	
Picture 11 Factory being readaptated into students dormitory.....	8
<i>Photography made by author</i>	
Picture 12 Museum of Wool - situation	9
<i>www.museu.ubi.pt</i>	
Picture 13 Living compartments in valley of Carpintheira river	11
<i>Photography made by author</i>	

Picture 14 View of charming old Jewish district	12
<i>Photography made by author</i>	
Picture 15 Romantic street of old Jewish district.....	12
<i>Photography made by author</i>	
Picture 16 Plan of mobility in city of Covilhã	15
<i>City Hall materials</i>	
Picture 17 Analysis of surrounding city attractions	18
<i>Graphic made by author</i>	
Picture 18 analyze of existing sport and activity facilities in Covilhã.....	19
<i>Graphic made by author</i>	
Picture 19 View from Rotonda do Rato on complex of factories in 80's	20
<i>http://cidadedacovilha.blogs.sapo.pt/4783.html</i>	
Picture 20 View from Rotonda do Rato nowadays	20
<i>Photography made by author</i>	
Picture 22 View for Square nowadays	22
<i>Photography made by author</i>	
Picture 23 Analyze of Rotonda do Rato square	Erro! Marcador não definido.
<i>Graphic made by author</i>	
Picture 24 Analyze of space utilization.....	Erro! Marcador não definido.
<i>Graphic made by author</i>	
Picture 25 Buildings on a square.....	Erro! Marcador não definido.
<i>Graphic made by author</i>	
Picture 26 Photo of the model.....	Erro! Marcador não definido.
<i>Photography made by author</i>	
Picture 27Tinte Velho in 80's	26
<i>http://cidadedacovilha.blogs.sapo.pt/4783.html</i>	
Picture 28 Tine Velho nowadays	26
<i>Photography made by author</i>	

Picture 29 Tinturaria Alcada nowadays	27
<i>Photography made by author</i>	
Picture 30 Tinturaria Alcada in 80's	27
<i>http://cidadedacovilha.blogs.sapo.pt/4783.html</i>	
Picture 31 Factory of Antonio Fernandes Fino in former times	27
<i>http://cidadedacovilha.blogs.sapo.pt/4783.html</i>	
Picture 32 Factory of Antonio Fernandes nowadays	27
<i>Photography made by author</i>	
Picture 33 bounding of old city spaces.	30
<i>Graphic made by author</i>	
Picture 34 Two building flows	31
<i>Graphic made by author</i>	
Picture 35 Two flows scheme	31
<i>Graphic made by author</i>	
Picture 36 serrouding natural environment potential	32
<i>Graphic made by author</i>	
Picture 37 Outside terrace	33
<i>Graphic made by author</i>	
Picture 38 Main entrance to the building	33
<i>Graphic made by author</i>	
Picture 39 Analysis of vehicle and pedestrian traffic.....	34
<i>Graphic made by author</i>	
Picture 40 Volumetric scheme	35
<i>Graphic made by author</i>	
Picture 41 Shaping of floors.....	37
<i>Graphic made by author</i>	
Picture 42 Space of lobby	37
<i>Graphic made by author</i>	

Picture 43 views for the cafe	38
<i>Graphic made by author</i>	
Picture 44 Prototype of ramps	39
<i>Graphic made by author</i>	
Picture 45 Ramps in the project	39
<i>Graphic made by author</i>	
Picture 46 Floor bending	40
<i>Graphic made by author</i>	
Picture 47 visual connection between levels.....	40
<i>Graphic made by author</i>	
Picture 48 Plan of green public space	41
<i>Graphic made by author</i>	
Picture 49 Penetration of parking by sun and water	42
<i>Graphic made by author</i>	
Picture 50 View for south part of former factory Tinte Velho	43
<i>Graphic made by author</i>	
Picture 51 Connection between offices and river	43
<i>Graphic made by author</i>	
Picture 52 Glass roof of the offices.....	Erro! Marcador não definido.
<i>Graphic made by author</i>	
Picture 53 Permanent elements	45
<i>Graphic made by author</i>	
Picture 54 Facades of former Tinte Velho building.....	47
<i>Graphic made by author</i>	
Picture 55 New facades of Tourism and recreation center	48
<i>Graphic made by author</i>	

1. INTRODUCTION

City of Covilhã where I chose to situate my project is an example of post industrial city which almost fall down due to the production crisis in XX century. To fully understand why this city, this building and this function were chosen by me I need to present shortly the city characteristic and its history. This will become background for further thoughts on city potential, actually bound with the education and in the future, according to my opinion, also with tourism.

2. CHARACTERISTICS OF THE CITY, REGION AND COUNTRY

Covilhã is central Portugal city, in district of Castelo Branco, located under the highest continental mountain of the country, Torre, of 1993 m height above sea level.

Portugal is situated at the western end of the European continent. This relatively small country surprises with the variety of landscapes. Alongside the coast there are beautiful bays and long, white beaches, inside the country there are numerous rivers, hills and mountains ranges. In the middle and southern part of the country there is a vast plain called Alentejo, with a lot of cork oak tree and olive tree plantations. Natural beauty of Portugal almost whole year is underlined by the blue sky and intense sun light.



Picture 1 Localization of Covilhã city

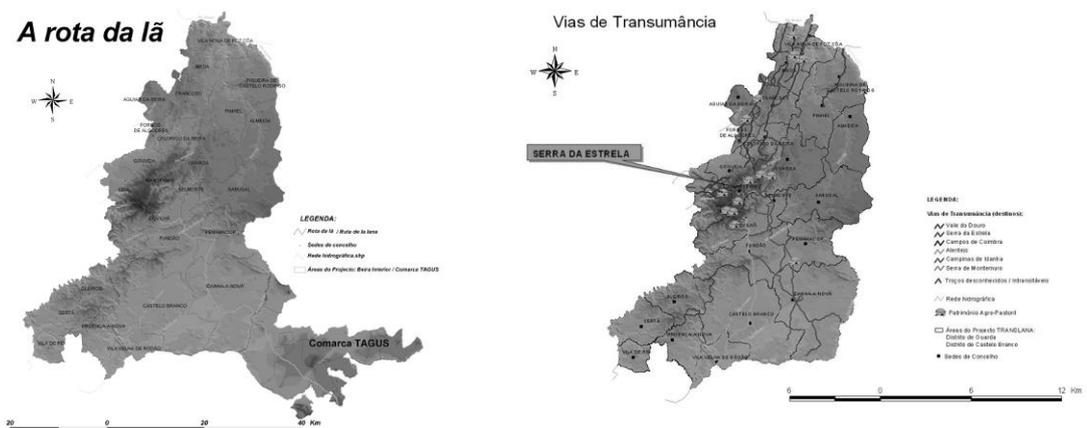
One of such naturally beautiful places is the city of Covilhã, which history and today's problems will be subject of further interest.

After finish of reconquest and information on peace with Moors the Covilhã population could start to organize themselves economically. Even though the economy at that time was based mainly on agriculture production also the textile industry started to form itself. Many traders travelling on donkeys were passing through the city, carrying wool from Spain to Tomar. This Roman road, passing through Paul, Casegas, Sobral de Sao Migiel was known as a Wool Track. Nowadays it is also used - as a extraordinary tourist attraction on a European scale.

The Wool Track is very well documented, especially its part passing through Beira Interior mountain range. The textile industry was developing itself on this area since XII century till today. This rich history and tradition caused that the living here population was considered as wool specialists.



Picture 3 Deing process in one of factories in Covilhã



Picture 4 Maps of Wool track

A lot of information on the matter of material production was transferred from one generation to the next one. The only things which could change the

character of the city were the economical issues, which nowadays influence on city image a lot.

The city, in the Middle Ages isolated because of its geographical localization, was anyway favored on a country scale due to its intense and privileged international contacts, which were strengthened by the contribution of the Jewish community and new Christian communes.

The Jewish community working as the tax collectors, bankers, medical doctors and astronomers was carrying calm life in Portugal for hundreds of years. In 1492 at the occasion of banishing Moors from Spain the Jewish population was also banished from there. In this situation the group of about 60 thousand of Jews was allowed to settle in Portugal. With their habits and culture were more and more separated ethnically. Jews were living in a separate part of the city (in so called Jewish districts), still contributed into the commercial and economical development of the region. The contribution of the Jews into the economy and whole country development appeared to be valuable the same as architectural heritage. Old Jewish districts are even nowadays extraordinary spaces worth seeing.

The big crises, which touched also other regions of Central Portugal, started in times of Great Discoveries, when the deep economical changes were observed. The crisis in the textiles was a consequence of rising import of higher quality fabrics from England and more attractive than Portugal offer of the East.

First step to rise up city textiles manufacturing was establishing by duke of Ericeira first factory - school at the river Carpinteira in 1681. Before it was done king had agreed with the ruling king that he will develop industry in Covilhã based on the order for sewing uniforms for Portugal army.

Also the earthquake in 1755 influenced a lot on industry in Covilhã. It destroyed the city walls and a lot of houses. Marques de Pombal made use of that at construction of Factorya Real.

In year 1864 was established Industrial school which gave a beginning for creating Universidade da Beira Interior. This and creation of railway in 1891 influenced a lot on textile industry development in the city.

In XIX century Covilhã was raised to the rank of city. The textile industry started to develop on wider terrain. The factories were located at the rivers, which delivered them energy. In those times the city population lived in a space limited by river banks, Carpinteira from north and Goldra from south, and was defined and organized thanks to the still developing textile industry, which made use of wonderful richness of water energy of those two mentioned rivers. All buildings that were build in that times are still existing reminding about industrial heritage of the city.

The political and social crises appeared during whole XIX century and at the beginning of XX century. A crisis was caused mainly by ambitions and disputes of new created social groups, especially bourgeoisie. In this time accommodating the workers who were attracted by development of industry was a highly profitable business. Unfortunately the conditions of living proposed to workers were really poor ones. In 1929 the first initiative for cheap living housing in Covilhã was made by City Hall, soon after start of electrical époque and start of construction of new roads. As Marielle Christine writes in her book² „Private initiative in workers living matters, especially in to the interests of industrial enterprises, was limited, and it's aim (...) was the control of costs through maintaining of flat rent.” .That's why in the end of XIXth century working class from Covilhã started to protest demanding improvement of living conditions.

However in 1940 the industry in Covilhã participated in 60% in total textile production of the country. In that times city was called „portuguese Manchester” thanks to its long textile industry tradition and thanks to development dynamics and quality of textile products. Unfortunately, in the 70-ties due to the industry crises, big and small factories have started to have problems which leded in majority to their closures. Such closures had tragic social and economical results for the whole region. Fortunately in the same time group responsible for the Regional Planning worked on the project of creation high education school in the region, making use of old factory buildings. It was planned to give the inhabitants education „close to their homes „ and decrease migration of the people to other regions of the country , in the same

² GROS, Marielle Christine – History of social construction in Portugal , „ Afrontamento Editora “, Porto 1994

time increasing migration of the young people to the city. In such a way decision on establishing the Technical Institute of Covilhã in the building of Real Factorya de Panos, was made in 1973.

It was the first step to establish the existing now University da Beira Interior , in 1979.

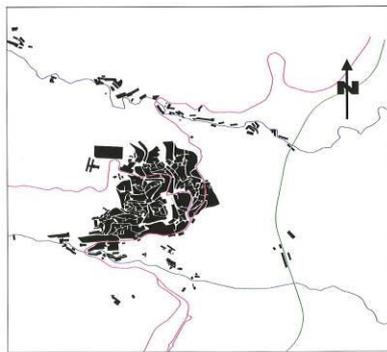


Figura 2.3- Evolução da Cidade da Covilhã - Situação em 1929 - (Fonte: Planta dos Serviços Municipalizados da Covilhã).

Picture 5 Covilhã in 1929



Figura 2.5- Evolução da Cidade de Covilhã de 1945 a 1971 - Situação de 1971 (Fonte: Levantamento Fotogramétrico C.M.Covilhã).

Picture 5 Covilhã in 1971



Figura 2.6- Evolução da Cidade da Covilhã 1971 a 2000 - Situação de 2000 (Fonte: Levantamento Fotogramétrico C.M.Covilhã).

Picture 7 Covilhã in 2000

4. METHODS FOR RESCUING THE CITY

4.1. OLD FACTORIES ADAPTED FOR THE UNIVERSITY FUNCTION

As it was presented in the previous part, life of Covilhã inhabitants forced them to specialize in textile industry at the end of XII century. In the context of complicated development, ups and downs, Covilhã developed itself up to the XIX century to the rank of industrial city. But for many reasons, which were described above, industry in Covilhã become less important and was replaced by university function. A new time has come for discovering again the most representative buildings of previous factories and transferring them into the buildings for university.

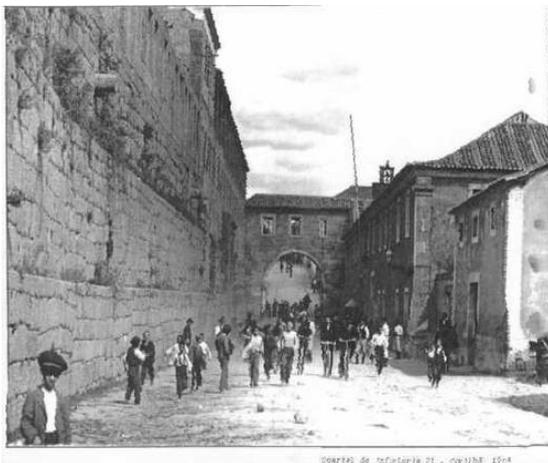
The University function was placed in old industrial buildings mainly in the southern part of the city of Covilhã. It was not only the logical solution for constant grows of university but also idea of bringing profits to the whole city. In a sphere of urban quality and environment, through adaptation of the abandoned buildings and

ruins, which are the Covilhã industrial heritage, city became unique on architectural scale of Portugal and world

Since many years the University of Covilhã was the subject of many transformations and evolutions. Today it is a modern institution, fully equipped in laboratories, workshops, libraries, computer rooms, research places. University campus is very well integrated with the city urban space. Buildings of more than 250.000 m² were designated for university functions. Campus was divided into few parts (so called Polos) which are located all around the whole city and integrate the city with the University as a public institution.

4.1.1. POLO I

The main University building was made in the XVII century old textile factory renovated into a lecture halls and offices. Due to very detailed rehabilitation works, this set of buildings is considered from historical, cultural and architectural point of view as the most important act of industrial archeology of the country.



Picture 6 Rua Marques d'Avila de Bolama in former times



Picture 7 Rua Marques d'Avila de Bolama today

4.1.2. POLO II

On a hill , less than one kilometer from the Polo I building , due to University enlargement, the next building was adapted and designated for infrastructure of the University central part. It was a XVI century Santo Antonio monastery. Now it keeps function of the Rector office and office for International Co-operation.

4.1.3. POLO IV

In the 90-ties the University took a decision to use some of the area in the northern part of the city for the next University buildings. The building Polo IV was situated there and came up together with the successful time for the University development. The building is now faculty of Humane and Social Education.

Close to the river Carpinteira in 2003 was located also students dormitory, which was also a very good example of an adaptation of old factory building³ from 1933.



FOTO ESTRELA

Ano 1970 - Sineiro: *Fábrica João Roque Cabral e Filhos, Lda.*
§ A *Fábrica João Roque Cabral e Filhos, Lda.* foi fundada em 1933.
Foram sócios fundadores João Roque Cabral e seus filhos Carlos Humberto Almeida Roque e João José Almeida Roque.

Picture 8 Factory before adaptaction



Picture 9 Factory being readaptated into students dormitory

4.1.4. LIBRARIES

There are three libraries belonging to the University. The main library at Polo I adapted former Wool Processing Company building and residence of Mendes Veiga family. The other buildings adapted by the University are: palace of Melo and

³ Factory a Joao Roque Cabral & Filhos

Castro family, Factorya do Rato buildings, Factorya dos Tapetes (carpet factory) Factorya do Moco, Factorya Paolo Oliveira. On the University area there is also located roman relic from end of XII century, chapel S. Martinho.

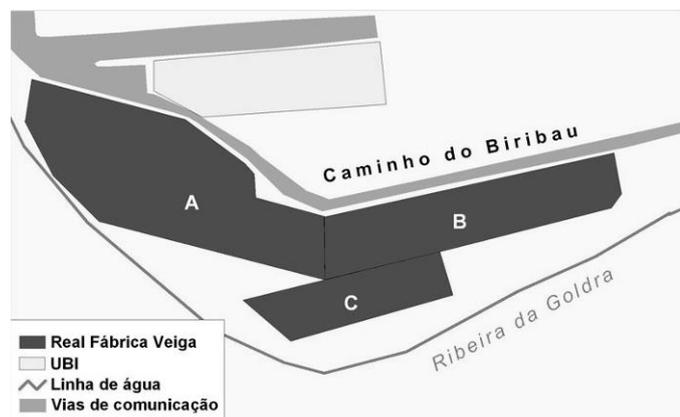
4.2. MUSEUM OF WOOL, WOOL TRACK

Adaptation of National Factory of Textile Colouring in Covilhã (Real Factorya de Panos from 1764) was an important project in a scale of a whole country, in a subject of revalorization of post factory building. The object was adapted for the University Museum of Wool on 30th April 1992. The building in the past served up to 1885 as a spinning mill, dyeing place and weaving place in the possession of 21 Army Regiment. In the year 1975 during the recovery and adaptation works on a building there were found rests of old mill and tub for textile weaving. Those findings were called the national culture welfare and were very carefully remade to be a part of museum exhibition. In 1996 it became possible to open the exhibition to the public. The museum task is to maintain the industrial heritage so closely bound with the city of Covilhã. The main slogan of the museum is „weaving the future with the threads of the past”.

The second museum object connected with the protection of postindustrial heritage and with the University was the adapted factory Royal Veiga, close to the Goldra river. This object was taken over by the University in 1997.

Its goal was integration of the main University and administration

building as well as creation of next constant exhibition bound with the wool production. Actually it is also a place where the important archives are stored. This object was made together with the Arquetex project.



Picture 10 Museum of Wool - situation

Royal Vega complex reconstruction was financed through the Operation Program POCentro-AIBT / Serra da Estrela and its adaptation into museum from the project Translana – Wool Track. (INTERREG III A). By these projects the Museum participates in gathering the information about the wool industry on European scale. What is very important the building of the museum keeps not only the archeological heritage but also the architectural one.

As it was presented before mentioned Museum of Wool is directly bound with the program connected with the European Wool Track. This track should demonstrate to the tourists, students and citizens the economical aspect of the wool as the raw material as well as architectural heritage of the old factories. The TRANSLANA track has its beginning in the Serra da Estera mountains (city Covilhã) and extends up to the rich Spanish plains Extramadura. On the path of the track we may find landscape symbols as well as discover culture of the people living at the borders and strictly bound up with the production from wool.

This whole action is the part of today's policy for culture tourism. Its main task is the improvement of quality of spending free time by the Europeans and creating the opportunity for uncovering where the European identity was made.

How it was underlined by Doudou Diény⁴, importance of these tracks is also just because they were planned as a mechanism of a contact between people and civilizations.

There is therefore a conclusion that “the history and culture of each nation are the result of common dynamic process: meetings, contacts and influences as well as process in which those contacts and influences created specific identity “⁵.

In my opinion such behavior after collapse of industry is worth showing as a good example for other cities. These adaptations, architectural and urban ones, rescue the city from dying caused by emigration of factory workers. The city found out new sense for its existence thanks to attracting numerous young people, who will in the

⁴ UNESCO Councilor

⁵ Portugal Espana y en Rutas de la Seda , publications de la Universitat de Barcelona, Barcelona ,1996

future influence in a positive way on city development and spread knowledge on region identity.

4.3. LIVING COMPARTMENTS

On basis of these projects there are starting to appear in the city new investments. Making living compartments in the building of old factory in the Valley of Carpintheira River is an example of such undertaking. It shows how the good example of urban policy can encourage appearance of new interesting investments and ideas from the circle of private institutions, what develops the city as well. Such positive support is mostly recommended in the urban policy of any city.



Picture 11 Living compartments in valley of Carpintheira river

5. CITY PROBLEMS & IDEAS FOR FURTHER CITY RESCUE

5.1. URBAN DESINTEGRATION OF THE CITY

The city Covilhã is clearly divided into two main parts – old historical city, located on in upper part of the hill and a new city, which develops in the flat land of the valley. This phenomenon is clearly seen in the way how the ground is being used and utilized. The old city is full of various functional units and the new city consists of huge monofunctional areas. What causes that the old part is better defined? Surely influence of historical events and configuration of city area what resulted in creation of individual, characteristic urban shape of the city.

This part of city is easy to recognize due to its dense, dissimilar and strongly deformed net of urban interiors. Another feature, which may be considered as a characteristic for this place is existence of narrows and widens on single parts of the road linear connections. It is accepted that made in such a way steps, dodges in a plan are not the factor identifying the space but also a functional factor which influence on slowing the road transportation. These elements and other various ones

should be taken into consideration during the process of creation of new city structure on this area.

5.2. EMPTY POST JEWISH OLD CITY

The Middle Ages went towards the Jews having important role in economy. In times when borrowing money for earning interest was forbidden by the Christian law – which was not obligatory for Jews – the Jewish merchants were holding a role of the bankers what was on hand reason of their tolerance and on the other hand the reluctance towards them. The debt of Christian dukes and merchants was the constant source of tensions and often caused the Jews expulsion. Such expulsion was connected with total confiscation of the Jews property by the king and very often was a way for getting out from the financial troubles.

Below the ruins of Covilhã castle, on its east side there is an old Jewish district, where the Jews found their place, after being thrown out from Spain in 1492. With the time passing Jewish created also second district outside the city walls. Today the district looks very adorable, with numerous flower gardens. It is a big city attraction and part of its identity. This Middle Age Judiaria⁶, agglomeration of small paths, paved streets and white painted houses decorated with clumps of green pot flowers, hanging from the windows , stairs and other possible places nowadays needs some plan of future development to not become totally ruined and destroyed.



Picture 14 View of charming old Jewish district **Picture 12 Romantic street of old Jewish district**

⁶ Jewish district

The buildings from those old times which survived are made of stone. As for today's living standards the buildings do not follow any heating requirements.

Furthermore the spaces inside the buildings are very difficult to be adapted to acceptable living conditions. And the main problem – small streets do not leave the possibility in bigger scale to park the cars within the old district. It all makes that it is difficult to adapt the area for living for the new residents.

Majority of the houses in the district remain left and slowly starts to degrade. It is an area so beautiful and so closely identified with the city that it cannot be allowed to be ruined. There are single efforts to adapt the buildings into the new flats but only on the outskirts of the district where the possibility for car parking and access exists.

In my opinion the rescue for that area would be creation of the student spaces in these old buildings. It is an area located close to the University and the students need interesting untypical space, such as the old city of Covilhã. Furthermore, as I already mentioned, at the beginning of my work, the city has got potential in the area of tourism development. Therefore part of old former houses could be adapted for touristic use. Their charm will definitely attract many tourists.

Also important aspects are created in the old Jewish district and surrounding marked touristic footpaths taking tourist into romantic journey through the most beautiful spaces in the city. The district has got definitely still unused potential.

5.3. NEXT UNIVERSITY BUILDINGS

The fresh issue for the city is constant expansion of the University. It is being said that there will be adapted a new building of old factory for all art faculties, it means Architecture, Graphics, Fashion Design. For me this is a correct way for further development. In my opinion the post industrial buildings very well suit to the university characteristic. Already from the beginning the students, thanks to daily observation of University activity, are learning proper behavior of rescuing the relics not only this of historical but also cultural heritage. In my opinion further University development will influence further city animations which perfectly succeeded so far with the industry fall.

5.4. NEW TRANSPORTATION SYSTEM

The city of Covilhã, is a small mountain city. It possesses three barriers, two in a form of rivers and a third one in a form of big altitude difference between the old and a new city.

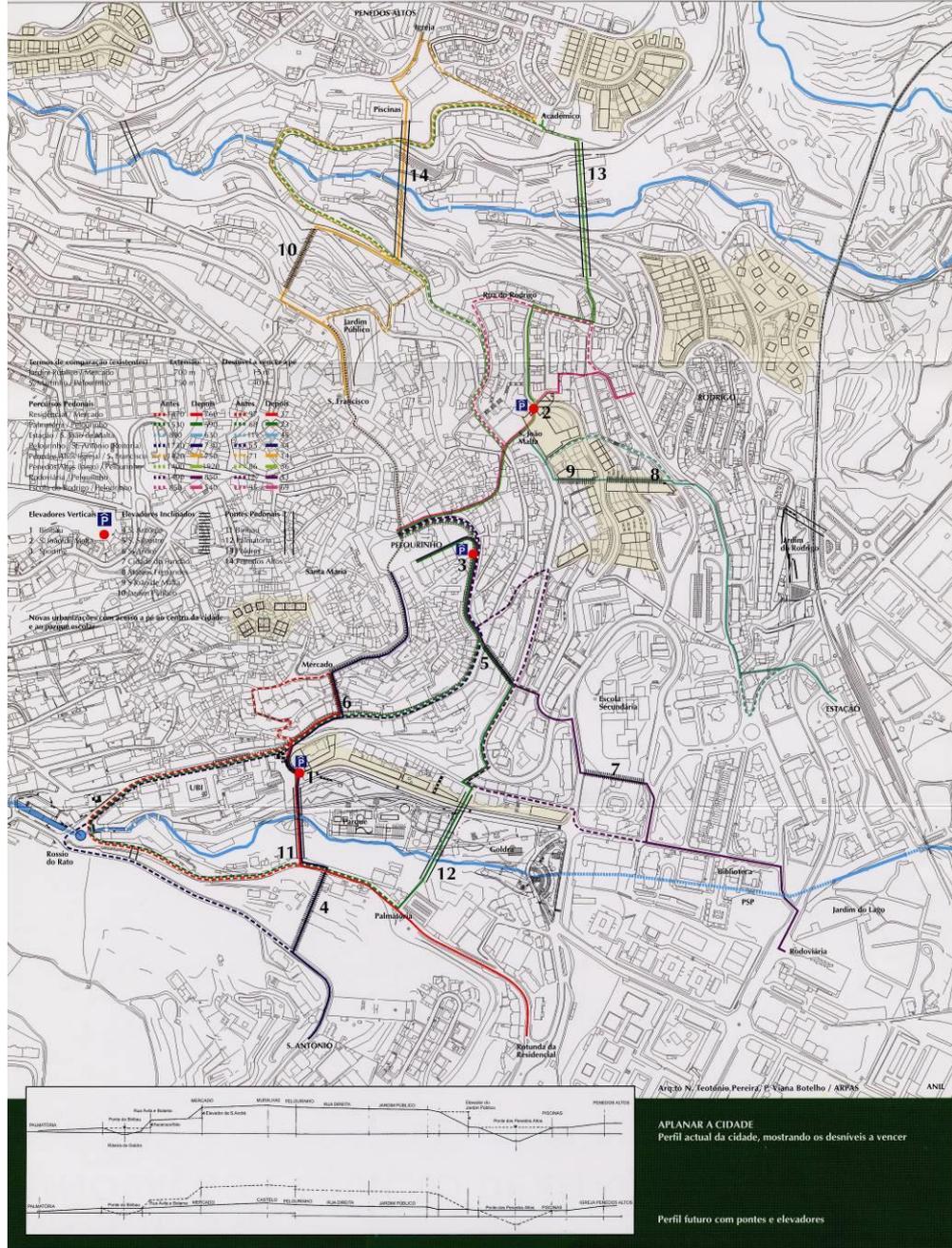
The slope of the ground between the lower and upper part of the city is about 17 per cent. Because most of the old post factory buildings were used as the university buildings the population of old city consists mainly of students or old citizens. In the sphere of transportation characteristic for the city is the historical center part with very narrow streets, very often one way ones, of the breath of 3 meters where parking is almost impossible.

When it comes to the pedestrian movement most of the streets of the old city do not have sidewalks and the pavement of the streets is very slippery during the rain. The city plans to stop illegal parking within the area of whole old city in order to improve the city image and increase the quality of air. It should mobilize the society for on foot movement. The city thanks to improvement of public transportation for more ecological and more balanced and thanks to bringing to the up part of city more services, wish to attract also more people to live there.

The support for the promotion of on foot movement will be the construction of few bridges (one was opened lately for use) and creation of public lift system (one of the lifts is also already in use). The bridges will shorten very much the distance for crossing the other sides of river valleys and will be the city symbols same as lifts facilitating especially the older person's transportation inside the city. The plan for improvement of city transportation which was made by the Urban City Hall is presented below. The actual ways to reach the important public institutions are marked with interrupted lines. Same ways after their shortenings are marked with the constant lines. As we may see some of ways were shortened even by 50 per cent.

Summing up it is the next good idea for the city to become more accessible so also more attractive for the tourists.

Para uma cidade saudável e sustentável reduzindo a dependência do automóvel
PLANO DE MOBILIDADE PEDONAL



Picture 13 Plan of mobility in city of Covilhã

5.5. TOURISTIC POTENTIAL

Portugal is a small, calm country not directly touched by the wars since 500 years. It creates almost ideal conditions for tourism – in warm and relatively dry climate the relics survived here for whole centuries not being destroyed. Almost in each city there is something worth to be seen.

The city Covilhã has got evidently the touristic potential. What is most important city is located close to the only one winter sports center in Portugal. In the city council there is a discussion on plans for construction of artificial ski downhill track closer to the city. The Covilhã is placed in the center of the area full of places with beautiful, Middle Age well preserved castles. Therefore Covilhã should be the ideal starting base for visiting those places. They are located about 20 minutes to one hour time by car travelling. Also mentioned earlier Covilhã old city, castle ruins, city walls or the church fully covered with azulejos cause that it is attractive place for tourist visit.

There is unbelievably romantic atmosphere, gentle climate, what will be appreciated by all who look for relaxation. Furthermore the modern parks, public spaces, lifts, bridges are written into relic structure what make the city even more attractive. There was lately open a new swimming pool with a beautiful view for mountains, what also started to be a big attraction. City approved also plan of a new botanical garden. Also the Museum of Wool and the Wool Track are the elements attracting the visitors looking for cultural impressions. In a time distance of 15 minutes from the city a beautiful mountain ground starts which gives the possibility for exercising sports such as trekking, bike riding or mountain climbing.

It all makes that the place seems to be the ideal tourism base. Unfortunately the potential of the place is not yet fully utilized.

There is lack of the idea for the management of the whole system. There is no possibility to use the professional guides or to rent the equipment. There are no sport and recreation facilities giving attraction under the roof for the raining season. The next problem is lack of attractive accommodation offer.

The only offer are the old, neglected hotel „cubes”. Why not adapt the beautiful old part of the city to the hotel purposes? As it may be seen there are

conditions for city development and animation in the next direction – tourism. But a respective plan for further proceeding should be made and the institution dealing with the whole process should be established.

6. ACTUAL SITUATION OF THE CITY

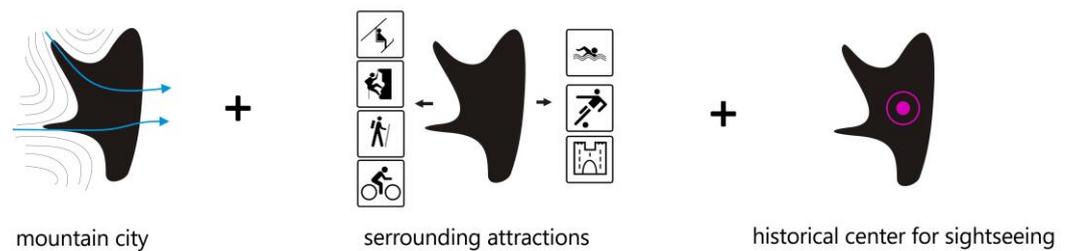
The city Covilhã boasts the new slogan „City of the five stars,„. It has to present Covilhã as a modern dynamic city, ideal for those who live there, for those who are willing to be taught there, to invest or look for new challenges. The city thanks to the young people has got a new energy. Pioneer investments in the infrastructure, Science and Technology Park, gave the city of Covilhã a high rank in the region. Also the unusual location of the city influences it.

The policy of sustainable city development may serve as a model for other cities of Beira region. Mentioned five stars are related to the different aspects: hospitality, innovation, approaching, tradition and amusement. What is the most important - the city uses the methodology of being different and other than the rest of the region cities so to attract the highest possible number of people. What differs the city from the others are the attractive investment possibilities being possible thanks to opening of University, younger population, improvement of its availability.

That all according to my opinion is not a tricky marketing action but is an effect of many interesting ideas and desire to act. Many post industrial cities of whole Europe should take inspirations from the development of the small Portugal city.

7. URBAN SITUATION

City of Covilhã rescued itself from crisis of textile production by bringing to life University function. This was really good idea for the very quick reaction on the problem. However city shouldn't stop on just this one initiative of development. As I already explained before city situated in the heart of highest mountains has a huge potential in tourism which is totally unused (See picture number 17).

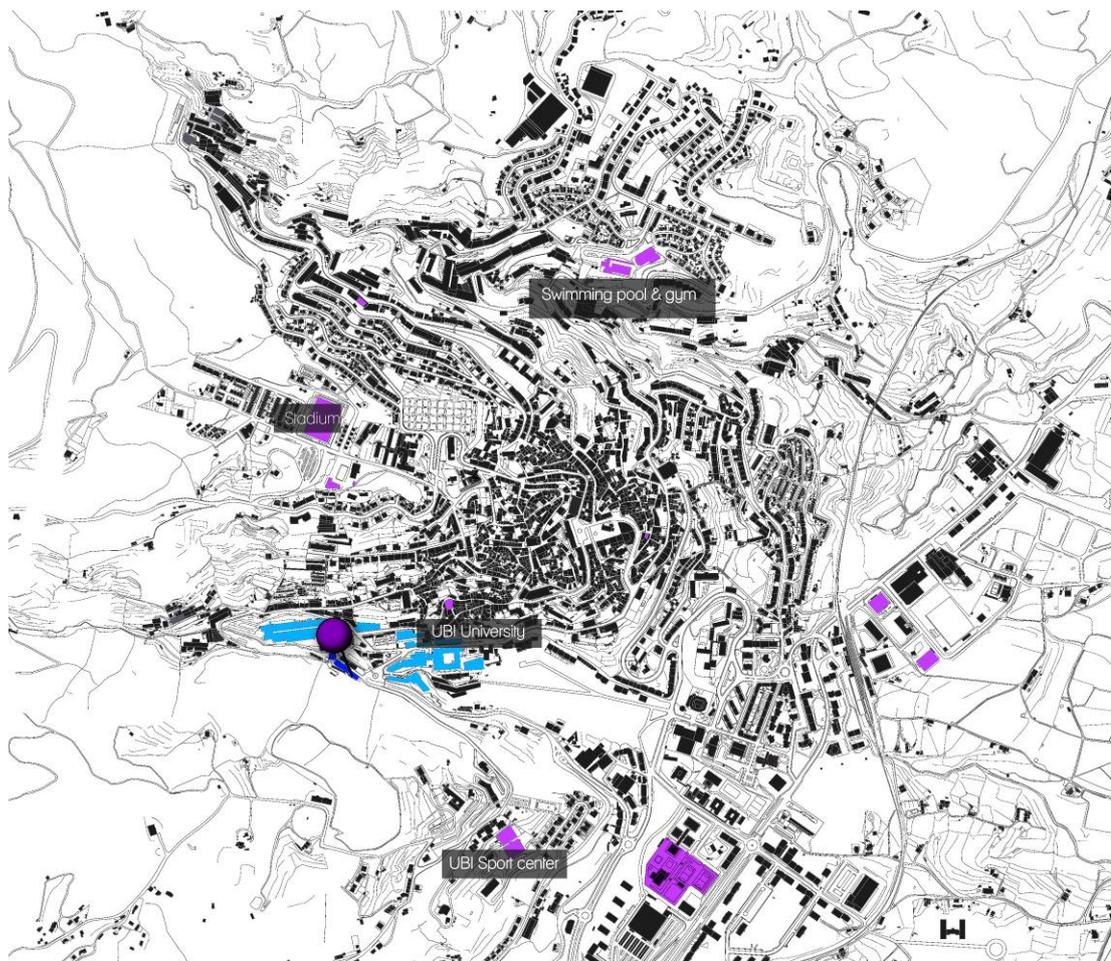


Picture 14 Analysis of surrounding city attractions

Covilhã because of Universidade da Beira Interior is now full of young people who are just waiting to get possibility to move their bodies or by use of beautiful natural surrounding or in the time of rainy winter by using some indoor facility. As we can see it on the picture 18 city is still not having any bigger, giving much more variety of activities object. That is why as a subject of my master degree work I chose to propose a project - center of tourism and recreation.

On the basis of positive experiences of the city in subject of adapting old factories buildings for new functions and still not used till the end variety of empty postindustrial buildings as a place of implementing my project and ideas I chose 3 buildings historically connected with cloths dye workshop.

To decide where to put such important building in the city it is needed to analyze urban situation of the city.



Picture 15 analyze of existing sport and activity facilities in Covilhã

Historical center of the city is the part inside and all around the medieval city walls. It is a part of wider space, perfect to make sightseeing and full of emotions walks through beautiful narrow streets. Nowadays city of Covilhã consists of two centers. First is the one, just in front of City Hall, named Plourinho⁷. This is center where currently citizens (people living in Covilhã not just for period of studying) like to meet and use main services. Another one, which is slowly overtaking city meeting function, is plaza near Rotonda do Rato. It is so called “center of young people”. As it is situated near University and was not so long ago revitalized for a very valuable urban space, students, but also each day more and more citizens, treat it as a best spot to meet. Advantage of both this center is lying just on the border of sightseeing part of Covilhã.

⁷ Plourinho - pole which usually stands in front of the old city hall, in the past it was place of the penalties.



Década 80 - Covilhã - Fábrica de Francisco Mendes Alçada - Alçada & Pereira, Lda. e Tinturaria Alçada

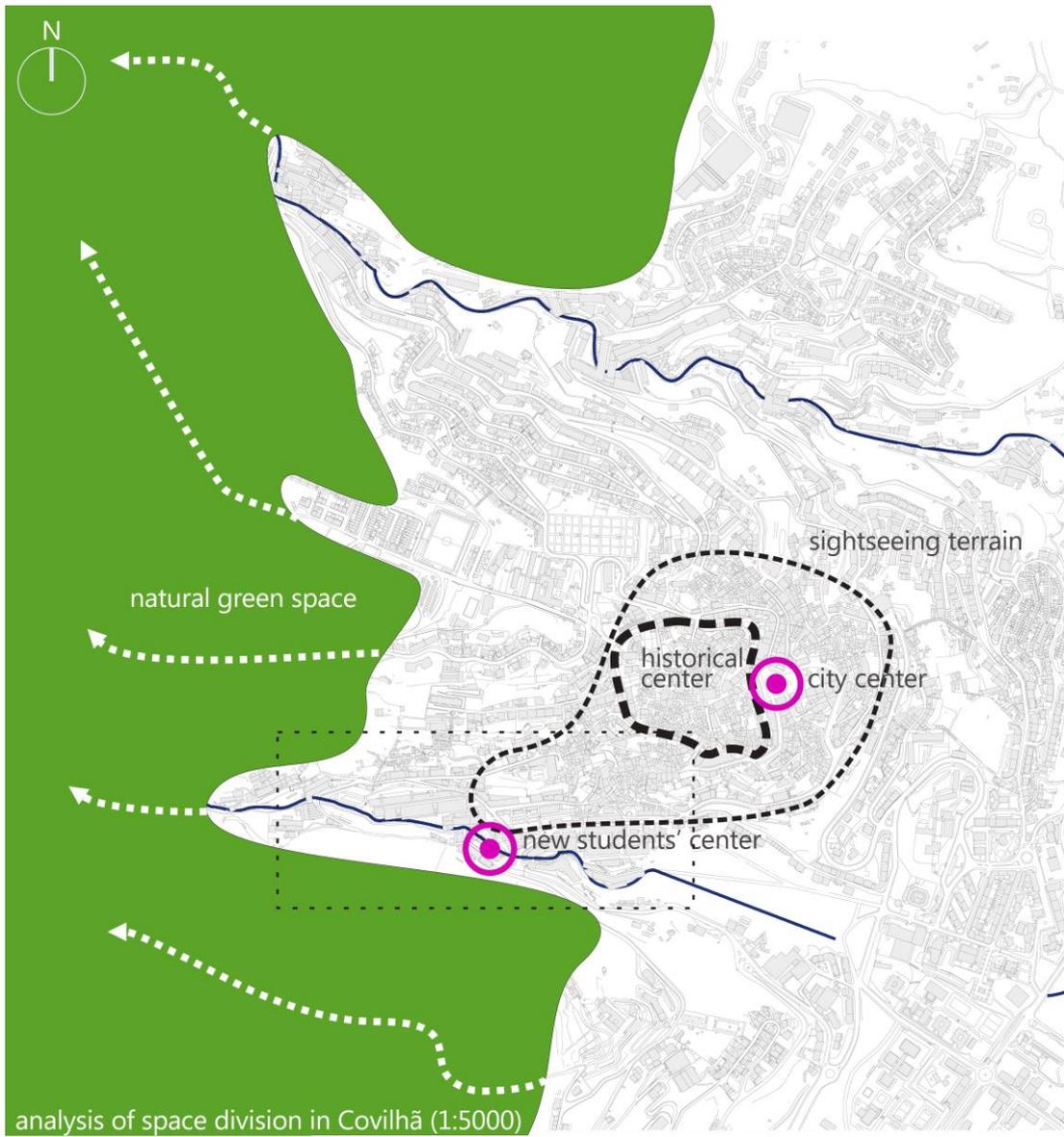
Picture 16 View from Rotonda do Rato on complex of factories in 80's



Picture 17 View from Rotonda do Rato nowadays

What was also very important while choosing place for proposing the project was having close connection of the building with the green space, already putting us in direction of the highest mountain of Serra the Estrela. That is why the “young people center”, area near Rotonda do Rato became place of my interest. All situation mentioned above shows picture number 21.

I chose to situate my project in this place also because the goal of the city should be to encourage people to use the most beautiful part of Covilhã(the upper one), by putting there many attractions. Already explained by me new transportation ideas of city hall will make it very easy to get from down part to up part even without using car. Also it is obvious that down town people mostly have cars and upper part citizens (mostly students and elder people) does not have them. It means that situating the building in the upper part is the best idea to make it accessible for all.



Picture 21 Analysis of space division in Covilhã

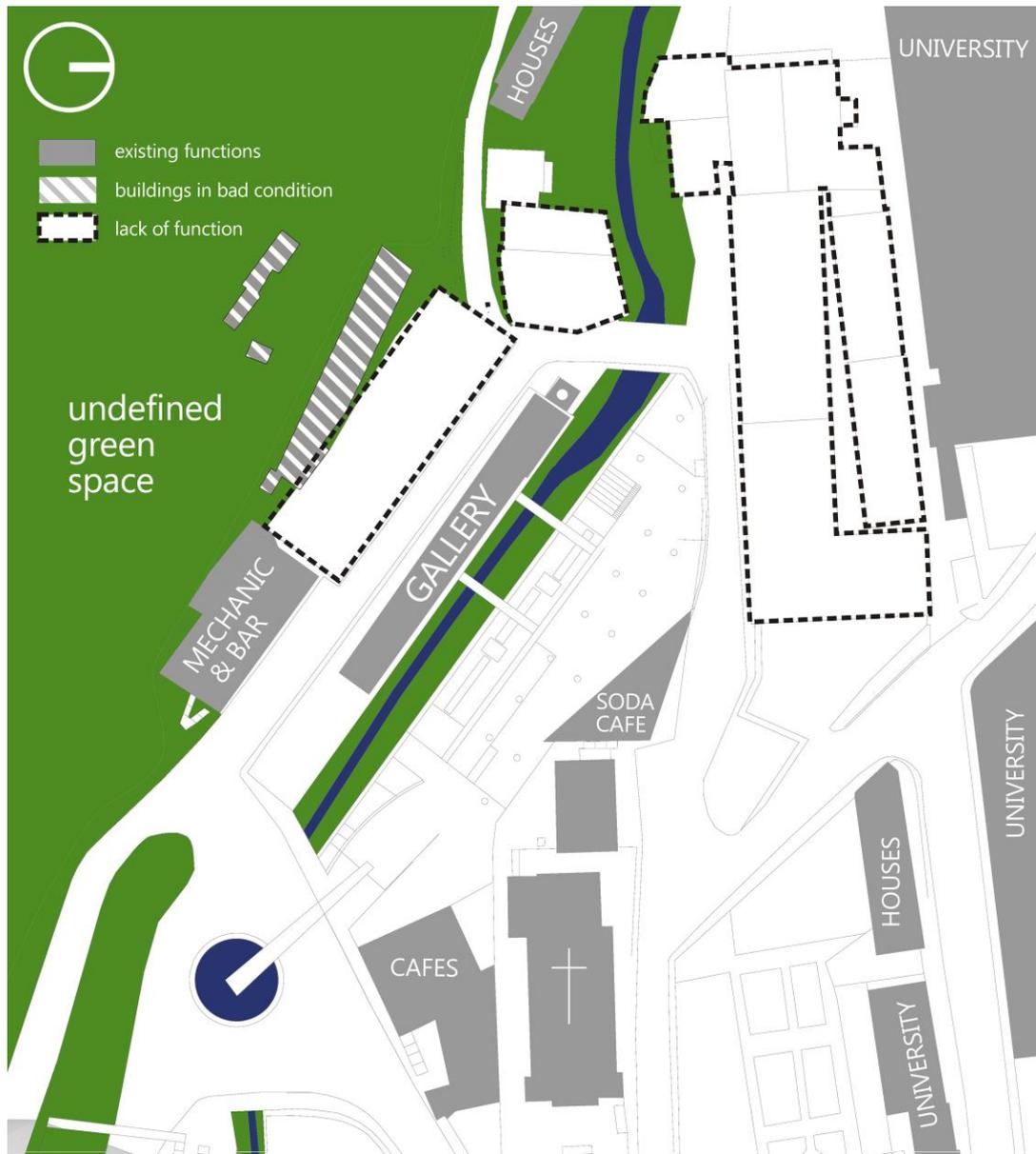
8. SITE PLAN

Looking more in detail to mentioned already square of Rotonda do Rato at first sight what we see are two existing functions which nowadays create this space.

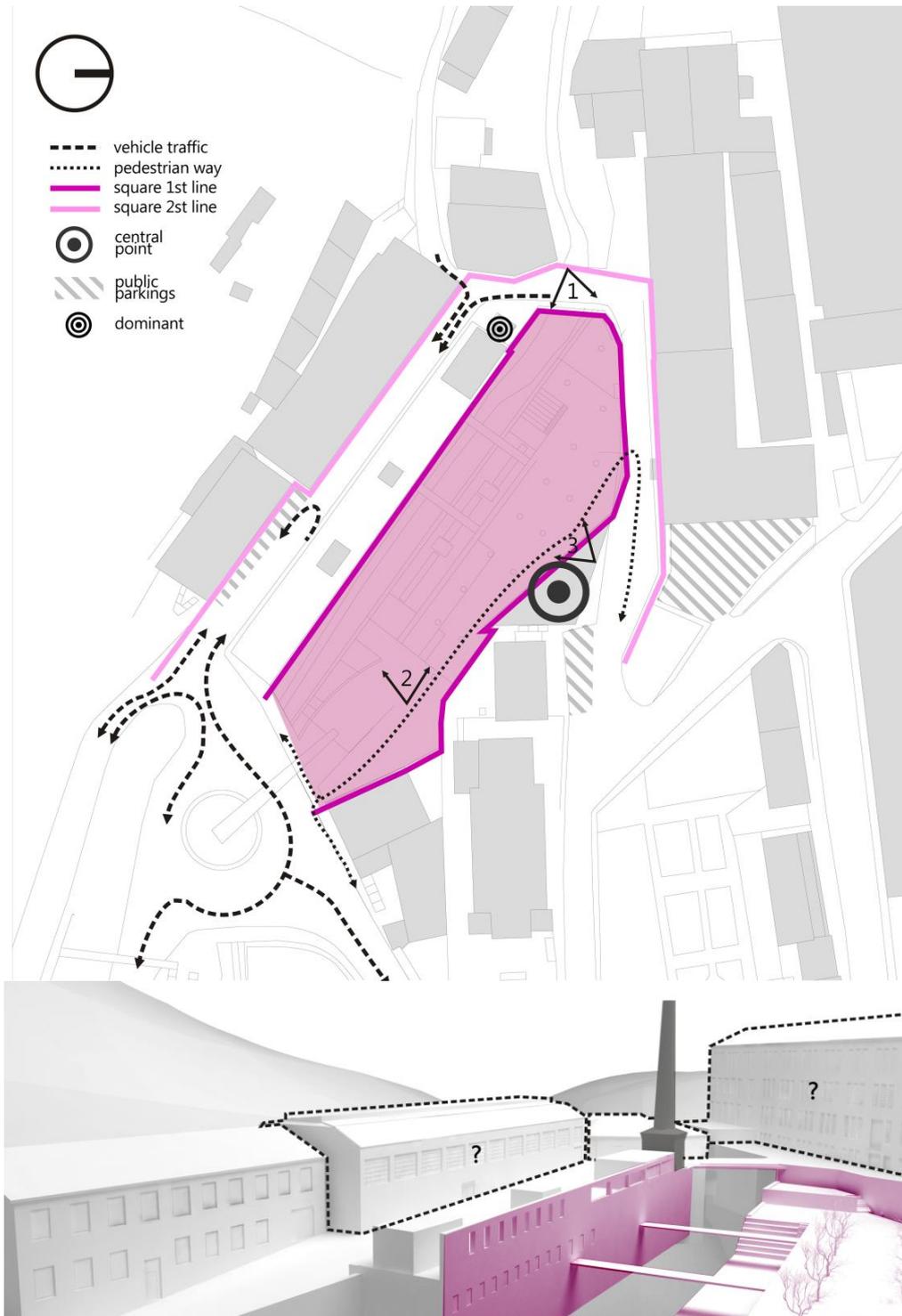
These are Café and restaurant Soda and also public Art Gallery. Both of them together with surrounding this square high wall and river create first urban wall of the square. But one more time if we will look more closely to the situation of this space we will understand that there exists also second urban wall of square, also very important, showing out from the partly transparent first line of square. This second wall is created by abandoned former textiles factories. Exactly three of these buildings, these ones that straightly connect with green space of mountain going in direction of Torre, become subject of my interest. Situation of Rotonda do Rato Square shows picture number 22,23 and 24.



Picture 22 View for Square nowadays



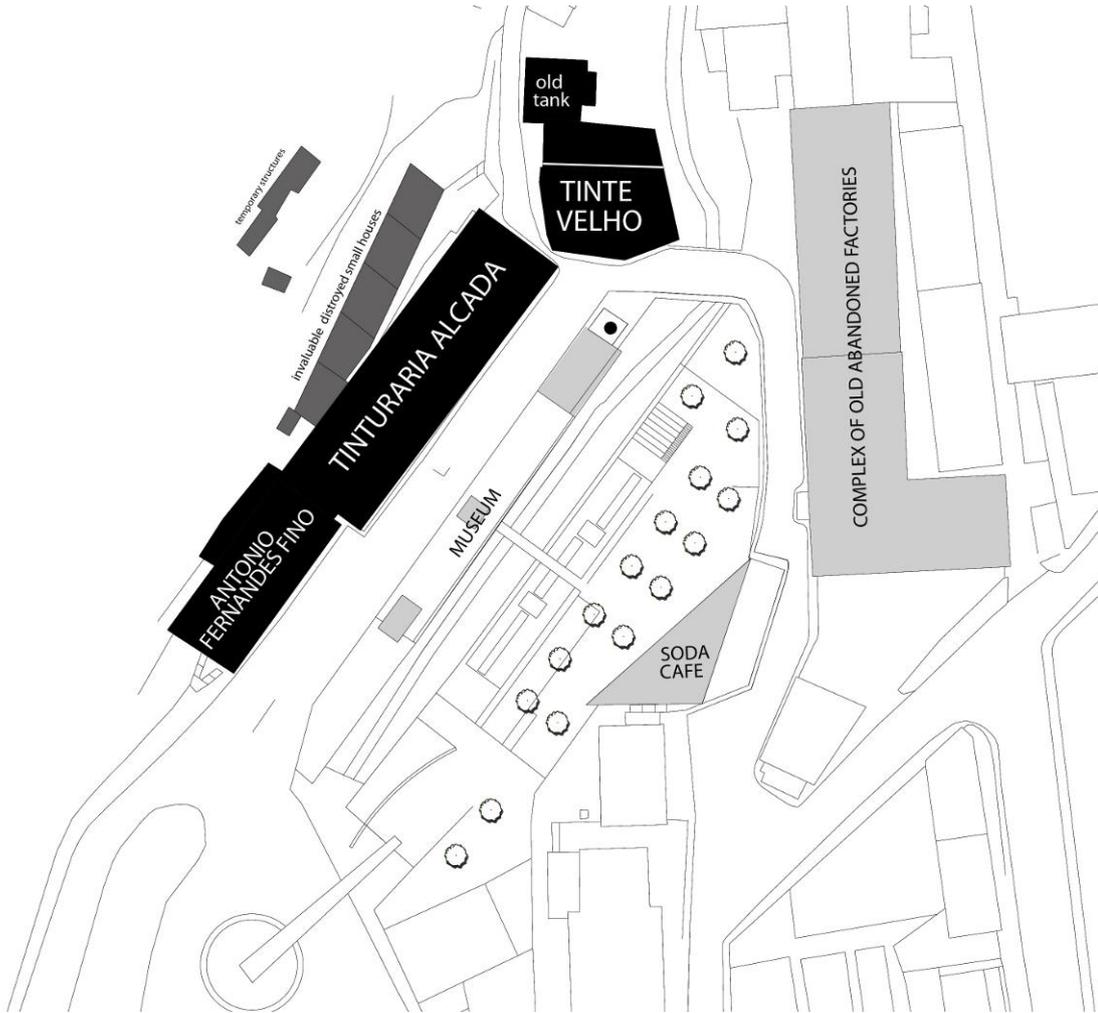
Picture 23 Analysis of Rotonda do Rato square



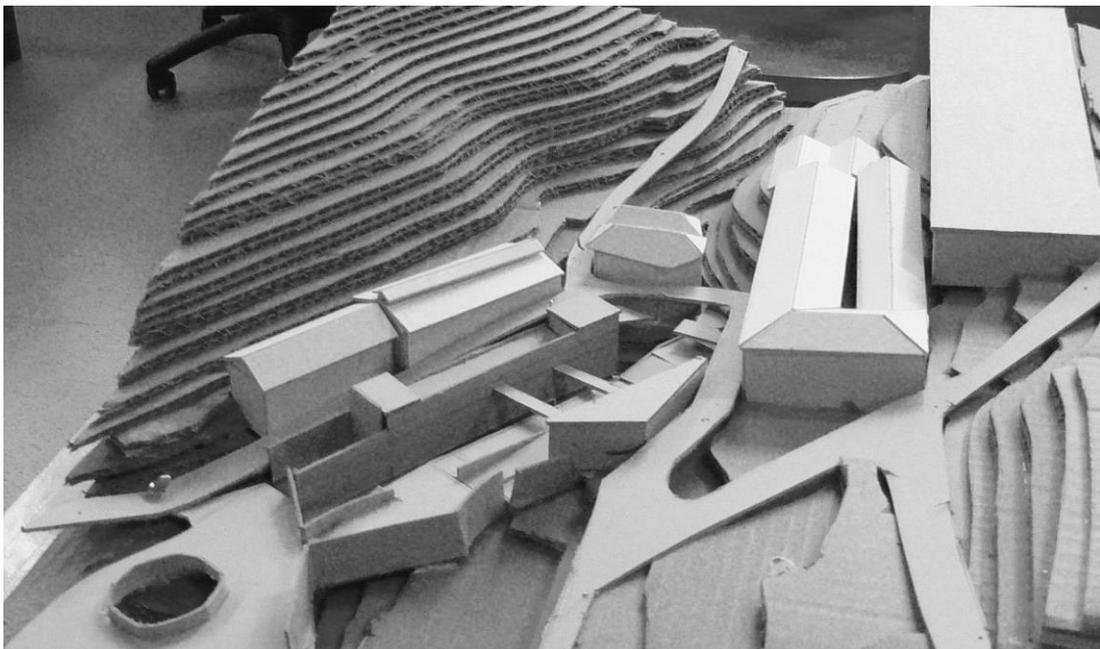
Picture 24 Analysis of space utilization

9. HISTORY OF FACTORIES

The factories I chose as a site of my project are splitting into two complexes: Tinte Velho and Tinturaria Alcada joint with Antonio Fernandes Fino. All the information about their history and function could be found in archives at Wool Museum in Covilhã.



Picture 25 Buildings on the square



Picture 26 Foto of the model

9.1. TINTE VELHO

Tinte Velho is a smaller and older building. Located in Fonte Santa, at so called Sao Martinho part of the city. This complex is the best sign of the rich history and heritage of the historical center of Covilhã and Portuguese Wool. Function of this building in former time was textiles dyeing



Picture 27 Tinte Velho in 80's



Picture 28 Tinte Velho nowadays

It is dated to be built in the year 1759. This complex consists of two buildings adapting and using nearby river. Its walls are made in masonry of stone. Both of the buildings have four slope roofs. The smaller building is a trace of beginning of industrial processes. Documents say that it has a furnace similar to the pombal model in Real Factory of Textiles⁸. In 40's of XX century the building was split into two levels by concrete slab.

The second building with bigger dimensions used one of the walls of the smaller building. On its interior walls remain traces of shafts and pillars from period of hydraulic energy. Building has also other associated structures, for cleaning and gathering water (tank). Both of the buildings characterize well preserved walls and tile roofs together with wooden beams in a very bad condition. Main influence on this process of destruction had a nearby river which produces a lot of humidity.

⁸ Real Fabrica de Panos

9.2. TINTURARIA ALCADA

This is a one of the long buildings made in stone masonry. This was one of two buildings in former times creating dying space. The second one is already recuperated into the art gallery “Tinturaria” by the well working program POLIS. The building of our interested has been almost not changed from the former times. It was only strengthened by putting concrete in the down level windows openings and steel beams in the roof of the lanterns. It has very well preserved walls but the roof is fully to be changed together with the beams.



Picture 29 Tinturaria Alcada in 80's



Picture 30 Tinturaria Alcada nowadays

9.3. ANTONIO FERNANDES FINO

As a supplement to the other dye workshops, Antonio Fernandes Fino occupied in year 1936, this building for the matters of weaving. After rich history of changing the owners, factory in 80's lost its industrial function. Nowadays inside are situated car mechanic and a night bar. It has very characteristic rhythmical windows and painted in white color walls. This was very typical for the weaving offices in the region.



Picture 31 Factory of Antonio Fernandes Fino in former times



Picture 32 Factory of Antonio Fernandes nowadays

10. TECHNICAL HERITAGE IN XXI CENTURY

Technical heritage is a new word in dictionary of XXI century. Very specific kind of this heritage is the industrial one, to which we can include former textile factories of Covilhã. According to TICCIH⁹ Industrial Heritage “consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education.” For many many years peopled were thinking that word heritage or monuments can be used only in a case of very old church, monastery, castle or old town. Nowadays everything changed and new thinking came appeared. People started to consider as valuable also other architectural elements such as: factories, bridges, railway stations etc. In the world exist already few documents considering the subject of technical heritage. The most important and well know ones are:

already mentioned TICCIH *Charter for the Industrial Heritage*;

Council of Europe Recommendation R (90) 20 *The protection and conservation of the industrial, technical and civil engineering heritage of Europe*;

ICOMOS¹⁰ *Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas and*

UNESCO¹¹ Operational Guidelines for the Implementation of the World Heritage Convention.

All this documents point out that the Industrial Revolution was the beginning of a historical phenomenon that has affected the human population.

“That the material evidence of these profound changes is of universal human value, and the importance of the study and conservation of this evidence must be recognized.”¹²What is also important TICCIH *Charter for the Industrial Heritage*

⁹ The International Committee for the Conservation of Industrial Heritage (TICCIH) *The Nizhny Tagil Charter for the Industrial Heritage*, July 2003.

¹⁰ ICOMOS - International Council on Monuments and Sites

¹¹ UNESCO - *United Nations Educational, Scientific and Cultural Organization*

¹² TICCIH *Charter for the Industrial Heritage*

underlines also that the industrial heritage “is of technological and scientific value in the history of manufacturing, engineering, construction, and it may have considerable aesthetic value for the quality of its architecture, design or planning.” It says that not only buildings of factories should be considered as valuable ones but also machinery, setting or even industrial landscape.

Also ICOMOS Declaration speaks about importance of not only culture buildings but also their surrounding and environment. They add that multi-disciplinary approach and the use of diverse information sources should be taken to consideration in the matter of industrial heritage. “Significant skylines, sight lines and adequate distance between any new public or private development and heritage structures, sites and areas are key aspects to assess in the prevention of inappropriate visual and spatial encroachments or land use in significant settings.”¹³

Council of Europe Recommendation is considering other but also very important subject. It gives idea how the society and local governments should be learnt to understand and deal with industrial heritage.

These documents and agreements show us also that industrial heritage should play a great role in sustainable development. Building substance of industrial heritage has a huge potential to be reused. It can be somehow “recycled” so it straightly connects with sustainability problem. It prolongs time of living of the building, uses build inside energy, lowers amount of used water and emission of substances and production of wastes which would be produced during making a new building.

So to reassume technical piece the same as piece of art can provoke feelings, provoke emotions and generate thoughts. Aim of the designer should be to preserve existing esthetic attracts and strengthening their influence. On the basis of tips founded in this all documents I could truly start the process of making my project.

I gathered the all possible information from city archives, old photos of surrounding and documented actual situation of the buildings. With this all materials I could properly start developing project which will be presented in next chapters.

¹³ Icomos Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas

11. ARCHITECTURAL PROJECT

Starting to develop public building- center of tourism and recreation, we should ask a question about identity of surrounding and place itself. How we want to show respect to the place which life we interrupt and on the other hand how we want to respect self identity of the building considered as a industrial heritage.

For me as a designer the most important future of the surrounding is the ambient of the inner city spaces at the old city. On purpose I did not use word streets which could come to our minds as a first. For me the character of old city lies in tiny squares and gardens, pedestrian paths, stairs, in very narrow streets widening and closing through all their length(vertically and horizontally). For our mental mapping the streets can occur as straight ones but our senses feel the small details of their bending.

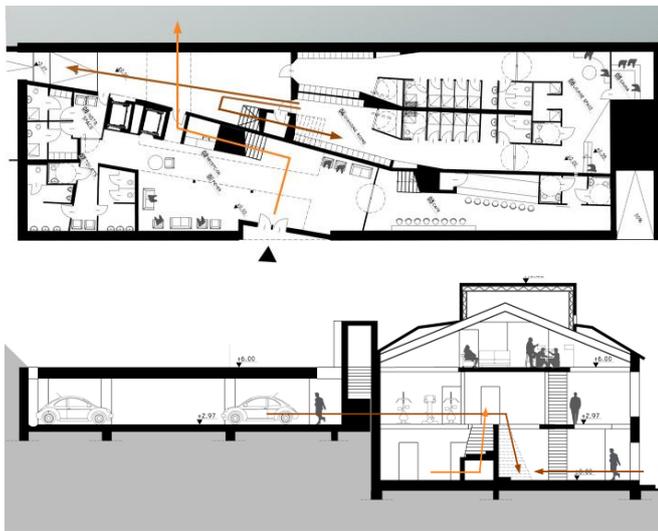


Picture 33 bounding of old city spaces.

On the other hand we see the old buildings of textiles factories we are working with. Two of them, the longest ones, as their characteristic future sais are very lengthy but also at right, perpendicular angles.

Joining together this very opposite aspects gives opportunity to create the building on founds of conversation between calm inside and passionate outside. Joining this features and obvious need of the building to be functional, had influence on creating its own identity.

The functionality appears in idea of creating two flows in the building. Fully separated in a sense of touch but not sight and hearing. Both flows almost all the time touch each other by, for example sharing the same wall. Word “almost” is very important because they never truly join. Being dragged into one of the flows we still feel the other side. These two ways of building functioning represent two kinds of usage - by the visitor who did not enter yet the main features’ core or does not want to get to this core and the ones who already prepared themselves to use all the features provided.

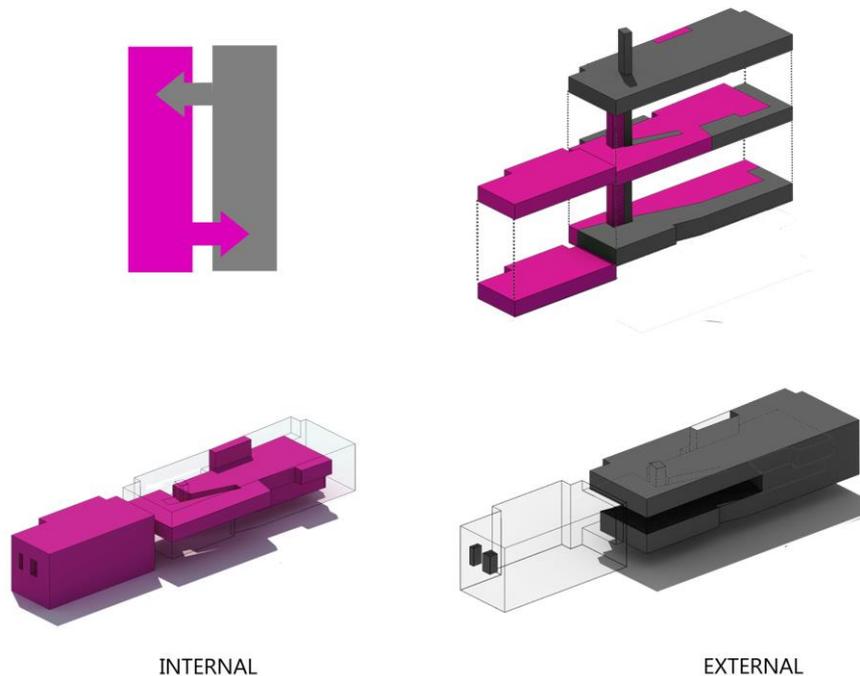


On the border of these two floats has to come out border. Of course sometimes full sometimes giving opportunity to check “the other side”. This border is a wall. Wall almost parallel to the existing walls of the factory making it so long.

Picture 34 Two building flows

Almost, because it is a subject of gentle deformation¹⁴ process, which we can find in the city exteriors. It is also a support for main vertical and horizontal communication in the building creating core of intensive movement. The movement between café levels, between parking and lobby, between exercises levels. This wall meanders between straight parallel structure walls of the building, finding its own way...

TWO FLOWS



Picture 35 Two flows scheme

¹⁴ A *deformation* is a non-prototypical spatial situation within urban space which is defined by a particular *prototype*. In analytical drawings, the *deformation* emerges as the result of comparing the reality of existing spaces or their elements with the prototype. This process is analogous to the mental process of recognition. *Deformations*, as kind of “urban DNA”, carry the Local Identity Code; *Local Identity Code for Central Fremantle Source and Design Cod*, Jacek Dominiczak and Monika Zawadzka in cooperation with Agnieszka Kiera, 2007-2008.

11.1. PROJECT SITE PLAN

It is very important to consider the impact of big public project on its surrounding. My idea wasn't to construct a competition for existing functions but to gently broaden the functioning area of the square. The main features of the existing public space should stay as they are - restaurant and fountain. My complex has an aim to become perfect background for actions happening in the center of square.

Also, buildings of my project have their own background created by mountain hills. Space between my buildings and the hill is to bring to the people variety of activities for spending free time. It will be an interesting space for everyone.

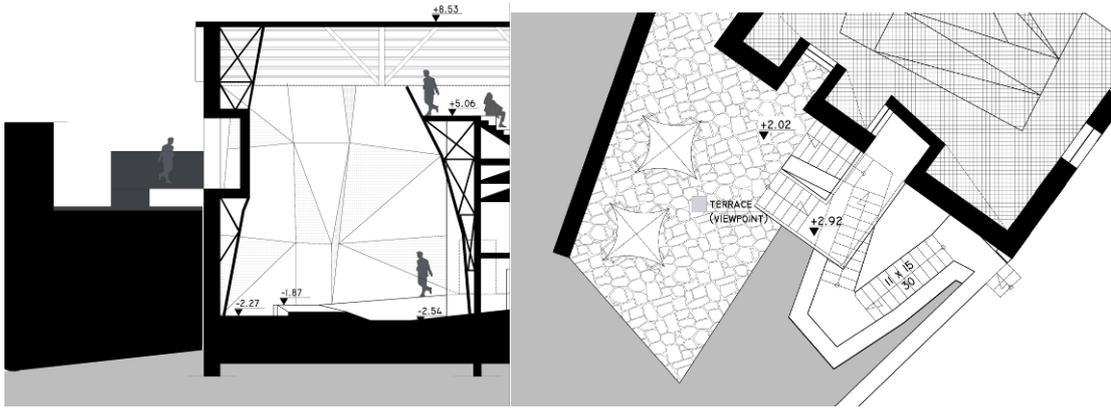
Moving forward also hill could be used as a space of activities. As shows picture number 36 it is very interesting area to put attractions such as climbing and rope park or even use it as a perfect beginning of track leading on Torre, the highest mountain of the country.



Picture 36 surrounding natural environment potential

Another urban future implicated by me in the space of project is bridge linking together this complex with other, nowadays abandoned one. As it was already written, in future the other complex is supposed to become center of culture and art degrees so connection with such a green leisure space, as the one proposed by me, should be a good solution.

I decided also to reorganize and refresh already existing terrace on the end of the complex, near Rotunda do Rato, to create new valuable public space. Idea in detail shows picture number 37.



Picture 37 Outside terrace

This place could be worth visiting not only because of providing beautiful panorama but also because possibility to already mentioned glimpse on interior activities (see picture 37). It was made by using old windows openings to enlarge exterior public space.

Whole complex to be fully functional needs many entrances, which are also supporting double flow idea.

Main pedestrian entrance to the activities building is situated from the square side. It is planned to work as heavy and mysterious “gate” between exterior and interior. (see picture number 38) The additional entrances to this building are situated from the side of public green space, all connected with café.



Picture 38 Main entrance to the building

The second complex of buildings splits for two main functions (tourist information with shop and rental and offices for organizing tourism in area). Each of them has one entrance from the most public side. Important is also that they join together by the additional passage. Main entrance for people coming by vehicles is provided from the underground parking.

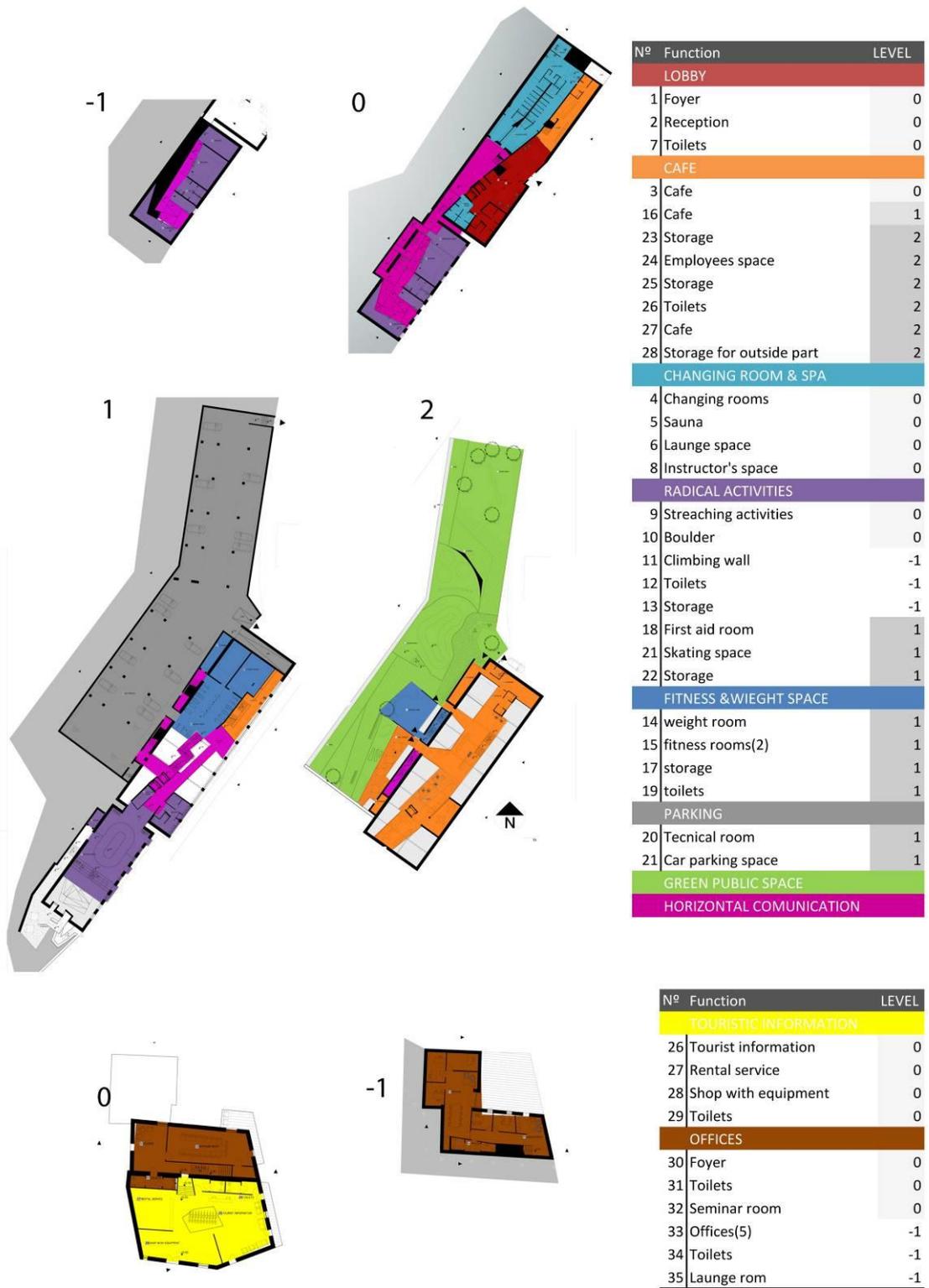
Main document describing the urban rules obeying each space in the city is PDM. It describes in details each part of Covilhã. The one where I situated my project has a name Sao Martinho. According to this documents in this space I should

provide 1,5 parking place per 50m² of gross building space. In the case of this complex it means 70 parking places (15 on the side of the street and 55 on the designed parking). As we can see from the analysis of pedestrian and vehicle traffic (picture number 39) such big amount of parking spaces is needed in this area, which nowadays meets with a problem of too less parking spaces.

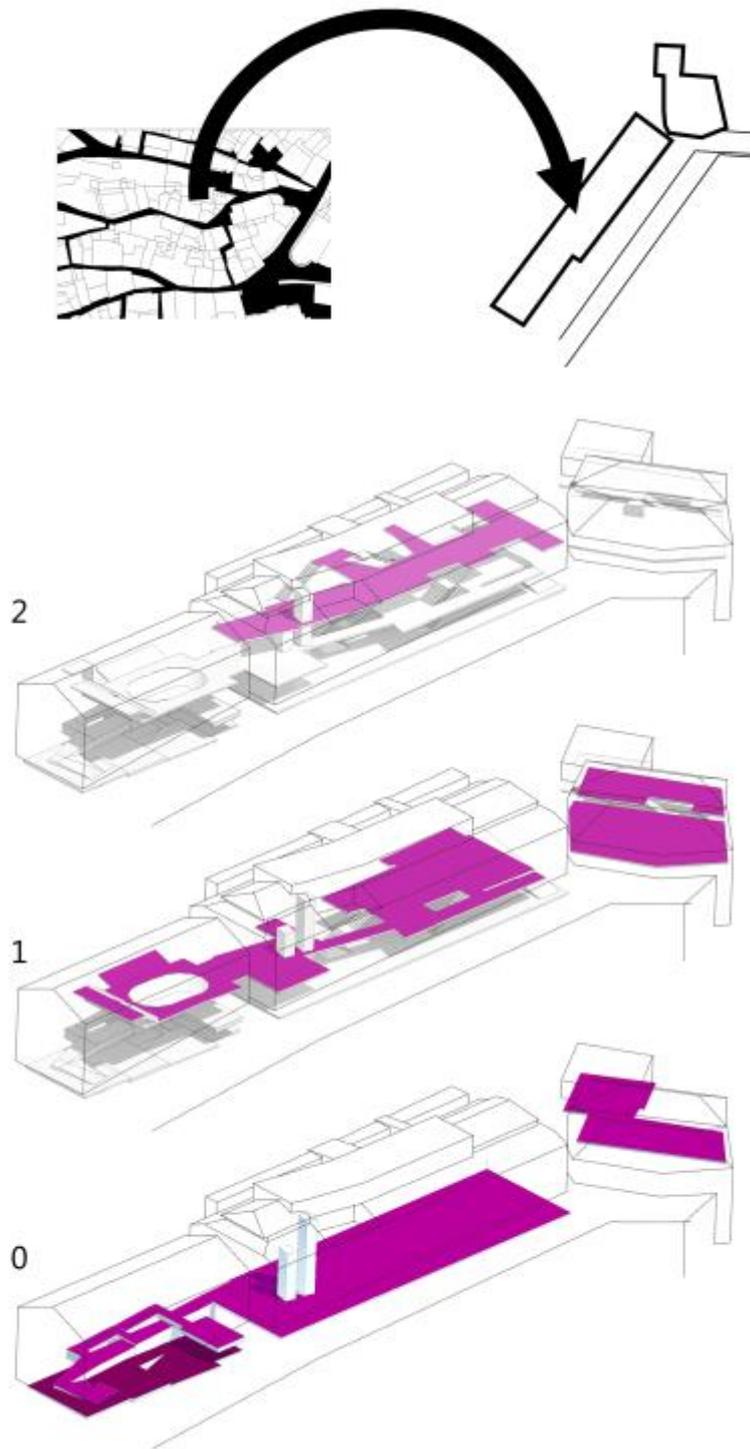


Picture 39 Analysis of vehicle and pedestrian traffic.

11.2. FUNCTIONS



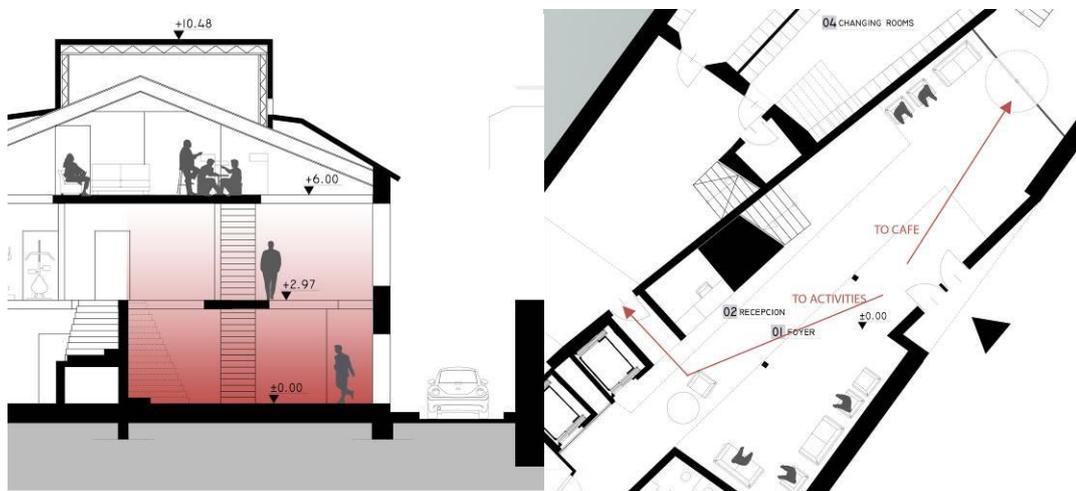
Picture 40 Volumetric scheme



Picture 18 Shaping of floors

11.2.1. LOBBY

After crossing the main entrance door we get to the lobby space. What we see at first is standing in front of us monumental wall cutting us from the other flow of people already running for the activities. We are just on the border to be dragged into the true core of the building. We can see people coming from upper level (parking) by stairs and elevator attached to this wall. Openness of the space up let us see little what is happening on upper level, to take a glimpse on people already taking part in exercises. From here the audience of the building can chose two ways. Either using secret passage to overcome the border and get into the core, or use the café. See picture number 42.

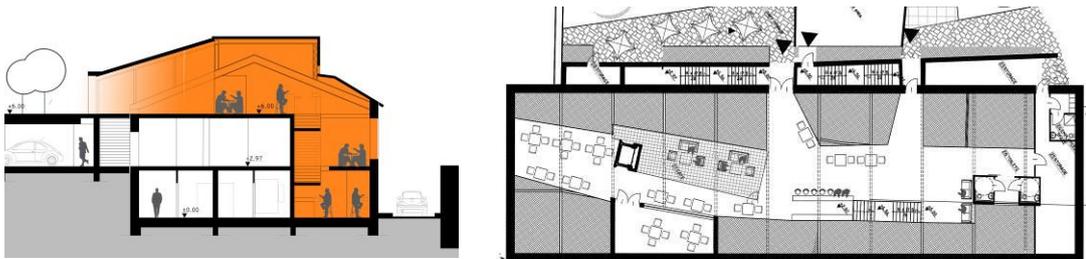


Picture 42 Space of lobby

11.2.2. CAFÉ

Main future of the cafe is its accessibility. As it “surrounds” all the other functions (situates on three levels) we can get inside or from the green public space on the south side of the building or from just mentioned lobby. It is some kind of shortcut which we can use to get through the building on the other side not being seen. To pass from one level of café to the other we can use either stairs or elevator in the lobby (both attached to wall, already mentioned border between flows). Level 0 of the café, the one we can enter from the lobby, is the most intimate space in all café. There is almost no daylight, just a little ray of light from the tight void in the ceiling. On the next floor we can find more light and open space. Big windows give perfect view for all square. The highest floor, accessible from green space, with part of tables put outside (on green space or terrace with view on square) is the most open

one. Just over the roof with lantern, we find a perfect space to meet with friends and chat. This is space with floor having untypical shape, sometimes even transparent to show the stairs under. All space is situated on the kind of entresol what gives opportunity to see all actions on the level down. Each level has its own toilets. As levels of the cafe are attached to the wall being border of mentioned two flows, we get there opportunity to glimpse on the other side. See picture number 43.



Picture 43 views for the cafe

11.2.3. CHANGING ROOMS AND SPA

If the visitor of the building chooses to get into the facilities core of the building first place he needs to visit is a changing room. As changing room should give very particular services: to change, to clean, to use toilet, to dry hair, it was planned in long shape. It gives opportunity to find each function easily. One more time shape of it is not just parallel to the already existing outside walls; it bends gently to give a drop of city identity inside the building.

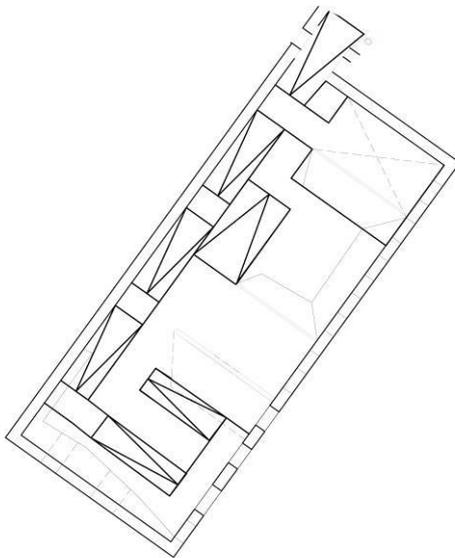
To give esthetic look to the changing room I planned to make huge wall with lockers, mirrors and shelves build inside. Now these all things are not an objects making mess in the space but true architecture, part of permanent walls.

Area straightly connecting with changing room is spa part of the building. It is implemented into building to somehow prolongate the changing rooms function. This is space for complete relax.

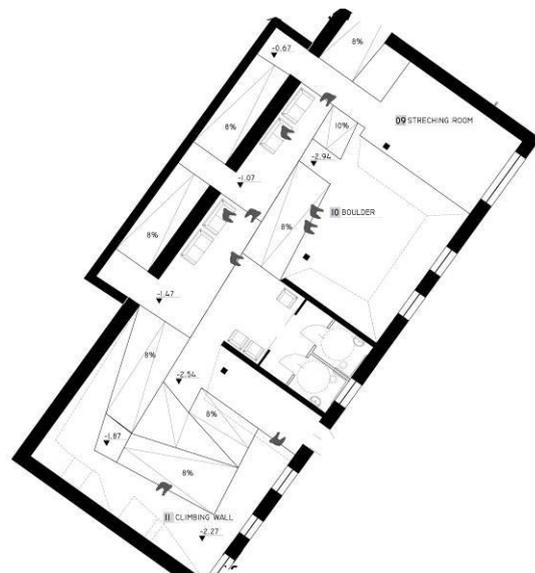
11.2.4. RADICAL ACTIVITIES

In the former factory near Rotonda do Rato I decide to situate activities which usually, with a good weather can be performed outside. These are climbing and skating. Both activities are becoming very popular urban sports that provide many individuals with the opportunity to experience the feel of thrilling.

It is not easy to begin to perform such sports outside. Facilities like this are perfect for everybody either beginners or experts having obstacles to perform their hobby outside because of lack of time or the bad weather. To underline mountain character of climbing I proposed very unusual way of getting to this activity. To surpass one level of height between changing room and climbing area we need to use a set of irregular ramps. They break through the external wall and come back inside, go around and turn, this makes this way similar to the mountain one. It could sound scary that the way to get to the climbing is so irregular. It is nothing to be afraid of. It is made on a base of fully measured and made according to law for handicapped people manners. This base was then just overbuild. See pictures 44 and 45. It is even completely different. Many changes of levels produce much more spaces to sit and stand being supported.



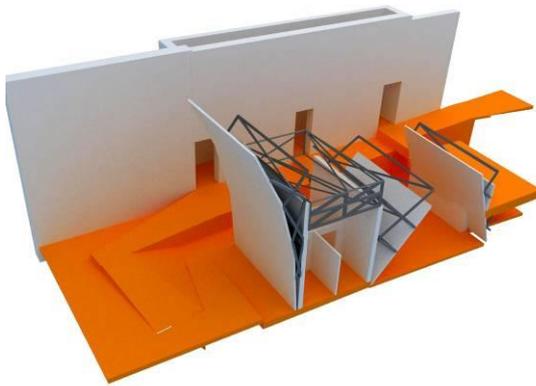
Picture 44 Prototype of ramps



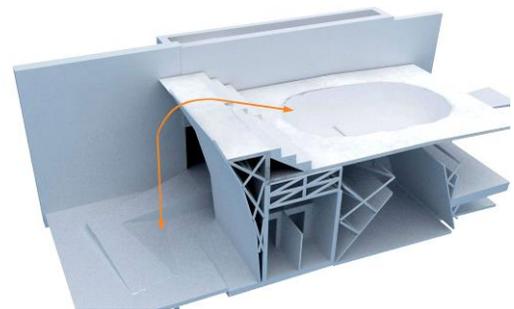
Picture 45 Ramps in the project

This space is not trying to deceive visitor. It is showing fully its construction. Like in former times factories were showing their all brutal machinery.

On the other hand one floor up is situated space for skating. As not plane spaces are perfect for skate's, level of floor in this part of building is inclinating 5%. Very important for them is also having place for audience and resting. Steps made especially for sitting use not only to watch skating people but also to take a look on level down and see people climbing. See picture number 47.



Picture 46 Floor bending



Picture 47 visual connection between levels

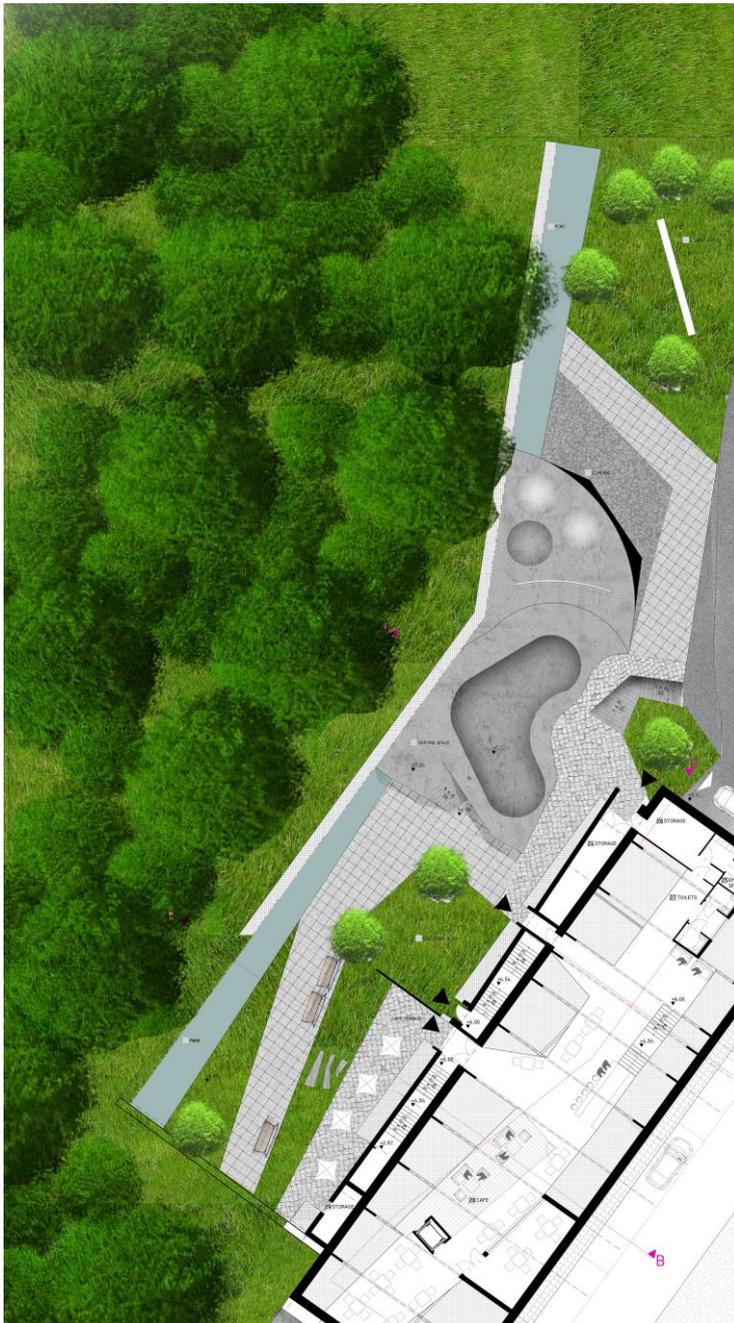
11.2.5. FITNESS AND WEIGHT SPACE

Coming back to the building with lobby part. On the level 1 of this building are situated typical inside activities, like weight space and fitness rooms. Weight space is an open one, directly connected with a middle level of café by glass wall. It gives possibility to see but not get inside until we will end the exercises.

From this level we have also possibility to get out on green space by stairs attached from outside to outside wall of the building. There we have small green space designated specially for complex activities area for making exercises such as yoga. Generally this space stands out by its horizontal communication which one more time is lineal but not exactly parallel to outside walls. Especially spectacular is the bridge above the foyer area.

11.2.6. GREEN PUBLIC SPACE

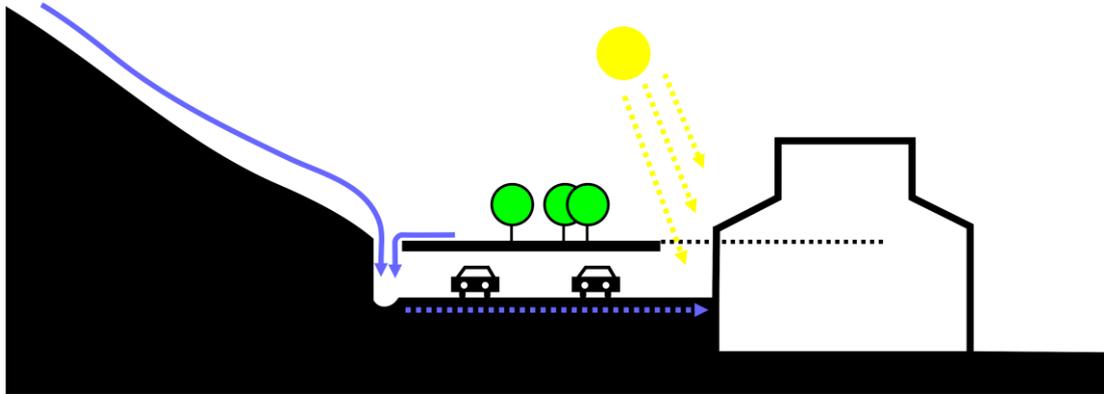
As it was already mentioned, I situated public green space from the side of the hill. It gives opportunity to try in the smaller scale the activities provided in the building. We can find there small climbing wall, ramp for skating, lot of lawn to make fitness exercises. There is also place to sit, rest and observe how people perform this activities. We can sit in the shade of trees, planted in big boxes to prevent their roots of destroying the roof.



Picture 48 Plan of green public space

This all activities are situated over the car parking plot. Two ponds with water falling down as a waterfall on the wall of the car parking create very extraordinary atmosphere of the public space.

In the subject of car parking beside the water also light is important factor creating the scenery. Disattaching roof of the car parking from building and mountain gives opportunity for rays of light to get inside. This makes it really special space. See picture number 49.



Picture 49 Penetration of parking by sun and water

11.2.7. TOURIST INFORMATION

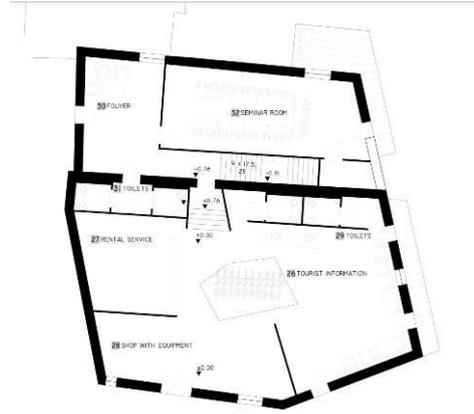
In the old building of Tinte Velho, as it is the oldest one and the most valuable one in the all complex, I planned to situate tourist information. Functions like this should be situated in every city with something to show. As Covilhã is a center of tourism in the region it should also have such facility.

In the space of tourist information I reserved some space for exhibition of machinery used in building. Beside tourist information in the first building of Tinte Velho I planned to situate also rental office and shop with equipment. All these three functions are such a kind of one's which does not need a lot of closed space. The main aim in managing this part of Tinte Velho was to not hide beautiful shape of its inside walls and roof. Make as much open view for visitor as it is possible. That is why the minimum amount of walls was planned in this building.

Also important new idea for this space is to open it more for a river side. I made it by adding small terraces on this side of the building.



Picture 50 View for south part of former factory Tinte Velho

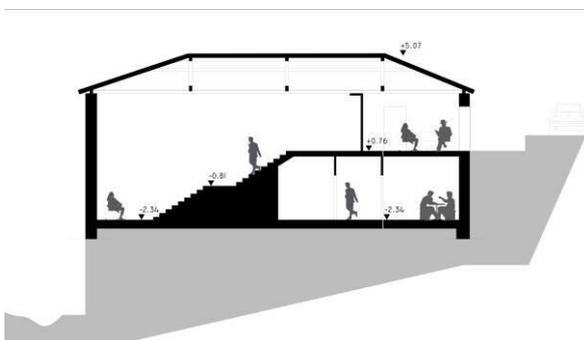


11.2.8. OFFICES

Very significant is also second building of this complex. In this one I decided to keep both floors that it had in a past and put there all the offices managing the tourism in the region. Also very interesting space was old tank for water attached to the building. It couldn't have been left itself, that is why the complex of offices is planned to be put inside.

The entrance upper floor contains of big room for conferences and meetings. Here we can discuss all new ideas for the development of city tourism. This room has also connection with another small terrace.

The down level contains of only offices. The most interesting ones are situated in the old walls of tank, covered by glass roof. The roof gives nice light inside.



Picture 19 Connection between offices and river



Picture 52 Glass roof of the offices

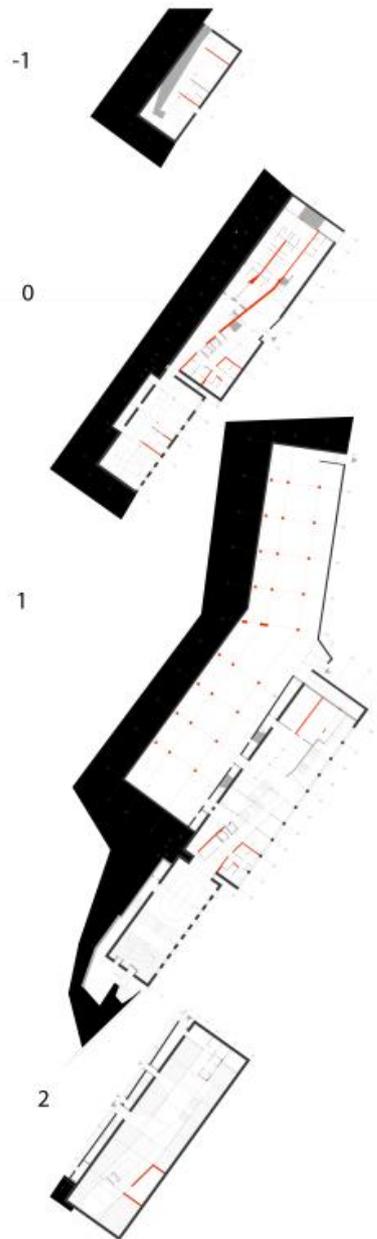
These offices have also connection with a huge terrace with an extraordinary view for a river and complex of factories on the other side of the river.

11.3.SUSTAINABILITY

Significant subject for today's designers should be sustainability idea. The simplest definition of sustainability is design that meets the needs of the present generation without compromising the ability of future generations to meet their needs.

My first idea to implement this thinking into life is saving water. All the year, but mostly on spring time a lot of water comes down through the hills of Serra de Estrela. To prevent building to be destroyed by the water and to not waste this water I planned to open its way through the building. After going down with the hill slope water falls down by the void into the parking (joining to the waterfall). All water is gathered by the special shape in parking floor and then, partly send back to the pond of the green space or partly cleaned and then used in the building by rainwater harvesting process.

Also keeping building with the possibility to be reused in a future for a different function comes as an idea of sustainability. By putting all the vertical communication, construction and installations in as less walls as it was possible we get the building easy to transform in the future. Permanent elements in the project show pictures number 53.



Picture 20 Permanent elements

Another idea is making a green roof over the parking lot. Such kind of roof offers multiple environmental benefits. The vegetated cover protects the roof membrane resulting in a longer service life before replacement is required. Increased sound insulation results from higher sound absorption by the growing medium and plants. Because rainwater percolates through the growing medium peak runoff rates are reduced. The plants absorb and filter outdoor pollutants, helping improve outdoor air quality. Also the roof provides habitat for birds and other small creatures. These all features make it really useful.

Also usage of steel as main structural material is sustainable thinking. Steel can be reused or recycled. It is also durable what provides long life cycle to the building.

11.4. ACCESSIBILITY

What I admire a lot is that in Portugal accessibility is very observed subject. That's why all my building is easy accessible for the incapable people. By two elevators they were given the same rights as fully healthy person. They can use both, flows. Also systems of ramps or leveled floor allow incapable people to get through the building.

11.5. CONSTRUCTION PROCESS

11.5.1. PREPARATORY WORKS AND DEMOLITION

Due to bad condition, it is needed to remove all the roofs, and beams in the Tinte Velho building and Tinturaria Alcada. Also due to non historical or architectural value the one-leveled living houses and temporary garden buildings on the hill side are to be demolished.

11.5.2. PRESERVED ELEMENTS

Because of architectural and cultural value, all the external stone walls have to be preserved. All the existing window frames with industrial divisions are to be mounted after necessary renovation. Also beams in the building near Rotonda do Rato as they are in good condition will be preserved.

11.6. FACADES

Facades of the building as it is the project anecting special technical heritage were supposed to not change totally. My main aim was just to make only this changes which are needed to show that new life by new functions was given to the buildings. The less touched facades are the ones of the most valuable and old building, Tinte Velho. There I added just small terraces made out of steel and new windows without partitions in old window openings. Also important was adding glass roof to the old water tank. As roof was element creating building's identity I planned to leave it in a shape it was originally made, just renewing its construction and all cover.



Picture 54 Facades of former Tinte Velho building

Very similar process concerns the other buildings. Just few steel elements were added to their facades such as terraces and stairs. Also windows of the white factory changed for the more plain but useful ones with bigger steel part giving possibility too put fresh air into the building. The widows with irregular partition in the factory whole in stone, nowadays are so important for this space that I left them

not changed. Here tiny move shows the refreshment. It is new roof with old and modern lantern and nice terrace with view on all square.

Interesting is also that by putting parking and green space on the other side of building we get one more new façade in the building. As it is totally new one I planned it to be plain and simple not to make a competition to the historical ones.



Picture 55 New facades of Tourism and recreation center

11.7. INTERIOR MATERIALS

Essential for the project is not only how the architecture of it will be shaped but also what materials will be used for interiors. All the building, as a technical heritage, are supposed to be done in very industrial character. All parts of construction will be made in steel. The interior side of outside walls mostly will stay as a beautiful stone wall. Only what has to be made is its cleaning with sand. Interior walls will be mostly white or rough concrete. Roofing in the longer building is

planned to be made from stainless steel, opposite to the smaller Tinte Velho which should preserve its old character and get new typical Portuguese tiled roof.

All the beams beside the ones in white building have to be changed for the new ones. In the Tourist information and offices complex - wooden beams (the same material as the original ones) and in the main activities building - steel beams (to get particular ambient of the building).

11.8. STURUCTURE

11.8.1. FOUNDATIONS

As main aim of the project is to keep fully all outside walls of the buildings also their all foundations stay as they are. As some new interior structure walls are added to the buildings additional new foundations have to be done. They will be made dependent on soil and water conditions prevailing in the planned investment.

11.8.2. WALL STRUCTURE

The building is designed in steel frame construction, partially making steel pillars and beams visible.

Interior structure walls - reinforced concrete.

Other interior walls - plasterboard.

Stairs and elevators shafts – steel construction.

11.8.3. CELLING

Steel beam ceilings.

11.8.4. STAIRS

Interior stairs supported in wall by sloping reinforced concrete. Stairs in lobby are covered by steel wall ending on a level of railing. Stairs on the south side of the building made in steel beam construction. Detached from old external stone wall with dilatation.

11.8.5. ROOFS

Roofs with steel or wooden beams, covered by stainless steel or red Portuguese ceramic tiles. As the steel beams are planned to be done on a not standard span they have to be fixed to existing stone walls by the system of rolls giving it opportunity to move slightly on the wall. Old water tank cover by glass roof based on steel beams. Green roof - made strictly according to the manufacturer's technical guidelines for green roofs.

11.8.6. FLOORS

Exterior paving made from granite cubes and concrete tiles.

Terraces finished with wood or tiles.

The floor is planned to be covered partly in polished concrete and partly painted with very resistant and waterproof paint there where exercises will be held. The building of Tinte Velho is planned to have wooden floor.

11.8.7. INSTALATIONS

The building is equipped in:

- cold/hot water installations,
- fire installation,
- electrical installations,
- sanitary installations,
- rain-water harvesting system with rain-water collectors
- heating installation,
- air conditioning,
- lightning protection,

The installations needed to ventilate the spaces are put inside the walls. There is also provided a place for internal ventilation in a space of roof lantern. In the technical room attached to the parking there is a vertical service space.

11.8.8. DILATATION

Because some of the old walls get in contact with the new ones it is need to make a dilatation joints between. This will give opportunity to elements to move freely.

12. CONCLUSION

This work shows adaptation made in a buildings being considered as an industrial heritage of the country. As all the process of my project show despite the very regular shape of such buildings all the surrounding can give us inspiration how to make inside new interesting space. Adapting such long and narrow spaces is not an easy task. But as we could see by the project sometimes slight, delicate changes can influence sensing of the object. If to this all we will add sustainability and accessibility ideas we will get interesting space, where people learn positive behavior just by staying inside. It is perfect connection. New, needed in the city function implemented inside historically important building for city and country. I have a strong feeling that creating proposed functions in a city would influence on a lot of people to come and research Covilhã as a city of rich history and beautiful natural potential.

BIBLIOGRAFIA

Professor Helder Pereira de Oliveira (not published). *Habitação Social em Covilhã*: doctoral work at Department of Civil Engineering and Architecture.

Elisa Caledo Pinheiro (2009). *Rota de La Translana*. Covilhã: Museum de Lanificios do Universidade da Beira Interior.

Waldemar Affelt (2009). *Dziedzictwo techniki, jego różnorodność i wartości*: Kurier Konserwatorski

Andrew W. Charleson (2005). *Structure as architecture, a source book for architects and structural engineers*: ISBN 0 7506 6527 0

Câmara Municipal da Covilhã (1999). *Resolução do Conselho de Ministros n.º 124/99; SUMÁRIO - Ratifica o Plano Director Municipal da Covilhã*

Jacek Dominiczak and Monika Zawadzka in cooperation with Agnieszka Kiera (2007-2008). *Identity Code for Central Fremantle Source and Design Code*

Committee of Ministers to Member States (1990). *Council of Europe Recommendation R (90) 20 On the protection and conservation of the Industrial and Civil Engineering heritage in Europe*
< <http://wcd.coe.int/com.instranet.Instranet/vlet?command=com.instranet.CmdBlobGet&InstranetImage=570715&SecMode=1&DocId=592694&Usage=2>>

ICOMOS (2005). *Xi'an Declaration on the Conservation of the Setting of Heritage Structures: Sites and Areas* < <http://www.international.comos.org/xian2005/xian-declaration.Htm>>

The International Committee for the Conservation of the Industrial Heritage (TICCIH) (2003). *The Nizhny Tagil Charter for the Industrial Heritage*
< www.mnactec.cat/ticcih/pdf/NTagilCharter.pdf>

UNESCO (2008). *Operational Guidelines for the Implementation of the World Heritage Convention*
< <http://whc.unesco.org/archive/opguide08-en.pdf>>

Council of Europe (2005) *Framework Convention on the Value of Cultural Heritage for Society* : Faro
< <http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=199&CM=8&CL=ENG>>

Connected Cities Meeting (2006). *Mobility problems in Mountain Cities – the case of Covilhã, Portugal*: European Community Interregio III C

Wrocław University of Technology (2001) . *Fundusze strukturalne Unii Europejskiej. Prezentacja projektów w ramach Celu 1 : Tempus EU-PULA*
< <http://www.wcss.wroc.pl/tempus/eupula/obj.ppt>>

Wikipedia the free encyclopedia. *Covilhã*
< <http://pt.wikipedia.org/wiki/Covilha>>

Official Site Museu de Lanifícios da Universidade da Beira Interior
< <http://www.museu.ubi.pt/>>

Paulo Jesus. Blog - Covilhã cidade neve
< <http://cidadedacovilha.blogs.sapo.pt/2711.html>>

Official Site of Universidade da Beira Interior <www.ubi.pt>

Touristic portal on Portugal <www.travel-in-portugal.com>

Official Site of Science and Technology Park Parkurbis <www.parkurbis.pt>

Portal on mountain range Serra da Estrela <www.rt-serradaestrela.pt>

Touristic portal on the region <www.turismo.guarda.pt>

Portal of the Jewish community of the region
<<http://zezepina.utopia.com.br/judeus/>>

Information leaflets of Covilhã City Council

ANNEXES

01. SITE PLAN – Scale 1:500
02. BUILDING A GROUND FLOOR – Scale 1:200
03. BUILDING A -1 FLOOR – Scale 1:200
04. BUILDING A 1ST FLOOR – Scale 1:200
05. BUILDING A 2ND FLOOR – Scale 1:200
06. BUILDING A SECTIONS AA, BB – Scale 1:200
07. BUILDING A SECTIONS CC,DD – Scale 1:200
08. BUILDING A FASCADES – Scale 1:200
09. BUILDING B GROUND FLOOR – Scale 1:200
10. BUILDING B -1 FLOOR – Scale 1:200
11. BUILDING B SECTIONS EE, FF – Scale 1:200
12. BUILDING B FASCADES – Scale 1:200
13. URBAN RENDER 1
14. URBAN RENDER 2
15. RENDERS OF INTERIORS 1
16. RENDERS OF INTERIORS 1