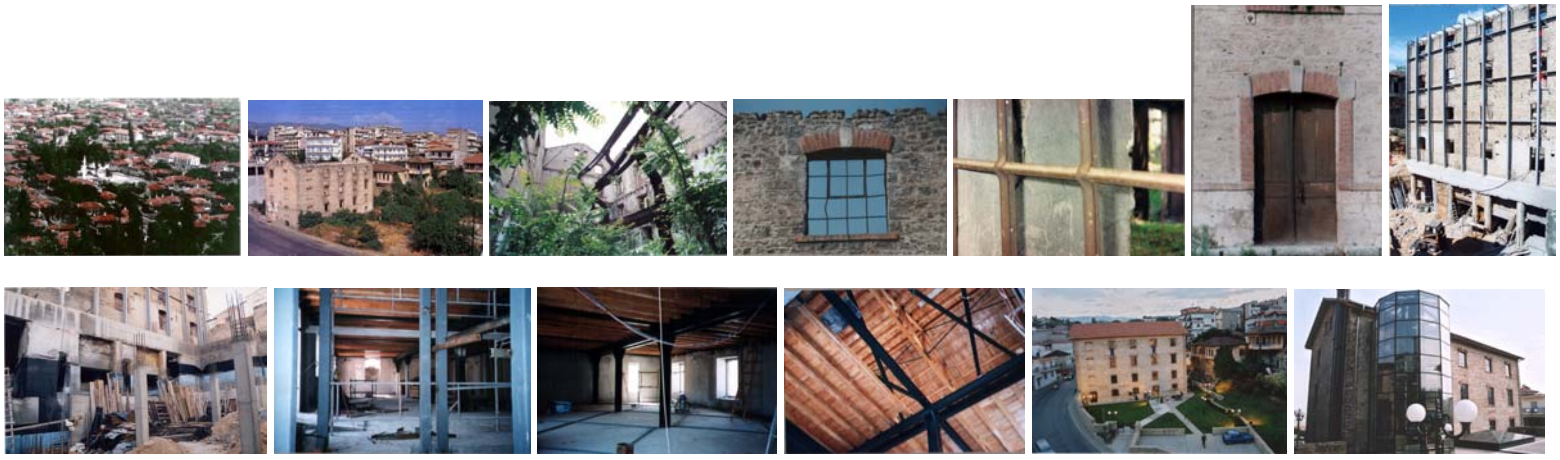
Future-proof historic centres Links

Workshop in Veria 24-26 of May 2011

Techniques
Restoration and Improvement of Energy Performance Of Buildings in Historic Centers

Full Report



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European Union
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DAY 1 : 24th May
Sharing Knowledge

What do we have to know about ancient buildings to restore them and to improve their energy efficiency, respecting their intrinsic qualities, both cultural and environmental?

Morning public session

The Session was introduced by the explanation of the premises where it was going to take place, giving the guests an idea about the history of the building, the rationales behind its shape and its intrinsic value. The explanation of the building took place in the open courtyard and was much more than a merely architectural, historical or socio-cultural analysis of the building. The story told by the professionals who worked on it over the last two decades first to study and understand, and then to renovate the building and bring it to a new life, this story immediately gave an additional dimension to the workshop. We felt like being invited to take part to a story that lasted since centuries and willing give our contribution to take it further. The first text of this report is the English translation of the presentation by arch. ***Kalogirou Artemis*** and arch. ***Stella Sidiropoulou*** focussing on the technical aspects of restoration works of the Mansion House Sarafoglou.
The first day of the workshop was open to invited guests and specialized audience who did not belong to the network and had to be informed about its activities. Therefore during the first morning some welcome speeches and introduction of representatives of local administration, stakeholders and participant to the Local Support Group.

Nicolaos Mavrokefalidis, President of the Municipal Council welcomed the participants to the Workshop on behalf of the Mayor of Veria Mrs ***Charikleia Ousoultzoglou Georgiadi***, who could not make it herself due to another institutional commitment.

Vilma Mavromatidou, Architect, welcomed the partners of the LINKS network on behalf of the Association of Architects of Imathia Prefecture of which she is Secretary.

Nikolaos Ousoultzoglou welcomed the LINKS network partners on behalf of the Chamber of Small and Medium Size Enterprises of Imathia.

Frédérique Calvanus, LINKS Lead Partner Bayonne Municipality representative, introduced to the guests the main subjects of the LINKS network and updated the partners on the current state of play.

Kleopatra Theologidou, Architect, LINKS Local Coordinator in Veria explained the challenges that Veria would like to tackle in the frame of the URBACT LINKS network and the expected benefit for the city and the citizens.

Prof. ***Job Roos*** (TU Delft) held a one hour long and very intense key note speech starting with the story of the Red Chemistry building in Delft and its conversion into the new Architecture Faculty building. From this case study he unfolded his point of view on the greatest challenge that European construction industry and society at large have to face in the next decades: the renovation and upgrading of the majority of the building stock. (Full presentation in the annex).

After this thrilling key note speech and a short discussion about it LINKS Lead Expert ***Antonio Borghi*** introduced a set of general criteria to understand the needs and potentials of any historical building in its context. This set of criteria is intended to be tested in the analysis and comparison of the case studies and pilot projects from the partners' cities and the basis for the common platform of

understanding, in other words the basic knowledge on technical aspects of eco-restoration. As an annex to this methodological framework the Lead expert has proposed a LINKS Glossary in English, to be integrated by the partners and translated into the different languages of the partner cities.

The first morning of the workshop was concluded by the presentation of arch. ***Dimitrios Troxopoulos,*** representative of the Association of Architects of Imathia, who is actively involved in Veria's Local Support Group. The presentation introduced the first results of a survey aiming at discovering what the citizens think about the city centre of Veria.

The Sarafoglou Mansion - *introduction to the history of premises of the workshop by arch. Kalogirou Artemis and arch. Stella Sidiropoulou*

The Sarafoglou mansion is located in the neighbourhood of Kyriotissa where the properties are organized in closed building islets including as a central atrium the church and other outdoor communal spaces, in between the church and the residences, according to the monastery type.

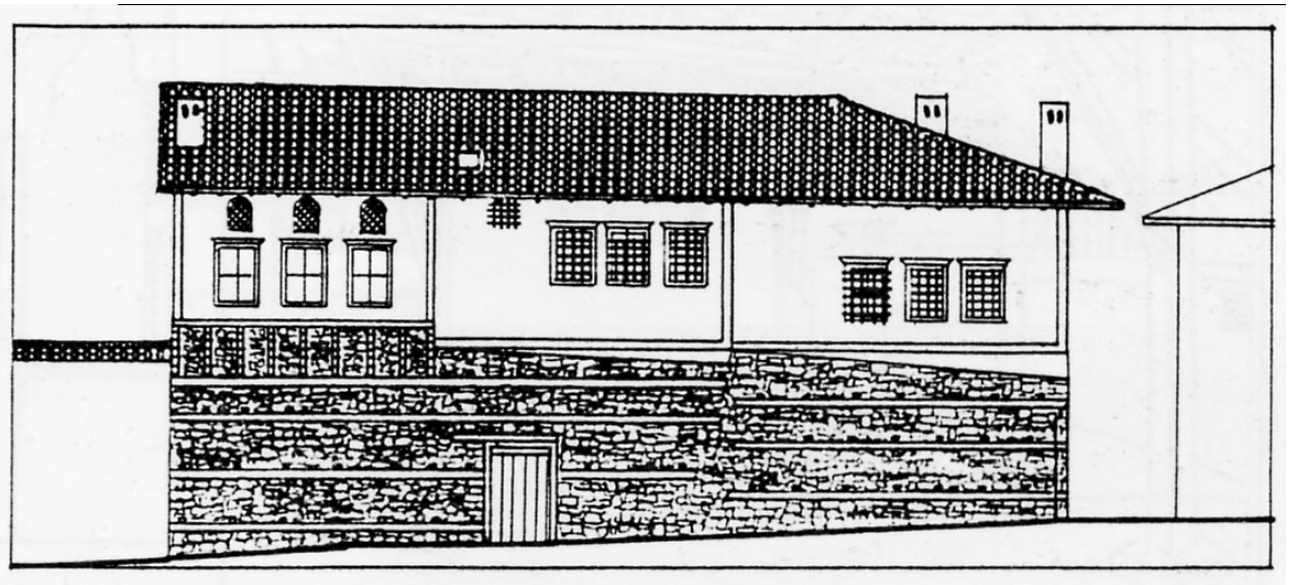


Figure 1. Elevation on the street

The closed blocks of buildings are a transformation in between the Greek and Roman city and its borders are located at the pre-industrial part of the city, while there are evidence that the Christian orthodox churches (that are joined modestly to the ensemble of the area) are built on top of ancient sanctuaries.
The mansions are built in a round form, with a few or any windows on the ground floor and with one or more passages to the outdoor spaces, on the contrary and in order to ensure access between the public outdoors space to the internal semi-public space, we see openings at the semi-closed areas.

On the first floor the residences are wide open with functional projections facing the main road and open balconies facing indoors. The defensive character of the building islet lost its importance gradually and intermediate walls took its place in order to isolate and separate the properties.

The Sarafoglou mansion is built-in the closed islet, but we can distinguish it because of its size, height and its decorative elements, like all the mansions that belong to families with high social status.

The study of the archive material that was used in this case was based on the titles, the deeds and the buying contracts, also permits for industrial productions for wine from the Ottoman authorities and donations to the church and archives of the Greek Christian community, letters and files of the professional and social activity of the family, also photographs, verbal reports from the only offspring of Mrs Eudoxia Sarafoglou who was born in 1893 in Veria.

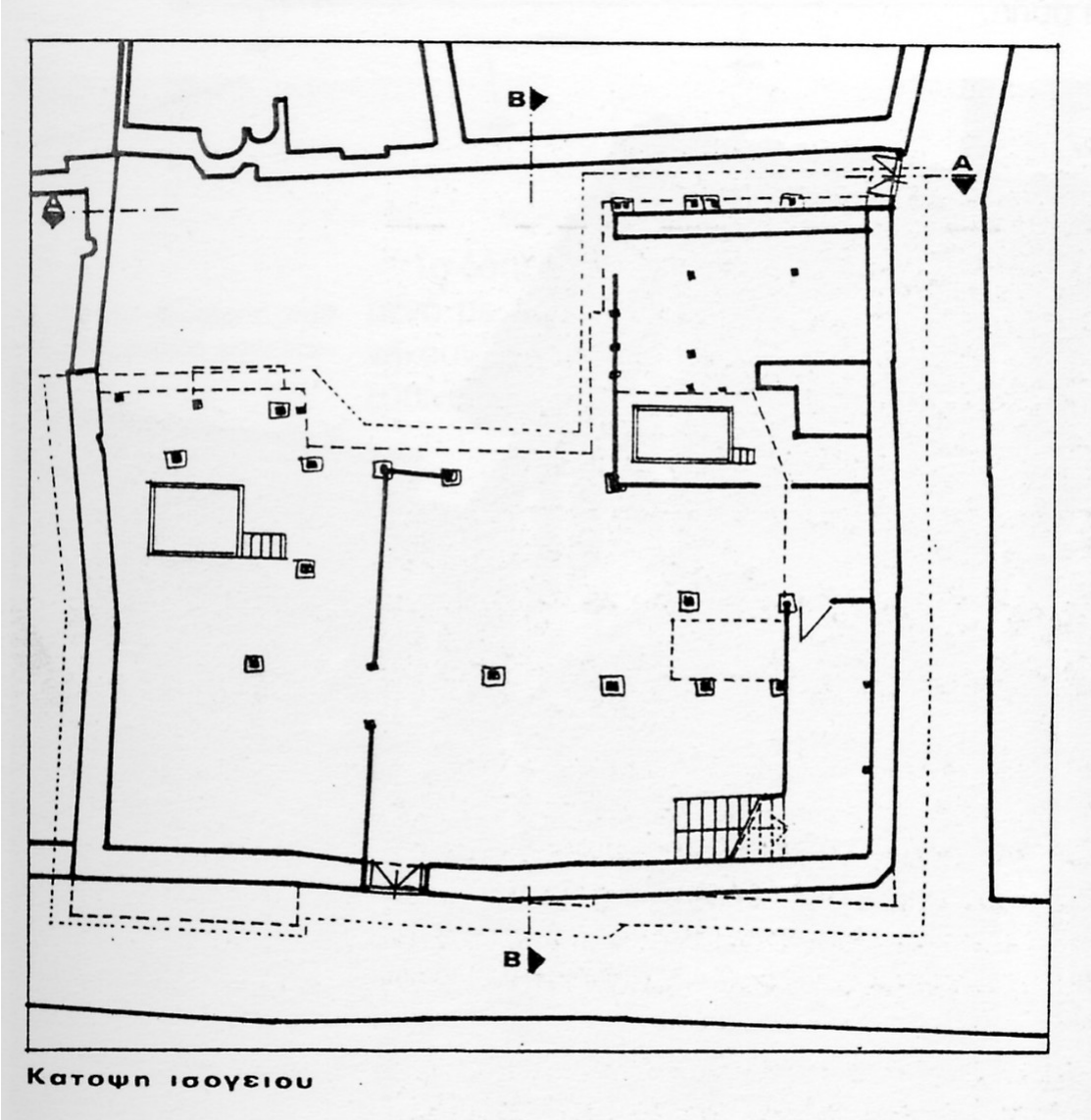


Figure 2. Groundfloor plan

According to the oldest archives the residence was bought in 1766 by Antonio Kampouroniko who had licence to produce and sell wine. Hence the industrial facilities to the ground floor are dated on the 18th century period. We assume that the main entrance was paved with shingles to the courtyard that serves the residence with crafty entrances to the side road for rural and industrial use.

In the beginning of the 19th century Georgios Petras a wealthy merchant, married to the daughter of Kampouronikos and resided in the mansion. Mr Petras had influential commercial activity and trade with Constantinople and participated in the social and financial life of Veria. At that time the utility space becomes the new wing and splits in two levels, and on the floor the loggia (roofed balcony) becomes the reception hall and adds up to the roofed section of the terrace. Also designed wood work vitro and skylights give a unique and aristocratic character to the mansion.

In 1870 Eleni the only daughter of Petras, is getting married to Konstantinos Sarafoglou a merchant and craftsman with watermills and land. They have seven children from which Eudoxia who was born 1893 is the only inheritor of the mansion.

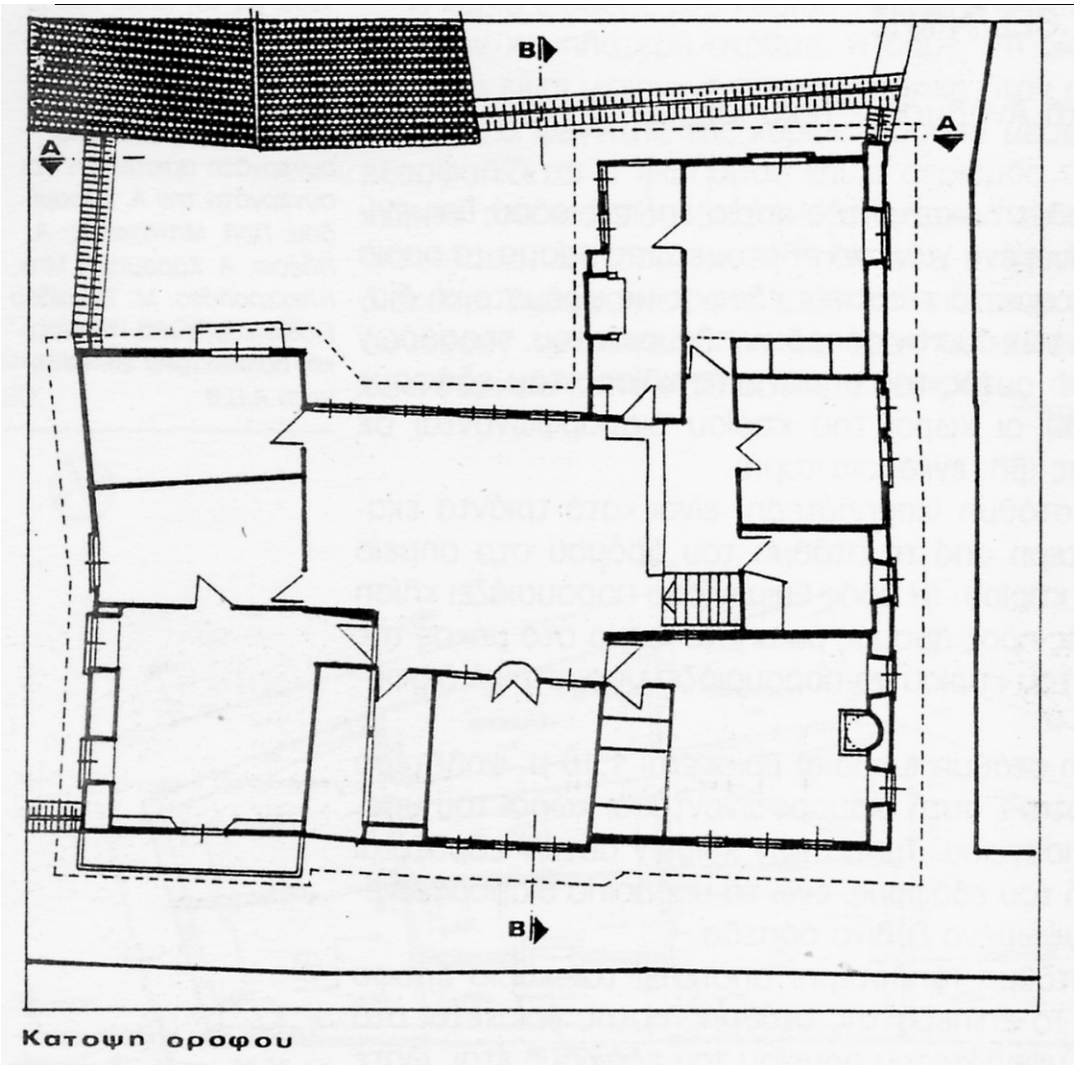


Figure 3. First floor

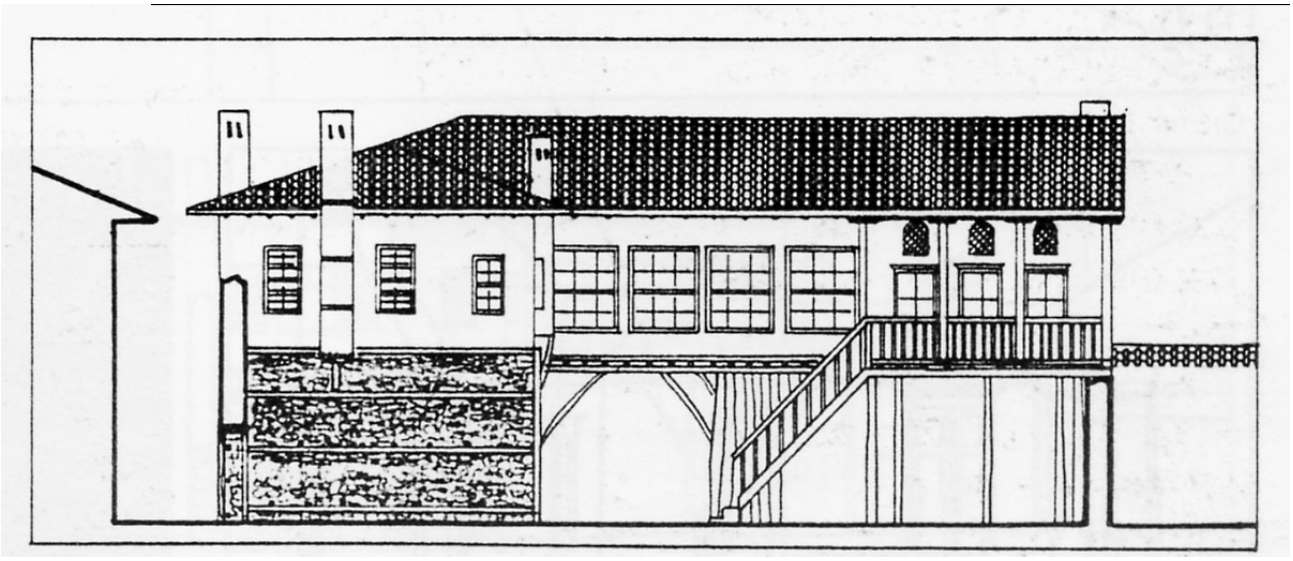


Figure 4. Section A-A

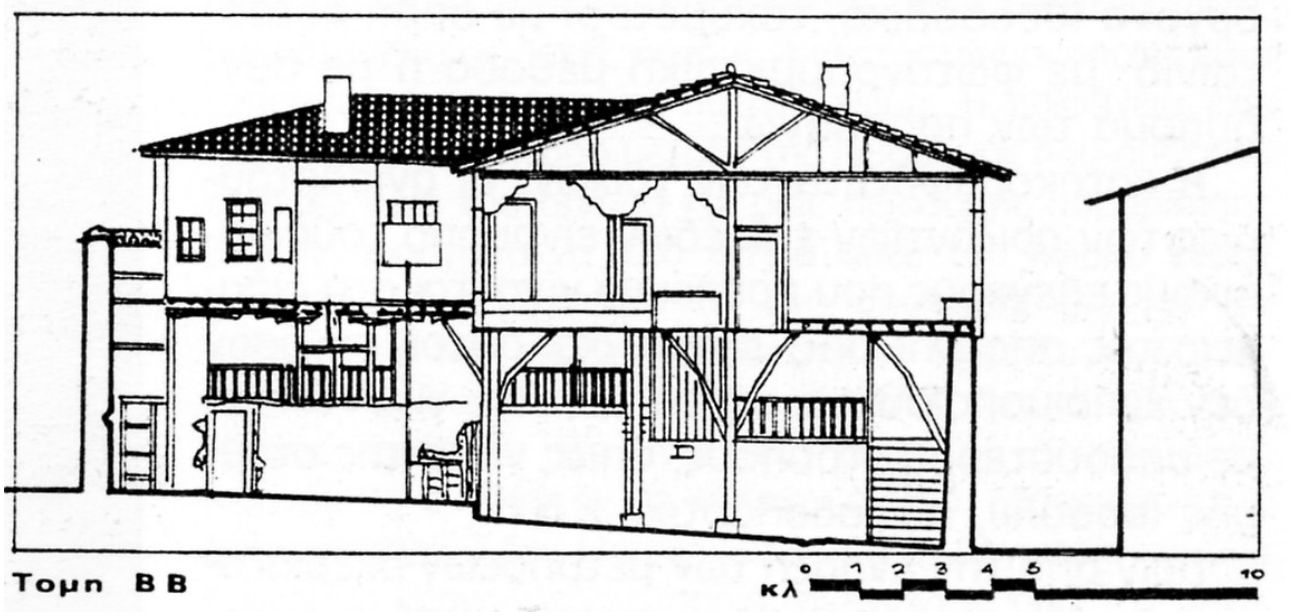


Figure 5. Section B-B

During the course of First World War French generals reside in the good part of the mezzanine. After their retreat, along with their possessions they also extract decorative elements of the building, the windows, the decorative wood work, the fireplace, the roof and the elevation. After this extortion the removed part of the elevation was converted to a terrace.

After the liberation of the city after the First World War the family did a few changes to the house, they built a bathroom on the floor and they closed the roofed terrace in order to create two bedrooms.
In 1922 refugees reside in every room of the building. At that period they closed the windows, the roofed terrace and the walls are coated and they change the elements of the elevation.

For the re-use and preservation of the building, it was chosen to be restored in the form of the 2nd period, with a purge of interventions that where done during the residence of the refugees. The good part of the mezzanine that was removed during the withdrawal of the French troops was reconstructed according to the retained elements and the evidence provided by Mrs. Sarafoglou and the general characteristics of all mansions of Veria.

The first phase of the restoration of the "Sarafoglou" mansion took place during the nineties. The second one, which converted this vernacular house into a folklore exhibition hall, was completed 3 years ago. The conversion required a series of maintenance works. In addition, exhibiting the collection, along with the newly proposed uses of the building itself, created the need for functional and aesthetic transformations.
More specifically, the courtyard was cleared and covered with perforated concrete tiles, which allow grass grow through the gaps. The timber shed in the courtyard (protecting the old wine-barrels), was fully restored. The outside walls were partially restored at areas where cracks had developed and repainted with the same colours.
The load-bearing timber-frame structure was carefully examined and reinforced where necessary. All the filling timber elements were also replaced. All the wooden surfaces were protected with varnish and fire-proof layers.
Concerning the timber roof, water tightness and static strength were examined and improved, including the replacement of damaged items.

Welcome speech by Nicolaos Mavrokefalidis,

President of the Municipal Council of Veria

Ladies and Gentlemen,

On behalf of the Mayor of Veria Mrs Charikleia Ousoultzoglou Georgiadi, who is in Athens today, on behalf of the Municipal Council and the citizens of Veria, I welcome you to our beautiful city and I wish you a productive and fruitful collaboration during the works of this meeting. From our part, we did our best in order to provide you all necessary tools and means to facilitate your work, within the frame of this exceptional LINKS programme, so that you have the best possible outputs.

The aim of URBACT - LINKS project is to produce an action plan for the eco-restoration of the historic centers of the partner cities and the creation of a Local Support Group in order to support it and monitor its implementation. I need to underline here our strong interest for the historic center of Veria to be developed an implemented and realistic action plan. It is our strong belief that the environmentally friendly restoration, or eco-restoration, should be within the main strategic priorities of the Central Governments and Local Authorities.

Historic centers are tangible documents of the civilization developed in time in the cities, tangible documents of the history of cities. As such, ensuring their survival and thus the historic continuity in time seems to be a crucial task, which should be based on the most current and effective architectural and urban planning trends and techniques. If we fail to follow the challenges of our times, city centers will suffocate under the pressure of intensive building construction, which will eventually lead to the disappearance of our cultural heritage, one and for all.

With the hope we all succeed a better future for our past, I wish you every success to your works.

Welcome speech Nikolaos Ousoultzoglou,

President of the Chamber of Imathia

On behalf of the President of the Chamber of Imathia Mr Nikolaos Ousoultzoglou, who couldn't be here due to health reasons, we welcome you to the beautiful city of Veria and we wish you a pleasant stay.
The President of the Chamber of Imathia welcomes the meeting with the hope its outcome is fruitful, because the renovation and eco-restoration of the historic center will offer further development in our city, and at the same time, it will strengthen the tourism, thus creating new jobs.
Good luck with the work of this meeting.

The Architects of Imathia as stakeholders in the LINKS network

by Vilma Mavromatidou

Welcoming you in LINKS meeting in Veria, representing the Board of Association of Architects in Imathia , I would like to express a few thoughts about our Association, its relationship to the historic city of Veria and its participation at the Local Support Group in this program.

The Association of Architects was founded in 1999 by a group of about 25 architects aiming, among others, to the promotion of scientific and architectural work in our region. It now has about 80 members, while the Architects in our county are estimated to be no more than 100.

Among our members, there are colleagues with graduate studies and relevance to the urban fabric of the historic center and restorations of listed buildings. So from the very beginning, the Association has organized and participated in meetings, lectures, conferences and workshops on historic center city of Veria.

As shown by the data of the department of Urban Planning of the Municipality of Veria, the Architects are - compared to other engineers-the ones who design and construct the most buildings, which are in the historic center. In the recent economic situation, the number of building permits in this area is limited from five to ten per year.
The two regions 'Kyriotissa' and 'Barbuda', among which the first one is the largest and most populous, while the second is more elongated and degraded, share specific terms of construction and except in rare cases almost all the 240 listed buildings of the city are there. They are privileged areas due to location, orientation, density and of major architectural, scientific, and professional interest.

Both scholars, however, and the owners of the preserved areas face difficulties in issuing and implementation of building permits. These are due to the lengthy approval services, the ownership of buildings, the proximity to dangerous buildings, the lack of skilled builders, craftsmen and other factors. As since October 2010, for a building permit it has been necessary to submit a study of energy efficiency concerning the new buildings, another difficulty appeared. New buildings located in the historic center must obey both to the specific terms of construction and the energy requirements.

By the same law listed buildings are exempted from a study of energy efficiency when building permits are issued for their restoration. Although this seems to facilitate the process of licensing for these is more likely to let them without energy certification - and therefore at a disadvantage, compared to other buildings - on the property market.
It is therefore necessary and appropriate to the analysis of building materials for both listed and non listed buildings, new compatible materials for the restoration or the construction of new energy efficient. In this way it is possible for listed buildings to obtain an energy certification and to arrive at proposals for upgrading their energy behavior but also for the new buildings in the historic center. Following this direction we can get the technical tools which are necessary to preserve and enhance the living conditions in the historical center of Veria, at least in the technical field.

In an era when engineers and architects in particular are experiencing unprecedented financial difficulties, our Association stands actively at the Local Support Group in the LINKS program assuming that the guarantee for a sustainable future of the historic center of Veria, is well based on the discovery of wisdom and cultural values of the past.

Heritage conservation and eco-restoration: a chance for one another

by Frédérique Calvanus

With the statement FUTURE PROOF HISTORIC CENTRES, the LINKS project aims to prove that historic centres can be the future eco-district. This statement means that the LINKS partners want to handle the conflicting usage of interest between preservation requirements and evolution needs. This ambition requires a comprehensive approach of the problem: social, urban, cultural and economic.
That's why we all decided to tackle a wide and a transverse work programme to fit the needed integrated approach.
Our two first meetings were dedicated to urban and social challenges of the historic cities, and also to the essential involvement of citizens within the life of the city. These issues have provided the general framework for thinking about our historic centers. These questions are not closed for LINKS, and we will have to come back later on to make our concrete proposal to improve the urban management of historic cities..
We now arrive at the technical part of the programme, the most concrete and may be one of the most exciting issues to be addressed during LINKS.
For a long time, heritage conservation and energy saving have been considered as conflicting objectives. On one hand, the main concern for the stakeholders of heritage conservation was to plead for a status apart from European regulations to avoid the damage of standardization due to the regulation instigated to face climate change. Their attitude was almost defensive, and certainly justified face to the increasing thermal requirements. They were pointed the fact that thermal renovation works could have consequences and may jeopardize the authenticity, and the material integrity of this unique heritage.

On the other hand, local officials and town planners were aware that historic centres should evolve to meet the manifold demand of citizens today, and among these, the thermal comfort and energy efficiency of their dwellings. In their point of view, impossibility of evolution could also lead to a loss of cultural heritage and identity, loss of attractiveness and economic stagnancy.
Yet, the stakes in terms of quantity are significant. As a proof, here is the proportion of dwellings, considered as ancient (build before 1945) in Europe.

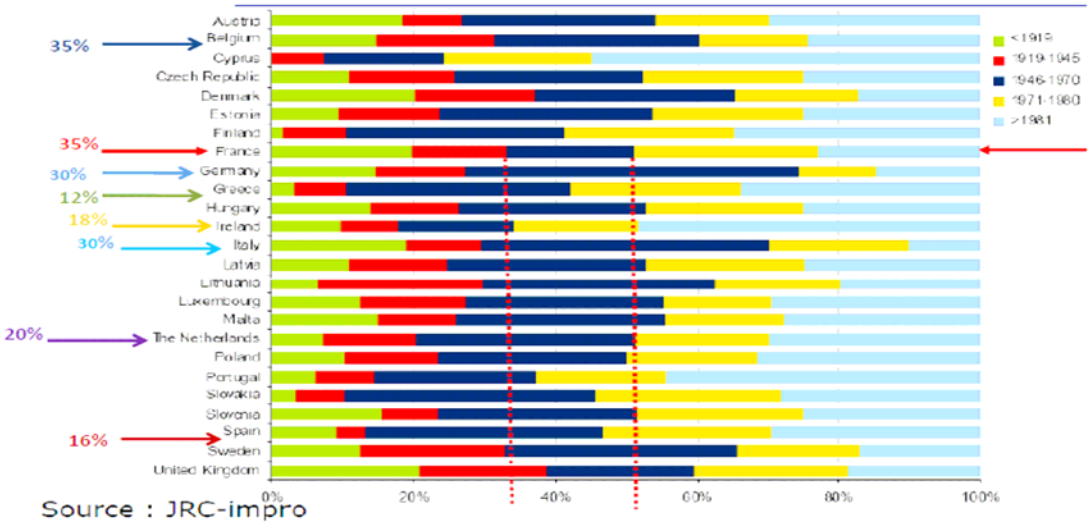


Figure 1: Age of buildings in the EU Countries: green is before 1919, red before 1945

The question we have introduced in the application form of LINKS in sept 2009 was: How can we manage the right balance between the preservation of built heritage and the sustainable, future proof development of historic towns? This question was of a great interest for many historic cities all around Europe, that's why LINKS has been approved.
Since this approval, an abundant and recent literature pointed out how eco-restoration practices can be a chance for the conservation of ancient buildings, thanks, among others to their natural hygroscopic and breathability qualities.

From another point of view, the maintenance and reuse of the historic fabric, in particular of historic buildings contribute to the efficient handling of natural resources through:
1/ Reducing the need and consumption of new materials,
2/Reducing land consumption
3/ securing the city of short ways (reducing the length of transport ways and causing less commuting)

In addition, recent studies have proved the fact that many historic buildings already show energy-saving qualities. This is not a surprise to some experts, but quite unexpected for many people and above all, it remains difficult to scientifically assess this.
What was still recently considered as conflicting values, conservation of heritage and environmental qualities, are now seen as two faces of a same medal and matches together to contribute to the sustainable future of historic centres.
What is the role of LINKS within this evaluative context? What can be our added value in this recent profusion of seminars, studies, publications about heritage and sustainable development?

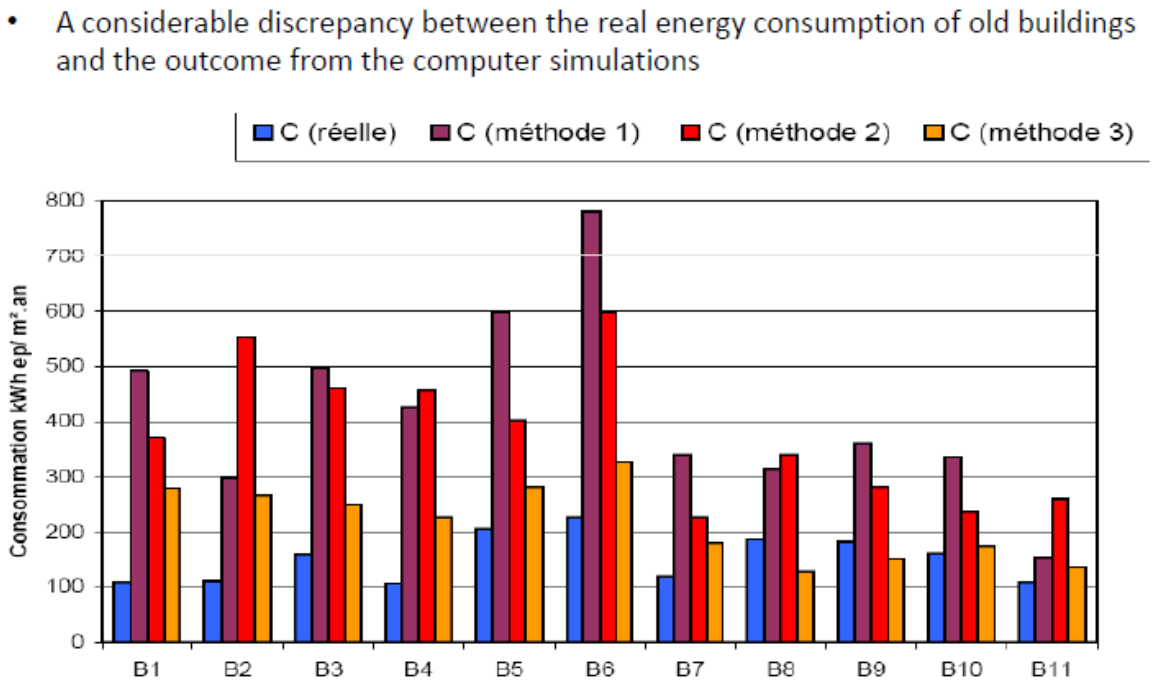


Figure 2. Comparison between simulated and real consumption of energy in old buildings.

First, we said it during the last meeting, LINKS is not a research project, but is a project based on exchanges of experience and practices. So, for us, the more knowledge progresses, the more we have material available. Nevertheless, some questions still pending, and knowledge remains incomplete. Some of us need to carry out additional expertise to improve the knowledge of their built heritage.

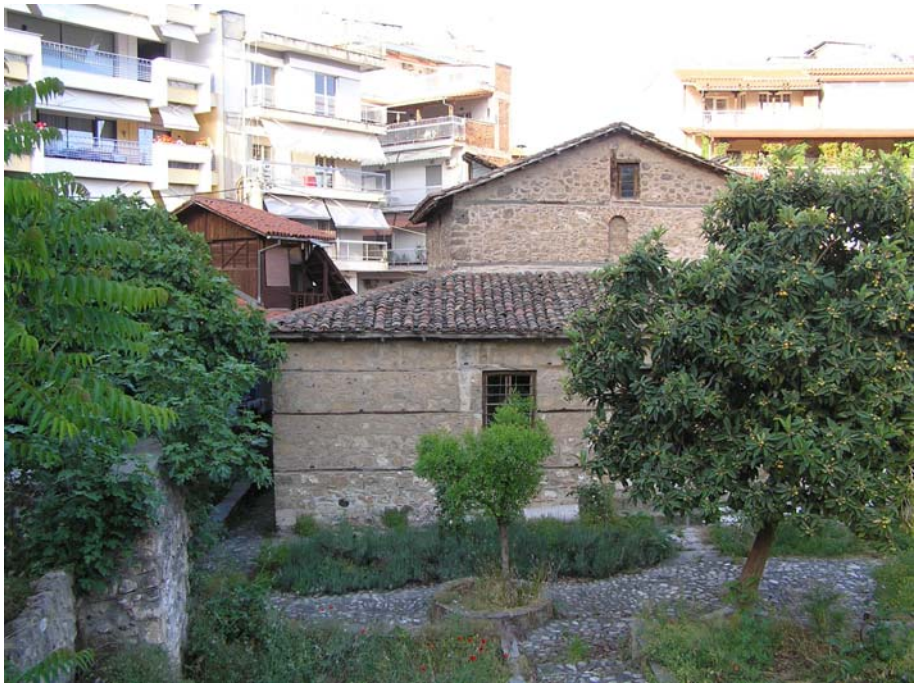
This meeting in Veria, dedicated to techniques, is the core of the project and will be the opportunity to remain the objectives of LINKS.
Our first challenge will be to gather knowledge, to showcase best practices within our network and to identify the best range of actions that can contribute to substantive energy savings and thermal comfort in historic buildings.

Qualities of the Low-tech and opportunities of high-tech will two lines of thought.
Our second challenge, may be the most difficult, will be to make this huge amount of knowledge available to the right people, at the right place and the right way, to develop concretely eco-restoration and to initiate a deep change in practices.

According to these 2 main challenges, we have tried to propose you a realistic and balanced programme for this meeting.

We initially thought that we could have the first day on the issue of "knowledge", the second one about the "transmission of knowledge" and the third one about the modalities of action within LINKS.
But this first proposal was too loaded and may be too ambitious, so we decided to focus 2 plain days on knowledge, with only a quick glance on the assessment tools.

We will finally split the technical program, which is really the main target of our project, in the following meetings, to concentrate now on the questions of Knowledge. For that, we have the chance to meet and exchange with leading experts, and I wish we will have a studious and fruitful seminar.



LINKS and the challenges for Veria *by Kleopatra Theologidou*

Why does Veria participate in LINKS program? Which is the added value and which are the benefits? Especially when the image and the size of its historic center are different, the architecture of the historic buildings is different and the problems both, of the historic center and the buildings are also mostly different from the other partner cities.
In Veria, we could say that there is not nowadays a distinct and coherent historic center. There are small parts, neighborhoods, maintaining their traditional character, which are scattered and disconnected. Here is the first challenge we face in the context of LINKS. Propose environmentally friendly interventions to restore the continuity, taking advantage of the knowledge and experience developed during our collaboration with our partners. There are different options. Could it be by:

- *Creating a network of pedestrian zones that will connect these areas?*
- *Creating green walks-routes with appropriate plantings?*
- *Creating water routes, in a symbolic way, inspired by the role the water played in the daily life of the citizens in the past and the strong relationship of the city to the water in general?*
- *Maybe by combining all above in a balanced relationship?*

And of course the main challenge is to address common problems, which appear almost in all historic centers, such as problems relevant to the car's circulation and the access to it, problems associated with safety, the quality of public space, and in general problems related to the quality of life of people living in it, so that we manage to transform it to an attractive place where everybody would like to live in.

A second key issue, which has already been dealt in our previous meeting in Almeria, is citizens and mainly resident's participation. It has been common problem as well as common belief among all partners that the active participation of residents and their consensus is a prerequisite for the effectiveness of any interventions and actions. In this context, we have already started a first attempt to discuss with residents in listed areas. Mr. Trohopoulos will present and analyze the first results of this contact, which we plan to continue and spread to a larger number of people with different characteristics, including citizens, potential residents or users of the historic center, in the aim to mobilize local forces. In this effort we'll use tools and experiences we gain through our cooperation and our participation in the LINKS project.

Coming to the main theme of the meeting in Veria, associated with the techniques, I will borrow some of the words Mrs Calvanus used previously: «...impossibility of evolution could also lead to a loss of cultural heritage and identity, loss of attractiveness and economic stagnancy". It is an issue that I think we all have experienced not only locally but nationally and which led, in conjunction with other factors, equally important, to the contemporary form of the historic centers in our country, the devastation of a large number of listed buildings and their poor state of preservation today, which involves extensive reconstruction and loss of authenticity.

To use knowledge and best practices that could result in recommendations and guidelines, which will ensure comfortable living conditions in the historic buildings and at the same time will protect and preserve their values, values that differ from building to building, is a challenge the results of which could have an important impact not only locally but in a wider geographic area with buildings of common characteristics to ours.

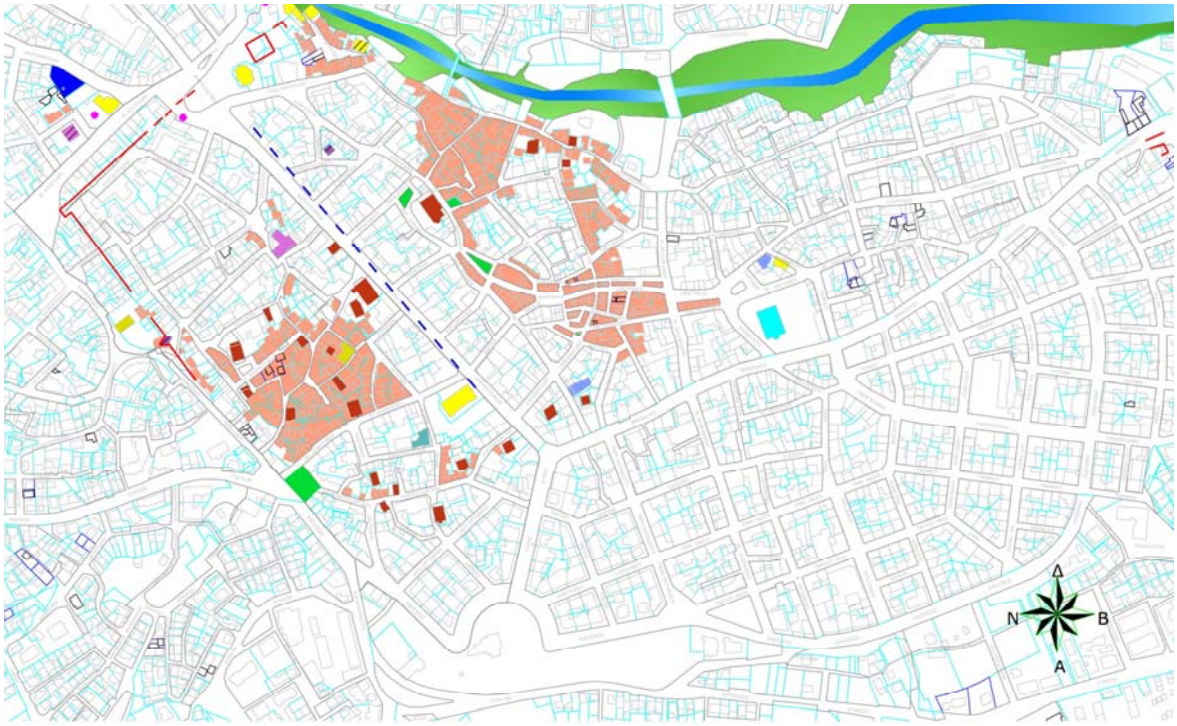


Figure 1. Map of the historic city centre of Veria and listed areas

Figure 2: Typical traditional house of the historic city centre

Which are very broadly these building characteristics and which is the situation today in Veria?
The historic buildings in Veria could be classified into 2 main categories:
The older ones which follow traditional patterns and the later influenced by different architectural styles at a European level. Of course, in between, there are many variations and transitional types.

The main characteristics of the first category are the introversion and the defensive form towards the public space, a form that changes dramatically towards the courtyard, where the scenery is quite different. Outdoor and semi-outdoor spaces and balconies are facing the courtyard, where the basic occupations of the family were taking place. The building materials are stone stonewalls of porous stone on the ground floor and mezzanine, reinforced with wooden belts, and timber frame construction on the upper floors. Quite limited number of windows on the ground floor, pierced by windows the higher floor. As a result, the energy behaviour of the building is different in the lower and the upper floors. How can we improve the energy behavior of such buildings with so many open spaces, is quite a challenge.

The current state of preservation of these buildings is mostly very poor. Most of these buildings have serious stability problems and therefore their restoration involves extensive reconstruction. On the other hand, this situation perhaps permits more interventions to improve the energy performance of these buildings.
In the second category of the buildings the layout of the openings is changing. They are decreased on the upper floors, and increased on the ground floor, thus creating a balance and symmetry to vertical and horizontal lines. The use of wood is reduced; the use of brick is increased and in some cases the use of iron as a building material. The horizontal plan has a closed contour, with quite a few balconies and is closer to modern standards of housing.

These buildings are clearly kept in better condition and in many cases do not have serious stability problems. It is clear that in these buildings the restoration approach is different, as well as their energy behavior and needs.

The knowledge we have about the energy performance of all these buildings, as described above, comes mostly from experience by living in them – the sense of comfort- and is not scientifically documented. We are planning to work on these issues in the context of LINKS, and promote relevant techniques respecting their character as historic buildings as well, to give solutions thus preserving what is left. To achieve this, we are also collaborating with two universities, the Aristotle's University of Thessaloniki and the University of Thessaly.

In purpose to be effective, we are in communication with the Ephory of Historic Buildings of Central Macedonia, responsible for the protection of historic buildings in Veria, to make sure that the techniques that will be proposed are acceptable and approved by them and therefore realistic and viable, thus also reducing the time needed for approvals.
The transmission of knowledge, one more important theme of LINKS, is one of the central issues of our own participation in the Program. Among other actions, we proposed, at the application submitted by Bayonne in 2009, as a pilot project, in the context of our participation, the creation of an Office for the information and support of citizens, an action for which the Association of Architects of Imathia showed particular interest for collaboration. In this direction, we agreed with our partners the first day of our meeting here to be an open session to enable local actors to attend it. We are also interested in actions that will mobilize the whole pyramid of the construction sector and also in dissemination tools, as mentioned by Frederique, which are themes to be included in LINKS program.

Figure 3: Groundfloor of the Sarafoglou Mansion house during a guided visit by school pupils.

Figure 4: Colourful restoration of a typical traditional building block in the historic city centre

Just a few decades ago, Veria had a completely different image with a completely different potential. Its image today varies and we could characterize it disappointing when referred to its architectural heritage. By participating to the LINKS program, we seek to produce an action plan for the eco-restoration of the historic center that will transform the problem into an asset, that will convert Veria to an exemplary city, a city of innovation, like some of our partners already have launched, in the context of the characteristics and the potential of their historic center. A city environmentally friendly, as well as friendly to its citizens, thus contributing to the improvement of the quality of life, local development and the revitalization of the local economy.

Figure 5: Well renovated building complex in the Jewish district in the historic city centre of Veria

LOOKING FOR BALANCE

The discovery of an integral approach

A report of the Workshop in VERIA;
Lecture by J. Roos, May 24 2011

Den Haag, June 22 2011

BRAAKSMA & ROOS
ARCHITECTENBUREAU BV

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1. Dies Natalis, TU Delft Zuidserre September 2008

1. Theoretical framework

Introduction

For me sustainability has to do with balance, in fact active balancing. I am not an expert on sustainability, I am a curious architect at TU-Delft Faculty of Architecture looking for interesting ways to search. Like the inspector: who committed the murder, by bits and pieces, to lay the complex puzzle. I am interested in use by people to be conversed in building, re-use even more for its complexity and the interesting time-layers of predecessors. A story of use meeting history, of growing interest in our time, of culture to be handled with care and understanding.

Thus I feel not an autonomous author, I feel like a co-author with time, and I feel also the responsibility to bring further what is or was valuable and may be even place it into new perspectives. Thus, make visible what was forgotten, use its potential with the means of today and tomorrow. To make this into a success is a complex task that asks for a lot of knowledge one person can never have: time for team-work to find the balance in design between past and future in a cultural-driven way.

But not only! It should also be a balance for eco and societal drivers. Because building is about our future and the challenges we meet today are huge. The complex balancing could be compared to a sensitive neurologic system which makes our body function: the result goes without saying. For a thorough re-use applied sciences are needed for an integral approach. Very recent we constituted a department (working title hyperBmit), which deals with *technology driven design*.

Technology should be explained in terms of underpinning the design task. I would prefer to definition of technology to: “the total of processes needed in knowledge and processes resulting in products and services for societal needs”. So we should leave the one-sided and hard technical side and choose for the approach in which both alpha en beta sciences processes are involved such as culture and ecology.

Ecology for me has to do with balance, now still often neglected in the design process often disturbed over the various scales, like for instance on the urban scale only where inner cities just remain as tourist’s focus. Ecology is the science that matters about the balance between living organisms (people) and their environment or the mutual relationship between biological and a-biological elements on different levels of scale. This is a pretty subtle and even a nice metaphor for architecture, if you add at least social and cultural aspects.

Main question: how can we be in control in the transformation processes, to weigh and balance the social, cultural and ecological needs What are the incentives and constraints, what are the opportunities? I did an attempt for a theoretical framework on methodology in my book ‘Discovering the Assignment’, which resulted in a model of thought. Looking for a firm methodology, this was the outcome. Particular open for debate and further research.

Case-study: The City of Delft and the building for The Faculty of Architecture

My story today is about the City of Delft and its transformation within in a timeframe of about 10 years. Three years have passed now. The focus is on the re-use on behalf of the Faculty of Architecture of a huge listed monument, caused by a major disaster: The destruction by fire overnight in 2008, of the previous modern building of The Faculty. The re-use handles about the scale of the monumental building but we will also have to go beyond its borders.
BK-City (the name of the new Faculty Building implemented in the existing building) fulfilled now in the past three years only partly the social needs and the eco-needs, and more over the cultural needs. Eco-needs and partly social needs still have to be implemented. This still is a big challenge to be met and asks for cunning, inspired and innovative/integral engineering.
It is a story about sustainability: re-using the existing building and the potential to anchor a whole community to the historical city (again). It concerns of course lots of facts and figures, but above all it concerns the process of looking for balance in the complex design task of re-use that is still going on today. (Photo 1)

5. The unique process

2. The Faculty of architecture on fire May 13 2008

3. The former Faculty of Architecture (Van de Broek en Bakema)

2. The Story of BK-CITY

History of the campus

There was a huge fire on the 13th of may 2008. A solid and huge modernistic building was destroyed within a couple of hours. We never thought that our building was even so vulnerable, that it could vanish into thin air so soon. (Photo 2) The impact of this emergency was the beginning of a different scope on the development of the TU-Delft campus.

The University and the Faculty of Architecture were originally located in historical buildings in the City centre of Delft.
At the beginning of the twentieth century the faculties of TU Delft already (also spread originally throughout the Historical City of Delft), were replaced in a new campus at the southern borders of the City center. Around 1950 the campus slowly moved further to the south, actually a total new modern campus was laid out in the 'polders'. The evacuation of the first and former campus near the City-Centre was concluded around 2005. One of the last buildings to be left was 'Red Chemistry', a large building with an urban pattern of about 30.000 square meters.

The new campus was of course a child of its time (CIAM/satellite-city), very conceptual like individual buildings on an 'empty screen'. There was great ambition at that time and the Faculty of Architecture was one of the last buildings at the far end of the campus. The architect Van de Broek en Bakema designed the building in 1968 for its purpose following the program for the school at that time. (Photo 3)

Through the years the population of students grew tremendously, and other needs evolved. New plans were designed to enlarge and refurbish the building. Also new recent plans for the campus were designed to 'compact' and change the identity of monoculture (originally only school-buildings) to multi culture mixed with other urban functions. This should result in a better social sustainability. The huge fire on 13th of may in the year 2008 ended those dreams radically, as far as the faculty of architecture was involved we thought at that time. The building could not be saved. If there had not been a fire, I can imagine that the building by the City of Delft would have been listed in the coming years as a piece of valuable heritage of modern times. Just as is happening to other buildings on the campus right now.

Within a few weeks after the fire, the board of the TU-Delft decided that the Faculty of Architecture should have a new temporary housing very soon. The solution was to use the still available building of 'Red Chemistry'. (Photo 4) In fact this building should be developed into individual houses, but the crisis that started later in the autumn of 2008 already casted its shadow in advance. The investor was willing to interfere in his development of the building, in fact I think it was the right moment for them.
This was the beginning of a development that now after three years still hasn't stopped. Not as far as the building is concerned but also: it doesn't stop at the scale of the building.
I will explain to you.

Context of the assignment

The context in which the assignment for the new housing of the Faculty of Architecture was developed, was quite interesting. *High speed* (original aim about a half year to design and build) was needed to have a building for at least 5 years. And, also a whole new generation of architects had to be trained. So you can understand there was a great *ambition* for the building being an outstanding example of architecture in the field re-use and inspiring environment for learning and working So the approach had to be professional.
And, from an emergency point of view there had to be a *pragmatic* approach: the best available building on short notice was 'Red Chemistry', a huge listed *monument* in the heart of the former campus. And not only listed as a building but also in its context together with other early 20th century University buildings. So a tremendous transformation had to be handled, there was a complex task to fulfill. How to handle? (Photo 5)
Already three weeks after the fire the building started, although there was no plan yet. At that moment the client (the board of the University and its representative the dean Wytze Patijn), organized a meeting with the most important stakeholders: this meant about thirty-five people around the table. Not less than 5 architects were involved!
This was the incentive beginning of a thrilling and unique process as we called "The making of BK-City. (Photo 6)
We can actually distinguish two stages in the project: one of them has been completed and met the needs of culture and to a certain extend also social needs.
The second stage is about the rest of social needs and mainly the ecological needs. This process just started.

6. The unique process

4. The Faculty of Red Chemistry

8. Birds eye BK-City

The history of 'Red Chemistry' and its broad value assessment

The building of 'Red Chemistry' was built in the twenties, at that time the largest University building in the Netherlands (30.000 m2). It was designed in an urban like pattern of nine wings and several court-yards by the state-architect van Drecht. (Photo 7) Built originally in the spatial typology of a chemical laboratory and with the rich application of red brick and natural stone, the nickname of 'Red Chemistry' was born . It never fulfilled its purpose. It was used in different ways and ended as an administrative building of the University. In 2005 the building was abandoned and plans were drawn to converse the building into an apartment building. So these plans were stopped for two reasons: world crisis an the urgent temporary need for housing for the Faculty of Architecture. It needs hardly any explanation that the plans for conversion into individual houses in a former original public building, would have taken a lot of effort and energy to execute. One can put question marks from a sustainable point of view anyhow.

But also for the design it was not an easy task. A thorough historical, technical and architectural analysis and broad (in)tangible value assessment on the diverse levels of scale and value aspects, were the basis and inspiration for the main interventions in the building. The knowledge that was gathered here, was a good contribution to very valuable conditions for the discoveries needed to design BK-City. In fact, without this knowledge of the balance between the existing and to a certain extend firm interventions, could not have been found that soon and successful.

The fact that the building has been listed as a monument, has its roots in its firm and sustainable appearance in the city and the careful design in an alteration of brick and natural stone with a keen interest in a mix of classical and Amsterdam School stylistic elements. The huge building is to a certain extend an interesting urban like pattern in the early twentieth century lay-out of the former campus. (Photo 8)

The development of the plan

Pragmatism, enthusiasm, inspiration, emergency-management, participation of many stakeholders, much knowledge and capability that could be applied, were the underpinning conditions for rather precise planning. The complexity and high speed of the execution, asked for a skillful team.

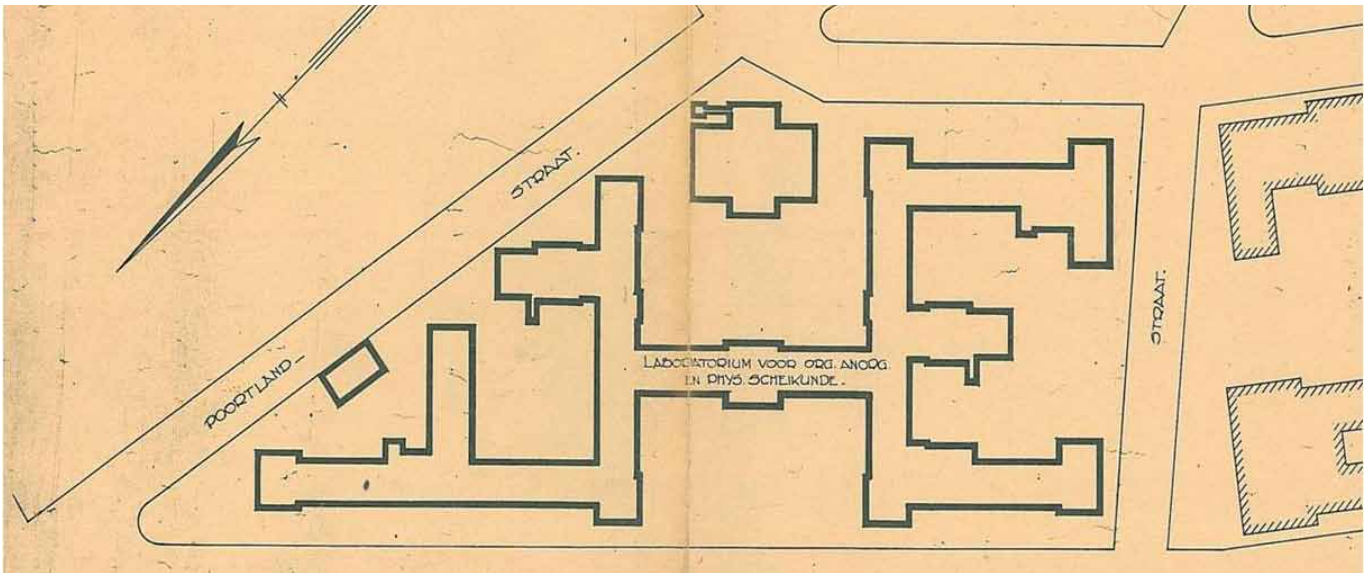
The choice that was made for five architects was maybe the most peculiar one. Many hands of course make the work lighter, but this was not the main reason. As we experienced, the intense workshops helped us to sharpen our starting points and concepts.

As a matter of fact the client organized its own criticism in an intellectual way, one might conclude after all. We went much further than aesthetics and conceptual sketches and theoretical debates and hobbyhorses riding. We were forced to deliver for our own community, we could not fail. So on one hand the experience of the new Faculty as a living organism was at stake, on the other we were aware we should take history very seriously. The integral approach was forced upon us and we liked it.

By May 2009 the new temporary Faculty Building was realized. About 35.000 m2 (biggest faculty building with 3000 students en around 1000 staff members) living/vivid University community was realized at the other end of the University Campus, close to the historical City of Delft

In December 2008 the results of a competition for a definite new faculty building between 450 architects, was exhibited and were announced. In fact three plans ended as the most successful: An 'icon' (sustainable and innovative)on the position of the former faculty building, a building as a linear connector 'all over the campus' (urban), and a continuation of BK-City. (re-use)

9. Front facade, *a very large classical Dutch building*



7. Situation Julianalaan, by Drecht

Do Battle

Because of the unorthodox process, the thinking about the re-use of the 'Red-Chemistry' building should be very contextual in the broadest sense of the word. Great concepts that were not focused on the integral approach, were doomed to fail. The difference in identity with the former modern faculty building was immense: a building that had been designed as a perfect architectural object on the campus, thirteen stories high, closely related to educational methods at that time and very much 'divided'.

'Red Chemistry' was different, but with about the same numbers in square meters just too small for its new function. The identity of the building is more related to an urban structure with open courtyards than a building. A vast surface in three stories, guileless in its urban lay-out because of unfortunate landownership in the twenties of the last century.

A very large classical Dutch building, (Photo 9) also influenced by Amsterdam School style elements. It was composed of red brick and natural stone building at that time, with low attention for an overall spatial quality in its lay-out: 1 kilometer of corridor for instance and because of the imperfect/ irregular shape of the building somewhat confusing for its visitors to orientate themselves. (Photo 10, 11)

In the understanding of the meaning of the lay-out of the building, as an historical 'urban structure', its historical imperfectness, its ability to facilitate a new community on a horizontal basis now and the notion of the new program, the discovery of the assignment could be done. 'All knowledge in advance' because of the former cultural historical value assessment was of great help. A master plan emerged which we called 'BK-CITY'.

In the terminology 'BK-CITY', the essence is revealed. The introduction of a new public infra-structure consisting of street(s) and glass-covered squares, the potential of the building could be used, enhanced and intertwined in a self evident manner. (Photo 12) This public structure had always been the missing link, and now the somewhat dull and uninspired building could reveal its hidden beauty. The BK-community meets each other on a regular basis in this vital urban and connecting structure. The social-cultural change towards the former modern housing of the Faculty of Architecture is obvious.

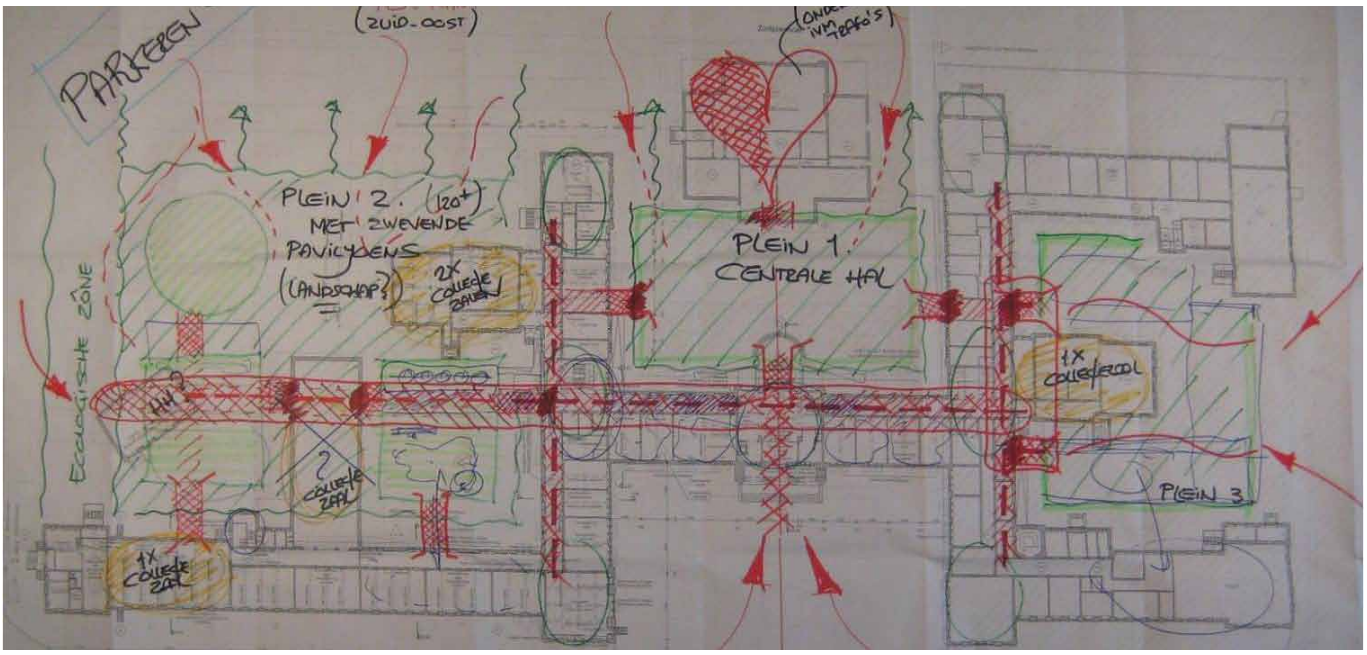
Imperfection as resource for inspiration

The 5 architects that worked on the design of 'BK-City', made use of the 'knowledge in advance': they used it as a guideline; they also enhanced the new 'urban structure' of the building, as this was the main 'discovery of the assignment.

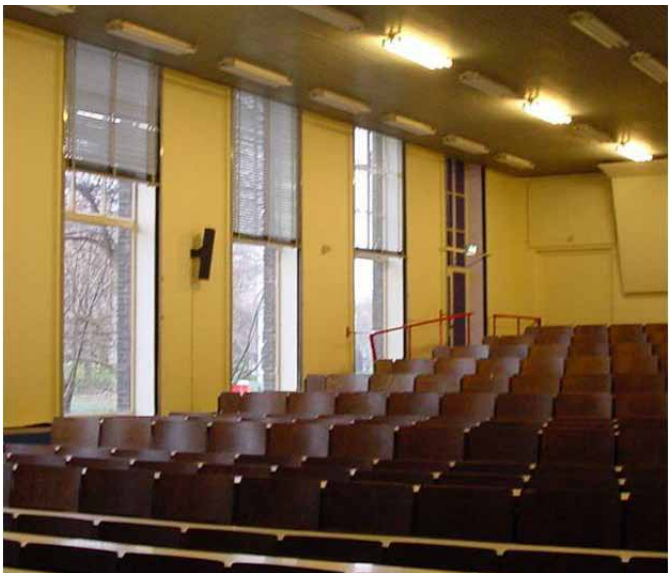
The effect of several architects designing upon the same building was amazing. The existing and eclectic Dutch classical building was actually rather boring than thrilling from an experience point of view. The master plan facilitated a different perspective on the building-structure: a world of different places, colors and atmospheres could be developed within the firm structure of the master plan.

The five different architects (from very conceptual tot contextual) designed a coherent plan. There was a sharp debate and the interventions and refurbishment were all done within the context of the value assessment and the assignment. The original 'DNA' of the building was an important starting point.
Facilitated and inspired by the work that was executed by the builders almost at the same time we made the designs, the important theme of imperfection became a leading motive.
Taking out all artificial ceilings for instance and adjusting the technical structure with spatial new passages, the building emerged on one hand as a strong sustainable structure, on the other one could feel the imperfection seeing the building 'naked'.
One could experience the strong structure for instance already in the 'skin', the elevations, designed in a thorough balanced application of brick and the firm use of natural stone. The application of natural stone in the elevations itself can be observed in varieties of articulation of the architecture (window frames, lintels and cornices in Weibener and Etttringer tuff)), the decoration (for instance the ceramic moldings for ventilation) and the plinth of the building in pink granite.

The imperfection now could be sensed in reading the building's interior in its structural outfits without almost any upholstery. (Photo 13) Actually at the start of the refurbishment we left the building from a pragmatic point of view 'unfinished', we didn't spend energy on it. Together with all the new visible infrastructure of technical installations, the reinterpretation of the original idea of a Laboratory Building emerged in a strong informal atmosphere. (Photo 14,15) In the end we hardly did upholster the building. Together with the very precise influence of the 5 architects, this resulted in something different than the original building and at the same time we remained very close to its original identity.



12. Draft Concept of 'the Street'



10. Lecture room

11. Hall

13. Redevelopment of het Ketelhuis as restaurant

(Photo 16, 17) In many ways the building can be experienced as an 'education permanent'; students can 'read' the structure, the history and at the same time sense every day the meaning of the intervention that could gain quality from a process that facilitated an integral and multidisciplinary approach.
Is this a Dutch approach? To some extend yes, it is hard for us to answer. We experienced the making of BK-CITY (also driven by the emergency and high speed), as something refreshing and an opening to new ways of thinking of connecting the future to the past.

BK-City Slim (Photo 18)

Already before the community of the Faculty of Architecture started to use the building, there was the idea of making the building the permanent housing for the Faculty. Of course much money was spent (almost 60 million euro's), but particularly the very special atmosphere in the building was very attractive to its new 'owners', students and staff.

The former iconic competition for a new building was still there but no longer of importance. In fact this building had become the icon, an 'icon of re-use', and from a social point of view very topical; because re-use undergoes a firm stimulus by Dutch Government today.

Peculiar detail that at the same time this Government, who funded originally 25 million euro's for an architectural icon for a new building, withdrew this offer. Since no longer this icon was purchased. The acknowledgement that re-use also is a complex and topical architectural skill, that still has to be gained here, is more or less shocking.

May be the fact that wow in 2011 two serious prices were awarded to BK-CITY may help: the Europa-Nostra price in the field of conservation and the nomination for Dutch Renovation Award, both in June 2011.

As was stated before: in the process of the making of BK-CITY not all needs could be fulfilled within the severe constraints in time. Especially ecological needs and partly social needed do still have to be gained.

The first motives were pragmatic:
- Measures for energy reduction (CO2- neutral)
- Combination of these measures with the necessary maintenance
- To implement a better and sustainable use of the building
  (Still small extensions needed)

But of course inspired by the success of BK-CITY, there should be more ambition. As a Faculty of Architecture (education and research institute) we should use and enlarge our own knowledge here, make the building an example/landmark and icon for sustainability. Not just the energy-aspects but more-over the broad perception of sustainability, the innovative and inspired engineering should be enhanced and implemented.

But there is also some jeopardizing this ambitious project, caused by a financial crisis at Dutch Universities. Budgets for the coming years haven been reduced dramatically, and we know that for the real ecological plans economical payback on short is not the most important feature. It did not stop us until now to proceed on the project. The first step was a competition for thorough integral designing: a competition was organized

New competition

A committee was formed to meet the challenge of the ambition of BK-CITY SLIM.
There was keen preparation for a competition between spans of architects and climate-experts. Since the building of BK-CITY had been transformed successfully in an unorthodox process, it was decided that the brief for the competition of a sustainable building should not be primarily the work of architects alone. The scope should be again the multi disciplinary approach with the focus on Climate. Actually the engineering we required for BK-CITY SLIM and the safe-guarding the architectural features of BK-CITY, should be complementary. The exact assignment was called *E-Innovation*: on the long term the building should be independent of fossil energy resources.

Challenges to be met were :
- Ecological aspects (life-cycles of material and water)
- Social aspects
- Economical aspects

16. Zuidserre

14. Streetview east

15. Streetview west

The project team of BK-CITY SLIM selected four spans of architects and climate-experts. They were asked to develop a concept/a real vision on E-innovation that could also be executed in several steps in time. The complex task was underpinned by a lot of relevant information. Not the least was a new value assessment of the building after the realization of BK-City.

Four spans of designers were selected, that to the opinion of the jury, were fit to fulfill this ambitious assignment. Next step was to formulate the criteria for the selection the best plans:
- Spatial quality
- The architectural features of E-innovation
  (also from an educational point of view)
- Treating the heritage after the interventions of BK-City
- The (realistic) vision on E-innovation

The products of the design teams were judged by a jury of experts in December 2010. The result was moreover a 'container of very interesting and pragmatic ideas'; a realistic plan could not be chosen and implemented. The complex task could not be fulfilled, partly because the integral approach and expected attitude/relationship between architects and climate experts did not happen to a satisfying extent. In fact the architectural ideas were not in line with the informal atmosphere of BK-CITY and had no relationship with proposals done by the Climate experts.

Outcomes of the competition , possible measures.

After balancing the results, the competition resulted in a number of possible several projects/measurements. Integration still has to be engineered. This will be the next challenging step that we are about to begin. I will summarize the most important outcomes of the competition:
1. Reduction of electricity (lighting) by better a control system
2. Insulation of the brick facades and slate/wooden roofs
3. Insulations of the windows
4. No use of the attic
5. Glasshouse on the West side of the building

Further research was recommended:
6. Natural ventilation and the new concept of the *Breathing Window*
7. The application of photo voltaic cells.
8. The resources of energy: low temperature heating towards a comfortable building
9. Further research for sustainability of University Plant
10. Integration of all possible measures into a thorough concept
One of the competing architects (except) had a thrilling and abstract concept that from an ecological point of view was quite interesting. Concrete implementation however could not be done.
And now there's a big challenge for the project tot think and act and reckon differently
just like in the emergency driven BK-CITY project. And to make the challenging link between context and concept.

17. Oostserre

18. BK-City SLIM

3. Reflection

First of all with all the recent effort that has been undertaken in favor of BK-CITY SLIM, *there is a real longing for good technology* for making buildings SMART, and that could help us solve the problems of balanced ecological design. However, despite all new innovative development we are still on our way. Perhaps in a decade or two we will have possibilities we only can dream of now. For instance the use of sun power in photovoltaic cells will improve drastically in about five years. So what more is there to come, we are curious about.

We really are in a dilemma to find a good balance between cultural, ecological, social and economical needs. BK-CITY SLIM we want to be an outstanding example, so we should use all the possible knowledge and skills we can obtain a good balancing in the building. But we know a part of the solution is still in the future ahead of us. As Faculty of Architecture we really should make our building the subject of constant research. We should enhance the complexity which is connected to the subject and invest in it. Despite all the questions of quick wins we should persist in meaningful research.

Secondly the successful project of *BK-CITY is a model for a new way of thinking,* a different attitude for architects. It is about the relation between history, present and future, to link them to the design-task. And it is not primarily all about the architectural design as an autonomous skill, it is about arguments that contribute to the story of needed conversion. Not a story of absolute truth, but a story that facilitates to discover the assignment where the architect should be an important team player. It is remarkable that the ambitious BK-community that trains new generations of architects, feels at home in the building.
I would like to stress again the future scope of *(broad) technology driven design,* as a solid footing the design task. Looking for balance between historical/cultural, ecological, social and economical aspects in an integral and innovative approach should be re-installed.

Third observation is the effect of the re-use of 'Red Chemistry' beyond the scale of the building. After the discovery of the great potential of permanent re-use, things started to be different now. The epical heart of the Campus shifted toward the north side, the interrelation with the heart of the historical City of Delft was reestablished. The success of re-use may result that the Campus of TU-Delft will now longer be the footprint of the modern campus that was designed in the fifties. Other former University buildings may be of interest again. Together with new functions, the urban footprint of both old and new campus will be more social and cultural sustainable. This is beyond expectation.

It is interesting that caused by the emergency, something not planned but rather guileless, these conversions do happen. Like in landscape architecture, not everything foreseen and unplanned, aware of a context that goes beyond design.

I want to conclude with the challenges to be met in the project of BK-CITY SLIM. It is very interesting that in November 2010 Michael Kouli Prodromou finished his master study at the Faculty of Architecture with the subject: "The sustainable refurbishment of BK-City. These were his main conclusions and recommendations:

- The existing building is extremely wasteful, huge possibilities lie in its refurbishment
- Simple measures might result in cost-effective solutions
- Interrelated measures could be much more effective
- A careful design is needed to balance the different interests
- An energy-neutral building is impossible with current available technology
- More data is needed for life-cycles of applied materials
- BK-City provides already wonderful opportunities for sustainable energy applications, such as the empty attic space, the water tower, the flat parts of the roof, ventilation through the decorative nature stone façade elements originally used for that purpose.
- Ways to involve the users, make them aware of energy consumption in the building. The 'education permanence', trying to lower our personal carbon footprint by behavior.

Last but not least and I fully quote Michael here:
'How the refurbishment project of BK-City can become the cornerstone of a broader Governmental, Municipal or University refurbishment program *could be investigated. For example, a refurbishment scheme that involves other TU-Delft Faculties or even the entire City of Delft. This will, moreover, make the claims for subsidies and financial support stronger. That leaves us with a dilemma, or rather an assignment for future. The need to reduce costs in quick steps and the ambition for constant search for better resources, by means of improved and innovative technology. We should as Institute of Knowledge empowered by the needs of society do both. It is our main responsibility.'*

Job Roos

Den Haag, May 24 2011

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"Methodological introduction for the analysis of historical building needs in their context" *by Antonio Borghi*

Our cities and our buildings never remain the same. The very fact that their context is changing changes the buildings and their meaning as well. In a sense conservation of heritage and sustainable development are two faces of the same coin.
We have to look after historic buildings and urban fabrics like we have to do for natural resources: not only for ourselves but for those who come after us. Built heritage and historical urban fabrics are one of the most important assets of our cultural heritage, they are our cultural footprint on heart. The way we treat natural resources determines our environmental footprint and the most important natural resources are the air we breath, the water we drink, the land that feeds us and our identity.

Some of the buildings we have to look after have been built generations before us, others for just some decades, but in any case it is our responsibility to hand them on in good condition to allow future generations to enjoy them too. In order to do so it is not enough to have the necessary budget, the power to determine restoration works and sufficient knowledge about technical means.

Much more it is necessary the sensitiveness to listen to existing buildings, to understand how they have been built in terms of materials, design and for which purposes.

Having this respectful and thoughtful approach, the outcome of the restoration project can be very different: (1) keeping the building as much as possible as it is, with its damages witness of the times (Neues Museum in Berlin, Palais de Tokyo in Paris); (2) bringing it back to its original status (Teatro La Fenice in Venezia, Frauenkirche in Dresda); (3) or even transforming the existing building or urban fabric into something radically different (Opera House in Lyon, Grazer Kunsthaus).

Figure 1. Neues Museum in Berlin (Friedrich August Stüler 1851, David Chipperfield 2009)

Figure 2: Palais de Tokyo in Paris (Dondel, Aubert, Viard and Dastugue, 1937, Lacaton & Vassal, 2001)

Figure 3: Frauenkirche in Dresda during DDR times 1945-1990

Figure 4: La Fenice di Venezia (2003)

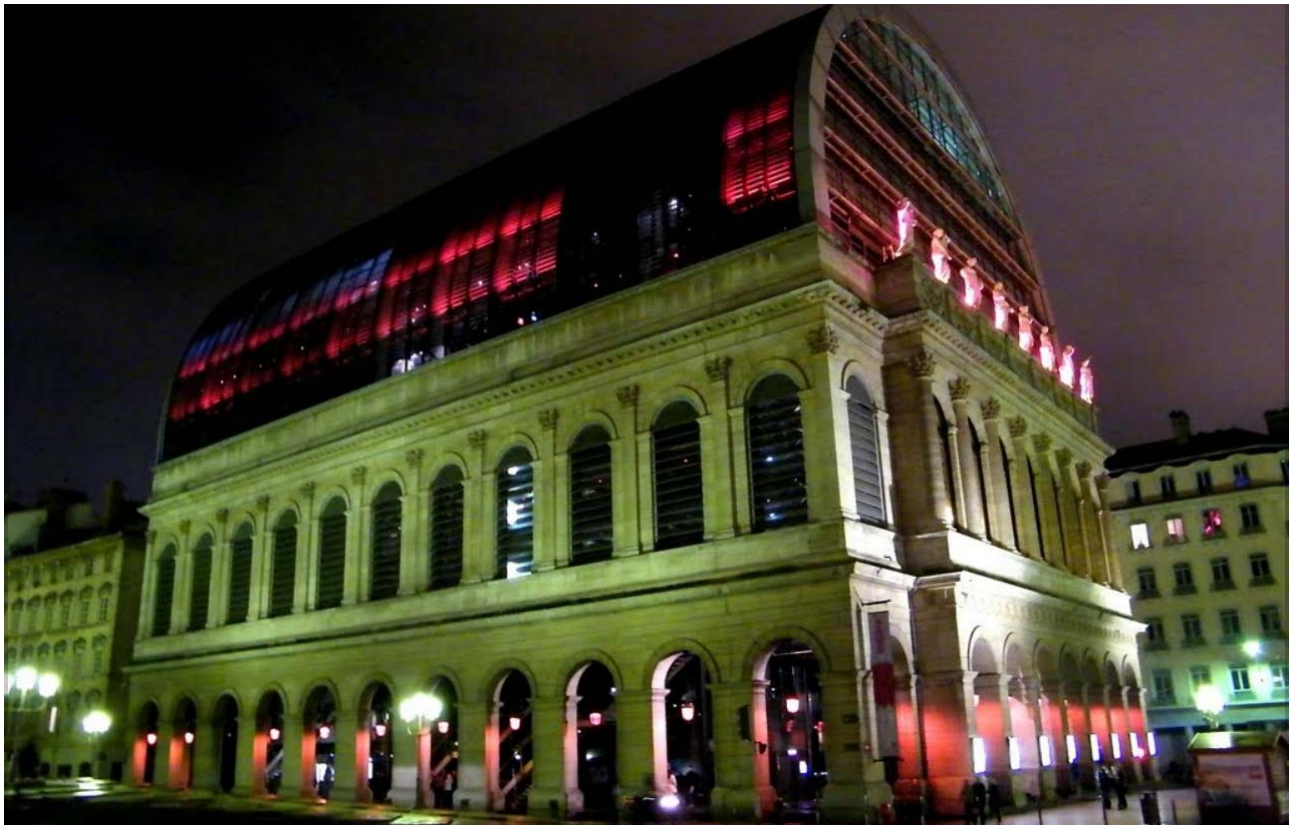

Figure 5: Operahouse in Lyon (1831-1993)

Figure 6: Grazer Kunstahaus (2003)

The example show that thoughtful design can have quite different outcomes, depending on the local context, the brief, the budget and the relationship with the citizens of an existing building. Of course these examples are quite radical in their attitude and have a strong symbolic value for the city and they community they are embedded. Dealing with "ordinary" buildings, budgets and functions the range of choices won't be that wide, nevertheless in any restoration project there are always choices to be taken and it is never true that there is one good way to proceed.
Once you have really understood the building you can establish a fruitful relationship with it and with the community to which it belongs. Having done that you can decide the new shape and meaning of the building after restoration in complete autonomy, as we have seen in the previous examples.
So that the works you undertake do not damage the special qualities of a historic building, it is important to understand the basic principles of building conservation. Many of these are common-sense and all are based on an understanding of how old buildings work and how, with sensitive treatment, they can remain alive in a changing world.
Before we start thinking about the restoration project, we have to learn as much as possible about the building. What is its history? How has it changed over time? Later alterations or even damages may be important too and evidence that the building has had hard times, it has been cared for and adapted over the years with each generation adding its own layer.
According to a recent study[1] published by the "Environment, Heritage and Local Government" Agency of the Irish Government, steps to be taken by the owner/responsible of the building can be listed as follows:

a. *Do understand and double-check the reasons for the problems to be solved before undertaking any kind of repairs.*

[1] "Energy efficiency in traditional buildings" advice series, ©Government of Ireland 2010

b. *Do repair the parts of the building that need it - do not replace them unless they can no longer do the job they were designed to do.*
c. *Do make sure the right materials and repair techniques are used and that even the smallest changes you make to the building are done well.*
d. *Do use techniques that can be easily reversed or undone. This allows for any unforeseen problems to be corrected in future without damage to the special qualities of the building.*
e. *Do record all repair works for the benefit of future owners.*
f. *Do use experts technicians and skilled workers - get independent advice from the right people and double-check the references - you can't go wrong!*

Common mistakes to be avoided by the owner/responsible of the building are:

a. *Do not exaggerate - only do as much work to the building as is necessary and as little as possible*
b. *Do not look at problems in isolation - consider them in the context of the building as a whole.*
c. *Do not use architectural elements or materials from elsewhere unless you are certain that the taking of the materials hasn't caused the destruction of other buildings or been the result of theft.*

Architects, engineers and technicians involved should:

1) *Consider the micro-climate and respond as appropriate: take advantage of the sun, create protection from the wind and keep buildings well-maintained and dry.*
2) *Ensure the nature of use is suitable for the building as a whole or for particular rooms within a building. In some cases, it may be appropriate to re-arrange the locations of activities within a building.*
3) *Control the impact of the renovation works: make clear what's new and be sure that it fits to the existing building or hide it in a clever way.*
4) *Evaluate the energy requirement in the context of embodied energy and life cycle costs.*
5) *Understand why and where heat is lost. Recognise energy-efficient design features in traditional buildings and endeavour to retain and improve these features.*

The distribution of responsibilities between the owner on one side and architect on the other is made only for clarification purposes. As Kleopatra Theologidou noted when reading the first draft of this presentation, in reality these responsibilities are shared and, depending form cultural and professional context, they can be found on one side or on the other. As a matter of fact there are many more actors coming into play: first of all the public administration with bureaucratic burden and restrictions, the building companies with their profit orientation. But this complexity shall never become an excuse for bad results. Remaining with the two main actors, owner and architect, the circular relationship between them is well represented by the French term "le maitre d'ouvrage" who is supposed to be the owner or responsible for a building, but at the same time it can be literally translated (in German) as the der Baumeister that is to say the Architect.

The principle of minimal intervention should apply when undertaking works to upgrade the energy efficiency of a historic building. Retain and repair the existing fabric of the building rather than replace it.

"Planning energy efficiency improvement for existing buildings should be made according to a priority list, where the simplest measures with the lowest consequences should be implemented

first." (Terje Nypan)

Prioritise the order in which building elements are to be upgraded, taking into consideration both the character of the historic fabric and the upgrading works which will provide the greatest energy savings when compared to the investment costs.

In general, for a traditional building, the priority order will be as follows:

1. *Draught proofing of existing windows and doors*
2. *Repair of shutters and fitting of curtains*
3. *Installation of one more layer of windows inside or outside (instead of replacing the existing windows)*
4. *Insulation between heated space and cold loft*
5. *Insulation between heated space and cold basement.*
6. *Replacement of outdated services with high efficiency units and updated controls*
7. *Wall insulation*

Follow the principles of passive design when making any modifications. If constructing an extension to an existing building, take full advantage of passive design using this new addition to incorporate elements such as micro-renewables, which can serve both the new and old parts of the building.

Figure 7: Frauenkirche in Dresda rebuilt in 1996

"What do the citizens think about the historic centre of Veria?"

by Troxopoulos Dimitrios

I will present to you the research project we are carrying on within the URBACT LINKS Network. We will manly focus on people and particularly their daily lives rather than focus on buildings only and their characteristics. I will present to you the results-conclusions of a team work related to the thoughts of the few residents who reside in the old historical parts of the city of Veria.

People and Buildings

I would like to present to you a few comments which describe:

- *The anthropogeography of the residents and*
- *The relation between the residents and the buildings where they live, in the particular areas, along with a quick look to the changes to the plans of the buildings in relation to people with or without their presence.*

A. Anthropography

To begin with, we saw a small sample of people-residents, an amount enough to lead us to certain conclusions-images.

Begin with: Aa- The research incentive (URBACT)-2010
Ab- To a first conclusion from this meeting today
Ac- and to a further second phase with the expansion of the sample that we examine and the extraction of certain conclusions-instruments that would help the creation of measurements-rules and interference to the way of living and more ecological approach on the way of living in the particular areas, always along with the context of URBACT program.

Categories of people-tenants of those areas.

- *Permanent resident who include the majority with common characteristics, the owner's relation to the residence.*
- *Resident-Tenant} Greek (not often), foreigners (more often).*
- *Professional use*
- *Abandoned, empty buildings-relics- buildings with no people to reside them.*

B. Common Characteristics of the Permanent Resident along with their Buildings.

With research elements: the age-the family situation- the financial situation-the residential situation. Our findings:

- *Elder People*
- *Usually living alone*
- *Residential relation: from inheritance*
- *Sentimental relation*
- *The always lived here or they came back to the houses that they grew up.*
- *The financial situation (very few expenses because of the individual use of their property instead of spending on rent and as a result they save money fact that is very useful today because of the financial crisis in Greece. Unfortunately they are mainly people who receive low pensions and others who are without insurances because they don't work.*

Figure 1: Dilapidated building in the city center of Veria

Figure 2: Old house abandoned in the city centre, with new development on the background

C. Common Characteristics owner-tenant (Greek- foreigners).
With the same elements that where used above:

- *Young people and young couples-families.*
- *Family atmosphere or flat mates and friends living together.*
- *Low rent, very low expenses and low bills etc.*

D. Common Characteristics of People that have Professional Purposes in the Area.
They operate exclusively by establishing entertainment sites, such as bars, clubs, cafes; restaurants and usually they operate only from 6 to 10 months the most, so the area is partly revived during the year. Those places redecorate the mansions on the inside every year in order to attract young people and as result most of them loose their original looks. The biggest problem they face is the neighbors of the area who complaint about the high volume of the music and the gathered crowds on the streets.

E. Empty Manors-Buildings.
Abandoned buildings-relics with no care abandoned through time. Empty Relics.

I think that it is important to observe this matter in a more modern approach and character- always expressed as a personal opinion:
So I believe that simply the maintenance of a civilization over time, except its spirituality, is also dependant to a degree to the materials that where used over time and their originality. To be more specific the originality of the materials has to be kept and preserved through time.

The preservation of building expression if a civilization is also dependant to the financial situation of the people who reside in the area, in this case we observe:

- *Restoration-preservation in a period of financial prosperity or*
- *Abandonment and decay and distraction in periods of financial crisis.*

At these times buildings become

- *haunts of drug addicts and homeless people*
- *or they become unsafe because of their decay, materials may be falling down etc.*

1. Relation between Resident and Building.
Common Findings of all residents ***Negative Elements.***

In general: *The need of more human presence, more lively hood and vitality from young people and young families in the area.*

In the Residence:

- *Better quality in their houses*
- *Heating-Hot Water*
- *Ventilation-Cooling especially during summer time where it's very hard to live in stone houses with small windows, it is generally very warm.*
- *Insulation techniques (double glazed windows-thermal roof loads during summer time)*
- *Construction of bathrooms inside the houses and generally more quality inside the house.*

Figure 3: Beautiful old house in need of restoration

Outside the House: *Better conditions of living in the common grounds- public roads- small squares.*

- *Better quality of the road works (ruined paved road) their current situation creates problems especially to older people who can't walk on the destroyed part of the road.*
- *Road lighting- currently it feels unsafe while walking in the dark alleys.*
- *Effective management of rainwater.*
- *More often garbage collection.*
- *Lack of cleanliness of public spaces.*
- *No easy access:* *A. Ambulance*
  B. Fire Brigade
- *More often police patrol system in order to be a safer area.*
- *Fix the problems on the outside of the buildings because currently there is danger of falling materials.*

2. Common Findings of Residents.

- *Area with low rent.*
- *Quite secluded area and yet very close to city centre.*
- *About 50m from all amenities of the centre such as shopping centers, markets, schools, educational centers and all kinds of entertainment.*
- *Low cost bills.*

What do residents of the area ask?

- *More livelihoods in the area.*
- *Children to be able to play around the area.*
- *Young families to revive the area.*

Incentives of the revival of the area, of course with the cooperation of the public sector and residents.

- *There are very few people that help nowadays and most planned works of the area have been postponed due to the crisis, the national bank has given mortgages of 100.000euros to every resident of the area with flexible terms and with only 10 years commitment to the bank- with a form of a rent.*
- *Suggestions from residents with a "little" help from our side in order for the presentation to be more scientific and precise.*

A. From the state and Prefecture side.	*1) Bureau of information and historical centre.* *2) Technical support of ECO-RESTORATION.* *3) Simpler procedures and operations in order to issue license for changes on buildings.*
B. Prefecture of Veroia.	*1) Care and interest for the common grounds of the area.* *2) infrastructure-drainage-water supply-*

	control rain water. *3) Systematic and efficient cleaning if the area.* *4) Efficient lighting.* *5) Measurements in case of fire and health support.*
C. Bank and Government.	*1) To administer financial incentives from the Greek public sector and participation to the mortgage funding.* *2)*

Taking in to account: Old inhabitants (older people) - young couples- old residents that wish to come back and stay permanently and those who wish to invest in the area.

Figure 4: Various types of buildings along a street in the city centre

New-Old residents:

The public sector and prefecture organize mini informational meetings in order to manage consensus and support for the neighborhood.
Also widen their knowledge and experience about the historical centre and the particular area that they reside.

Plus in these meetings the residents will know the future plans of the prefecture and public sector for the area and they'll know their rights concerning the mortgages that they can purchase from the banks and the flexible terms that these loans will have. Plus all their rights about the sound problem of the area, the cleaning of common ground, the drainage etc. And finally projection of the final realistic view that will occur after those interventions so as:

- *To create tempting presuppositions for young people and others who are interested to revitalize those areas.*
- *To keep older people satisfied and safe and with both the above and their cooperation the area will be vital again and full of life as long as immediate actions are to be taken into account and the government, public sector, prefecture and people cooperate and succeed to revive this old amazing areas that have declined.*

Figure 5: View over the periphery of Veria

Afternoon public session

The afternoon session was dedicated to technical aspects of restoration and energy upgrading of historical buildings and was introduced by the presentation by ***Prof. Ioanna Papayianni*** (University of Thessaloniki) about "The pathology of the historic structures in Veria in the context of a holistic approach for eco-restoration and our work programme within the frame of LINKS". ***Katerina Drakou*** candidate PhD and prof. ***Aris Tsangrassoulis*** from the School of Architecture of the University of Thessaly introduced the interim results of an investigation about comfort characteristics of historical buildings in the centre of Veria.
Arch. **Pouria Shoeibi** from Anderlecht introduced the case study «Ecole Vétérinaires in Anderlecht" under the specific point of view of technical and design solutions to improve its energy Performance.
Presentations were followed by feedback from guest experts Prof. Job Roos, Prof. I. Papayianni and Prof A. Tsangrasoulis on the thematic approach and content of presentations of the first day. The participants to the workshop undertook a short discussion about the topics of the first day.

Traditional building built on the city walls in the historic centre of Veria

"The pathology of the historic structures in Veria in the context of a holistic approach, for eco-restoration and our work programme within the frame of LINKS"

by prof. Ioanna Papayianni

Professor AUTH, Director of Lab. of Building Materials, Dept. of Civil Engineering, Aristotle University of Thessaloniki, e-mail: papayian@civil.auth.gr

1. Introduction

Veria is one of the most important Historic centers in the South Eastern Europe. Apart from Byzantine churches, the old buildings (private or public houses) have been constructed from the pre-industrial revolution period up to the early decades of the 20th century. They constitute a great part of its cultural heritage which testify the historic and socio-economic background of the area. The historic buildings of Veria could be categorized (according to their style) into these of vernacular architecture, which have been developed in the recent past in South East Europe and in those of neo classicism or eclectic architecture (Fig. 1).

Fig. 1. Typical old structures in Veria

Most of historic buildings have been abandoned and destroyed by overloading and earthquake vibrations, as well as by the ageing effects due to moisture and other deterioration factors of the environmental conditions. Some of them have been repaired and retrofitted with concrete, very often without any respect to their characteristics of traditional structures.

The importance of the proper repair and maintenance, as well as their revival and incorporation into the modern city, for the benefit of historic buildings, society and local economy has been well *defined in the frame of URBACT project.*

Therefore, developing a strategy for the repair, maintenance and upgrading of historic buildings, which will be based on the well established principles of restoration is of first priority, for their incorporation into the contemporary plan of the city (Veria). Furthermore, an estimation of their energy efficiency is required to make them habitable again. As known [1], the old buildings are inherently green, because they were designed to be climatically appropriate. However, climate has changed, especially in urban regions and energy efficiency of an old building is questionable.

2. Pathology of historic buildings

The survey reveals that they often suffer from (Fig. 2):

-Intensive cracking because of their inadequacy to overloading or earthquake vibrations.

-Bulking damages or detachments of external or internal walls from the roof level.

- Inadequacy of horizontal wooden frames by which the walls are connected.

It should be mentioned that moisture is the main deterioration factor in particular for earth buildings. Wet-dry cycling results in swelling and pulverization of earth blocks or renders.

Fig. 2 Common damages of old structures in Veria

3. The diagnosis of the pathology of an old building

To record the pathology, the following steps should be followed:
Visit the building and make a survey of the pathology symptoms by taking photos, making visual observations and non destructive measurements. It's very useful to fill a specific card with which a data base will be fed.
Pieces of information taken from survey:
- Recognition of the bearing skeleton and description of the structural system of the building
- Problematic areas which need urgent support
- Main damages and problems of neighbor areas
- Draft estimation of the sources of the problem
- Description of the original materials and materials used in previous repairs

4. The analysis of materials

For repairing with compatible materials it is necessary to [2]:
- Sampling materials following specific instructions (Fig. 3)
- Analyzing materials and making measurements of their mechanical characteristics in order to find their compositions and their residual mechanical characteristics
- Estimating the strength capacity of the structural elements. Sometimes, measurements concerning the ground stability may be necessary
- Selecting the suitable software and feeding with the existing strength characteristics
- Analyzing the building to find the static stability of it, taking into account the defined (in the relevant Code) seismic coefficient of the area

Fig. 3 Taking samples from an old building in Veria

5. Repair of old buildings

Apart from the existing materials other parameters also play role in repairing:
- Decide about retrofitting of the building taking into account the reuse of it
- Recording the pathology on the designs and give priority to necessary intervention works (Fig. 4)
- Select repair material for a compatible intervention based on the characteristics of the existing structural materials.
The selection, design and application of repair materials for the intervention on historic buildings are still a problem, because:
- Traditional Materials are not easily found at the market
- Contractors and technicians are not familiar with these materials
- There are no regulations
- Testing these materials is also difficult

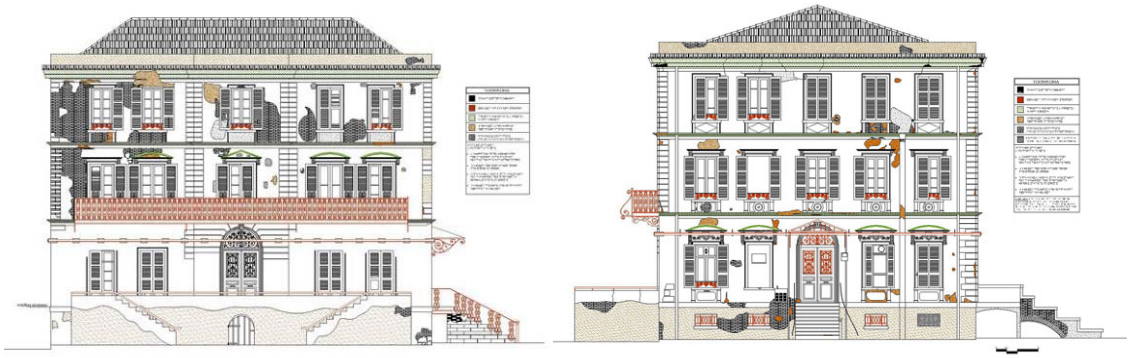

Fig. 4 Indicative map of pathology of a historic building in Thessaloniki

6. Pathology of Historic Buildings in eclectic architecture

The structural system is consisted of (Fig. 5-6):
- Foundation: stone masonry
- Basement: stone masonry with or without renderings.
- Masonry mortar: lime based mortar
- Floors: A frame of wooden or metallic beams with ceramic or wooden material.
- Walls: Fired brick masonry with lime based mortars compact or hollowed bricks.
- Roof: Usually wooden net covered with tiles.
They are characterized by their thick renderings and decorative elements made with mortars of specific technology.

Fig. 5 Details of old structures in Veria

Fig. 6 Structural members of old building in Veria

The most common damages are:

- Settlements of foundations and cracks of the upper structure (Fig. 7)
- Transverse cracks at the corners of openings in the masonry walls due to inadequacy to previous loads
- Damages of the floors due to the deterioration of the wooden beams, so as they do not work like a diaphragm
- Detachments of the corners of the masonry due to many reasons such as corrosion of metal beams (Fig. 8)
- Detachments of renderings and plasters

Fig. 7 Damages of external walls of an eclectic old house in Veria

Fig. 8 Detachments in old building due to corrosion of metallic element

8. Characteristics of building materials

The Laboratory of Building Materials AUTH, has created a data base in which all analyzed materials have been uploaded. It is useful to present some values concerning the materials:
- Stones (often shaped at the corners): Local stones from nearby deposits. Chiseled or not are connected with mud or lime based mortar
- Bricks: Compact or hollowed. dimensions: 5x10x21-25cm Strength capacity: 15-20MPa
- Masonry mortars: Lime-based or lime + mud mortars (joints about 1 cm). Compressive strength around 0.5-1.0MPa
- Renderings: Very thick lime based mortars with coarse sand which have been applied in layers with specific technique (travicto). Skillful technicians managed to produce facades and pillars resembling marble.
- Plasters: Lime-based mortars with fine sand and addition of nature fibers (chopped straw, wooden fibers, animal hair)

Fig. 9 Brick and mortar from an old building of eclectic architecture

Fig. 10 Characteristics of materials of old neo-classic building

8. Pathology of Earth block structures

Although there was long term experience in constructing with earth in the past (Fig. 11), this tradition has been lost and the revival of existing earth block buildings seems to be very difficult, unless the strength capacity of earth blocks is improved.

Fig. 11 Earth block buildings in Greece

The structural system consists of:

- Stone masonry foundation and basement
- Wooden bearing system
- Mud brick masonry walls reinforced with wooden beams (tsatmas)
- Wooden floors
- In upper structure bagdati type walls are often projected
- Roof: Net of wooden beams covered with tiles

Fig. 12 Structural members of earth buildings

Fig. 13 Structural members of earth buildings (floor and bagdati)

The materials found in earth block structures are:

- Compacted earth blocks
- Mud mortar joints: made with local soils
- Plasters: mud mortars or lime-based mortars reinforced with natural fibers (Fig. 14)
- Renderings: usually lime-based or mud mortars (Fig. 14)

Fig. 14 Coverings of earth buildings

The common damages of mud-brick masonries (thickness 50 – 100cm) can be said that are of two types.

These which concern the surface of the walls such as:
- detachments of plasters or renderings due to moisture
- scratching or loss of materials due to abrasion
- pulverization of the surface due to the action of frost or salts crystallization
- presence of insects
- growth of plants the roots of which destroy some times deeply the unbaked brick masonry

Those which refer to the bearing capacity of the structural elements such as:
- diagonal cracks in the plane of masonry walls created by earthquakes' vibration
- cracks vertical due to superposition of extra loads because of other uses of the building
- bulge of earthen walls, due to the pushes created by a different reasons: such as movements of wooden beams or wooden floors
- decay of the wooden beams and floors as well as of the wooden roof.

Fig. 15 Common damages of mud brick masonries in Veria

Fig. 16 Common damages of mud brick masonries in Veria

9. Repair of Earth Block structures

The bearing capacity of the wooden beams of skeleton and mud brick masonry should be firstly estimated.
In case of unsound wooden beams they must be replaced by new ones of the same characteristics.
New stabilized Earth Blocks could be used for reconstruction of missing parts of masonry.
Soil based grouts could be also used for filling the voids and cracks of the masonry for its stabilization.

Fig. 17 Unsound wooden beam in old earth building

Difficulties anticipated in consolidating earth block masonry:

- Grouting is a widely used methodology of filling cracks in masonries especially in historic masonries. The use of lime based grouts seems to solve the problem of compatibility between the old and new repair material and consequently the heterogeneous behavior of repaired masonry is avoided.
- But in the case of unbaked brick masonry there are some drawbacks: Firstly the porosity of earth blocks is very low and the penetration of grout under pressure (about 1 atm) is not easy. Higher pressures result in the failure of the material.

10. Experimental study concerning soil based grouts and pilot applications made at the Laboratory of Building Materials AUTh

In Table 1 the analysis of raw soil used for soil-based grout is given [3].

Code Nr	Composition			Color	U=D60/D10	WL Liquid Limit
	Sand	Silt	Clay			
1	73%	25%	2%	HUE 1.5 Y/R brown	<20	29,5
2	50,9	32,75	16,3	HUE 1.5 Y/R Strong brown	>55	47,5
3	72,7	23,8	3,45	HUE 1.5 Y/R Light olive brown	20	25,61

Table 1: Characteristics of soils used for grout mixtures

According to an Experimental study concerning soil based grouts the optimum grout composistions were found and pilot applications made at the Laboratory of Building Materials AUTh

Constituents	1(gr)	2(gr)	3(gr)	4(gr)	5(gr)	6(gr)
Soil 1	3000	1800	3000	2500	2000	1500
Hydrated Lime	-	900	-	-	-	750
Pozzolan	-	900	-	-	-	-
Cement	-	-	600	750	800	750
Water	2620	3800	3430	2730	2750	2750
Superplasticizer	30	36	36	32	28	30
Volume Stability Change in volume %	2.4	15.1	13.2	14.3	13.8	10.8
Fluidity Time of Efflux (sec)	10.1	9.8	9.6	9.5	9.4	10.1
28-d Compressive strength, (MPa)	0.05	0.18	0.55	0.89	1.98	1.02

Table 2: Soil based grout mixtures with the sandy soil code Nr1. Proportions and properties

Fig. 18 Technique of grouting earth block masonry with soil based grouts

After one month period of curing at room conditions the consolidated masonry models were crushed again. Measurements of the pulse waves' velocity were also made before the appliance of compressive loads. An adequate number of earth block masonry walls were crushed.

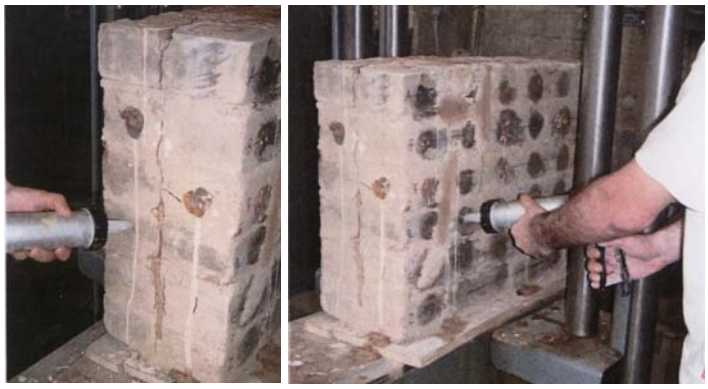

Fig. 19 Testing masonry models after grouting with soil grouts
After testing the results were compared with sound masonry models.

Grout Compositions	*Strength of masonry models before grouting (MPa)*	*Strength of masonry models after grouting at age 28 days (MPa)*	*Percentage of Strength Recovery*
soil 1 + 30% cement	*2.4*	*2.36*	*98.5*
soil 2 + Soil 3 + 30% cement	*2.64*	*2.47*	*93.4*
soil 1 + 50% hyd. lime + 50% pozzolan	*2.33*	*1.71*	*73.4*
soil 2 + soil 3 + 50% hyd. lime + 50% pozzolan	*2.42*	*1.78*	*73.5*
soil 1 + 20% cement	*2.04*	*1.84*	*90.0*
soil 2 + Soil 3 + 20% cement	*2.612*	*2.35*	*90.3*

Table 4: Comparison of strength of earth block masonry models before and after grouting

The strength recovery of consolidated by grouting masonry models reached 98.5% of the sound earth block masonry strength.

The best grout composition, in relation to its performance and effectiveness was applied for the consolidation of an earthern house of works in the area of Chalkidiki (Fig. 20) [4].

Fig. 20 Village Zografou Chalkidiki. Block of workers' houses (1845 A.C.)

Composition of soil-based grout

Constituents	*Parts by mass*
Soil	*0.6*
White cement	*0.2*
Pozzolan	*0.2*
Water	*0.96*
Superplasticizer	*1% by mass binder*
Bleeding	*1%*
28-d Compressive strength	*1.18 MPa*

Fig. 21 Selection of a wall with cracks for the injection with soil-based grouts

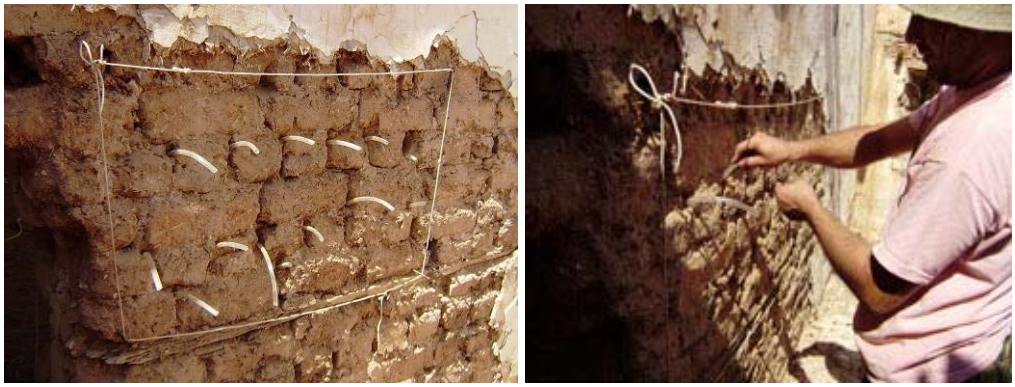

Fig. 22 Preparing the area for grouting. Holes were easily opened for the penetration of the grout from both areas

Fig. 24 Curing of grouted area

Based on measurements by sonometer, before and after grouting, a filling above 60% was achieved. It seems that stabilization of an earth block masonry with soil grout is feasible and effective.

Our work programme within the frame of LINKS

- Select two old buildings representative of eclectic and vernacular architectural style
- Making the survey and recording their pathology
- Taking samples and finding physico-chemical and mechanical characteristics of the materials
- Proposing new compatible repair materials based on the analysis of the old ones
- Providing technical description of the repair materials and instructions for their application

An effort will be made for these buildings to be used as models for repairing constructions of the same architecture

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"Investigation of the occupants' behaviour and satisfaction with the indoor environmental conditions in typical historic buildings in Veria. Primary results of airtightness test in Chatzikou House"

by prof. A.Tsangrassoulis, arch. Katerina Drakou (University of Thessaly)

Introduction

Under the scope of the improvement of the energy performance of traditional houses, providing at the same time thermal comfort to the occupants, it was considered necessary to evaluate first their current indoor environmental conditions from the occupant's perspective. As building occupants interact with the building envelope and its systems in order to satisfy their needs for comfort, this interaction can either benefit the maximum from the sustainable design techniques of the building or result in higher energy consumption due to lifestyle choice. Moreover, user behaviour significantly affects energy consumption simulation estimates which in their turn influence the building design decisions. It is, therefore, important to take occupant behaviour into account when designing buildings, as different building construction techniques may be incompatible with regional behavioural patterns.

Since there is a lack of studies about user behaviour in residential buildings in Greece, subjective surveys with the use of a questionnaire were carried out to investigate the behaviour of occupants of traditional houses in Veria. The aim of the survey is to analyse the pattern use of manual control of windows, shading and air condition units and to investigate occupant's sensation, preference and satisfaction with regard to the indoor environmental conditions. The questionnaires were filled in during an interview with the occupant and they consisted of sections about building typology, ventilation, window size, view, indoor air quality (IAQ), thermal comfort, shading, daylight and use of cooling systems.

Some preliminary indications of a small sample of questionnaires are presented below, as the survey is in progress.

Location, building types and sample profile

The survey sample consists of 44% male and 56% female participants. The majority of the participants are over 60 years old (78%), and the rest are between 40-49 years old. The respondents come from 5 different areas of the city of Veria (Dimosthenous-11%, Centre-33%, Kontogeorgaki-11%, Kyriotissa-22%, Barbouta-22%).

The main (56%) type of building of the survey sample is "house in contact with other buildings", while 44% of the respondents live in a "detached house". Building age is an important factor as it may be an indication of the construction type. The majority (67%) of the houses in the sample are over 100 years old while the rest (33%) is between 50-100 years old. 56% of the participants' houses are constructions of stone and wood, 11% are a combination of stone and brick and 33% are another combination.

All subjects of the sample stated that the period they have lived in their current house is "more than 5 years" and 78% of them spend more than 120 hours/week in the house. This distribution suggests that the participants have already formed a behavioural pattern for the house they live in. Natural ventilation was used for IAQ in all survey residences, while some occupants owned AC units which were used for cooling.

Figure 1: View of Chatzikou House

Figure 2: Interior of Chatzikou House

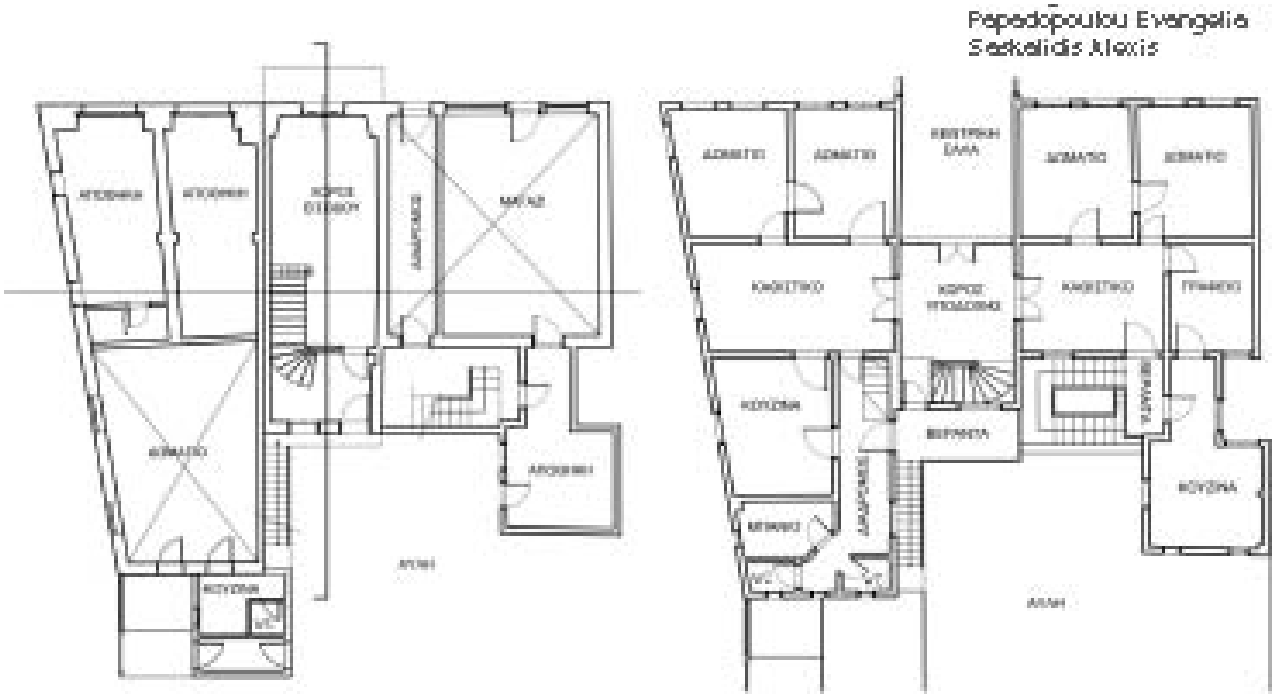

Figure 3: Groundfloor and first floor plan

Figure 4: Interior of Chatzikou House

Respondents' evaluation of their indoor environmental conditions

Occupants were asked to evaluate their indoor environment during summer and winter by expressing sensation, level of satisfaction and preferences for certain conditions. According to the results, occupants, on average, are slightly dissatisfied with their indoor temperature during a typical summer day. The standard deviation of the sample though, is large, indicating a variety of satisfaction levels among the occupants. The subjective temperature sensation (during summer), on average, is warm to very warm, while all of the respondents in the survey prefer to be a bit cooler or much cooler. During the winter, the occupants, on average, are slightly dissatisfied with their indoor temperature, as they feel cold. The daylight levels, on average, are perceived as low, while the occupants are not dissatisfied with the window size, they would prefer a larger one. The sample characterized the indoor air quality as "almost good" to "good" but there are some complaints about dry air during winter. Noise levels in residences appear to be acceptable to low.

Occupant interaction with windows - ventilation

The residential buildings in Greece are naturally ventilated, and consequently the control of windows and balcony doors is the main way to achieve thermal comfort and good IAQ during summer. Hence, the window opening type plays an essential role in the ventilation rates, and consequently in the user behaviour. In the survey, 56% of the participants use sliding windows, 34% side hung windows and 10% sash windows. The predominant orientations are South-east (22%) and South-west (22%).

According to the responses, the primary (56%) reason for opening a window during summer is the prevention of overheating and a secondary reason is the improvement of IAQ (33%). The prevention of overheating (44%) is also the most important reason for closing a window during summer. Other reasons are "protection from draught" (22%) and "protection from polluted air" (22%). Occupants are trying to maintain thermal comfort by using the building's high thermal mass and by minimising the heat gains through open windows. Regarding the frequency of night ventilation during summer, 56% of participants use it daily and 22% "4-6 times/week", as a passive measure to provide thermal comfort.

Occupants were asked about the frequency of altering the window state during a typical summer day and how this behaviour is distributed across different times of the day. A strong interaction of occupants with windows is noticed, as 44% of the sample changes the window state "2-3 times/day", 22% "more than 3 times/day" and 33% "rarely". The significant majority of the occupants change the window state mostly when they wake up (67%), and less when they spend many hours in the house (22%). A small portion of the participants (11%) alter windows before sleeping.

Use of shading – reasons and pattern of use

Concerning the shading systems, the majority of the survey participants (44%) use tent or blinds, 33% overhangs, 22% shutters, 11% curtain and only 11% have no shading. During winter, the majority of the occupants (40%) change shading state once per day and 20% "2-3 times/week", both in order to increase daylight levels. 20% of the participants alter the shading state less than 4 times/month to keep visual connection with the external environment, while 20% never change the shading state during winter. The interaction of the occupants with the shading systems increases significantly during summer, as 43% of the occupants use the shading 2-3 times/day to facilitate room ventilation and 14% more than 3 times/day to increase daylight levels.

Heating and cooling systems

Most participants (67%) use hot water radiators as heating system, 44% use fireplace or wood stove and 22% electric radiators. The common (43%) heating setpoint is 22°C.

Regarding cooling systems, 56% of the occupants reported that they have AC in the house, 67% have a portable fan, 11% have a ceiling fan and only 11% do not have a cooling system. July is the month that cooling systems are most in use (63%). Early afternoon hours (14:00–17:00) seem to be the time of day with least thermal comfort as the majority (75%) of the subjects use cooling systems during this period. The following hours (17:00-20:00) account for 25% of the cooling use, while there is a significant proportion of the occupants (38%) that make use of cooling systems between 12:00-14:00. The significant majority of 80% use a cooling setpoint between 19-21°C and only 20% prefer 26°C.

When occupants were asked to choose the three most important features of pleasant dwelling, they put thermal comfort in the first place, good day-lighting in the second and sufficient space in the third.

Concluding, on average, the majority of the indoor environmental conditions are neutral with a slight trend towards bad (large standard deviation because of the small size of the sample) and the mean temperature satisfaction vote is close to acceptable, but all the survey occupants prefer to feel "cooler" during a typical summer day. Most occupants control window state and shading 2-3 times/day and the main reason for window opening is prevention of overheating, while improvement of daylighting levels constitutes the main reason for opening the shading. Occupants use daily summer night ventilation as a passive mean to achieve thermal comfort, while there is also wide use of AC (56% of the participants own AC units). In general, occupants' expectations of indoor environmental conditions are quite demanding.

Further steps

Apart from the questionnaire survey, a first attempt of measurement of the airtightness of traditional houses in Veria took place. A blower door test was carried out at the Chatzikou house in Veria. The main conclusion from the test procedure is that contemporary diagnostic tools may face difficulties in practice in traditional buildings. The building was very leaky consequently the fan could not reach the pressure difference of 50pascal.

Further steps of the analysis consist of the thermal simulation of the Mansion House Sarafoglou in Veria. The results from the blower door test for the infiltration rate of the building and the occupant's behavioural pattern that will arise from the questionnaire analysis will be integrated in the thermal simulation of the building. First, a free floating simulation will run in order to investigate how thermal mass works and to define the range of internal temperatures. Afterwards, the base case scenario will be defined and through different scenarios, suggestions for construction techniques in order to improve the energy performance of traditional houses will be developed.

Case Study "Ecole Vétérinaires in Anderlecht" *by Arch. Pouria Shoeibi*

The building dates from the 19th century. It is situated in Cureghem, near Brussels Midi train Station, the archetype of a suburb shattered by the de-industrialisation with a migrant population rate of about 65% . The building presents a timber frame façade on the main street and a stone façade on the side lane. The European Fund ERDF and the Brussels government have launched an important strategic programme to stimulate Economic competitiveness, employment and urban development. For the Municipality of Anderlecht, this mix funding was the opportunity to incentive an eco restoration pilot project.

Technical specificities:

First of all a feasibility study has been carried out to assess the environmental impact of the restoration of the building, including the reduction and waste management and use of ecological materials. A panel of alternative technical solutions has been proposed by the municipality to reach a low energy performance (60 kW h/m².year) including innovating systems for heating. Following solutions have been selected according to a cost benefit analysis:

- *Dynamic Save Water management system.*
- *Double-flux ventilation with heat exchange will be used.*
- *Roof insulation.*
- *Wall insulation respecting old moulding.*
- *Doubling windows with new and high performance ones.*
- *Solar panels on the roof for pre-heating water.*
- *Innovative lighting concept.*

EXPECTED RESULTS:

1. *The Life Cycle Analysis allowed the architect to choose the solutions that showed to be the more efficient and less impacting on environment, not only during the building restoration phase, but also during the whole life cycle of the building (including uses & consumptions),*
2. *The municipality wishes this restoration to be an example of restoration of a listed building with all the constraints that this implies.*
3. *Restoration from the point of view of improvement of the energy performance in the local and regional context. Indeed, in Cureghem alone, there are 866 private residences which had been build before 1919 and 945 between 1919 and 1945. That gives a potential of 1811 residences, in the long term , to be renovated with energy performance.*
4. *The project will include the waste reduction and management strategy.*
5. *Increase the economic dynamism and employment in the zone,*
6. *Support the development and the expansion of companies in key social and economic sectors*

DAY 2 : 25th May
Sharing knowledge

What are the lessons of the different case studies carried out by LINKS partners?

Morning session - Guided tour in the historical city centre of Veria

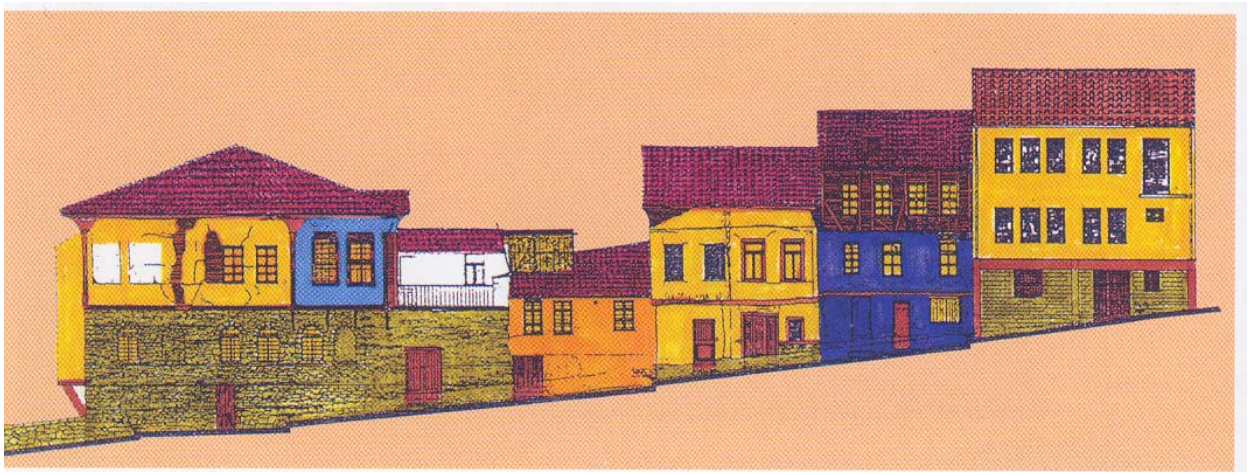

Figure 1: Site survey drawing of a typical street front in the historical city centre of Veria, Jewish district

The visit in the historic centre of Veria started from the listed areas of Makariotissa and Kiriotissa, where a remarkably large number of Byzantine and post- Byzantine churches dated from the 14th c. and onwards still exist rich in mural paintings decoration. ***Maria Chimonopoulou***, Archaeologist of the Ministry of Culture – 11th Ephorate of Byzantine Antiquities guided us in theses areas. The visit also included the churches of Christ (14th c.), painted by the famous painter of the 14th century Georgio Kalliergi and the church of Kirikos and Ioulitta (14th c.), with a marble temple, in the centre of a building block, a typical traditional town planning layout in Veria.

Figure 2: Outside of the Church of Christ

Figure 3: Inside of the Church of Christ with original frescos, the oldest dated from the 14th c., painted by the famous painter Georgio Kalliergi.

Pass through the listed area of Kiriotissa and visit the Byzantine Museum where arch. ***Kleopatra Theologidou*** introduce the group to the history of the building, the highlights of the exhibition and the main technical aspects of the restoration process of which she was responsible. We can read hereafter the article published in the conference proceedings of the international symposium "Studies on Historical Heritage" (Antalya, 2007).

The visit continued with the Jewish area and the visit to the Synagogue and the Mansion House of Mpozoglou, it continued in the listed area of Panayia Dexia and the old market and ended back to the Mansion House of Sarafoglou.

Figure 4: The Anastasiou mansion in Veria's city centre, in the Jewish district, before restoration.

Figure 5: The same building after restoration.

Transformation through History: the Markou Watermill in Veria and its conversion to Byzantine Museum by Kleopatra Theologidou

This paper is focused on the methodology adopted at the conservation project for the conversion of a watermill to a museum. The different stages of the project are presented with emphasis to the historic documentation. This documentation was critical during the whole process of the planning in the effort to succeed a balance between the old fabric and the new use. An effort is made the different parameters of the building and its environment and their connection to planning decisions to be presented, in the effort to show that by highlighting the values of a historic building and its surroundings, as defined through its historic documentation, interesting solutions can be achieved from the preservation and the architectural point of view.

1. INTRODUCTION

Adaptation of historic buildings to new uses is a necessary procedure for their preservation in time. Different approaches are observed at an international level, relevant to the alterations made for their reuse. The complete respect to the fabric with minimum alterations on one hand and facadism on the other, define the borders between which these approaches are fluctuated. Detailed documentation of the building and its history is the necessary procedure in order to define the values of the building and determine the possibilities of alterations. Especially history, when dealing with buildings without obvious significance, is proved a precious methodological tool during the whole process of the conservation project. This procedure is described through a case study which regards the conversion of a watermill to Byzantine museum.

2. CREATION OF BYZANTINE MUSEUM IN VERIA

Veria is the capital city of the Prefecture of Imathia, which is located in the northern borders of Greece. Possessing a strategic position on the axis of Egnatia road, very close to ancient Aege (Vergina), the first capital of the Macedonian Kingdom, it appeared in historical texts first in the 5th century BC, it grew rapidly and kept its importance through time. The material evidence of its past is rich, and especially of the Byzantine period. A large collection of mosaics, dated mainly from the 5th century AD, a well known collection of approximately 500 Byzantine icons, sculpture from different periods, ceramics, religious books and metal works, as well as 45 churches with frescos, the oldest dated from the 11th century, reveal the level of civilization developed. Ministry of Culture, in order to highlight the rich heritage of the period, decided to create a Byzantine museum in the city. The conversion and reuse of the abandoned watermill of Markou appeared to be a privileged choice. Its position, at the borders of the old city and very close to the centre of the town, its size and space, convenient for a museum use on one hand, the opportunity for the preservation of an industrial building, through a new use, on the other, were these privileges and the reasons for this choice. It is worth mentioning that Veria, by the end of 19th century, developed a strong industry exploiting the power of the waters of the river Tripotamos and of a torrent that determined the west and southeast borders of the old town. Previously, water-driven pre-industrial installations were operating across them. A number of pre-industrial and industrial buildings are now abandoned, others in fairly good condition and others in ruins. In the last decades, there is a concern of the State and the Local Authorities on their protection and reuse.

Figure 1. The watermill before the restoration works

3. METHODOLOGY OF CONSERVATION PLAN

The image of the building in 1991, when the conservation plan started, was disappointing (Figure: 1). It was burnt in 1981 and what were left from it were the external walls and a metal construction of columns and beams, badly distorted. Therefore, the range of choices for its conversion and reuse was large, as the authentic structure was deeply injured. In order to understand and define the values of the building, necessary procedure for the conservation plan, a research was carried out where varied factors were examined with emphasis to historic analysis. Within this frame, it was examined the ownership and the owners themselves, the architectural plans the possible engineers involved, and the resemblance to other buildings of the period, the construction and possible information about the constructor, the origins of the building materials and the equipment and the importance of the building in the area concerning its function, its construction and possible renovations. Furthermore, research was carried out about its current state of preservation, the foundation soil and the characteristics of the environmental space. The results of this research determined the decisions and the scheme of the conservation plan.

4. HISTORICAL AND ARCHITECTURAL ANALYSIS

The initial owner of the mill was Stergios Markou, a doctor, with strong connections abroad. A land owner, also, he built the mill in order to grind the wheat he collected from the tithe. He, himself, was not much involved with its function, as he became very soon the mayor of the town. After his death, the mill passed to his descendants who operated it until the 1960s, when it was abandoned. In 1980s, Ministry of Culture expropriated the building in order to convert it to the Byzantine museum. The construction of the building started in 1908 and was completed in 1911. All its equipment was imported from abroad and was working with water-power. In that period, it was the first time that cylinders, instead of millstones, were used in the area for grinding, an innovation that gave possibilities for the production of different types of flour. The region of range of the mill was large.

It was a four-storey building, at a rectangular ground plan. The architectural drawings were owed to two German engineers who visited the area for this purpose. The whole construction was of a high quality, by stonewalls and timber floors and roof, plain, with minimal decorative elements, where the traditional patterns were followed with some additions, typical to the industrial buildings of the period. These additions were the use of bricks at the arches, the carefully carved corner-stones and the metal windows and doors. Moreover, it was the first time in the broader area that iron was used as a building material. An iron construction of columns and beams was positioned in the middle, across the long side of the rectangular ground plan, in order to support, together with the stone walls, the timber beams of the floors. Rings of iron plates, embedded in the stone walls, were used for tightening the walls, while iron plates connected the timber beams to the iron rings. Finally, iron plates were used to form the lintels of the openings. The iron and the timber elements of the structure were imported from Europe. A comparative study to flour mills in Greece and abroad showed many similarities and influences.

The constructor was a moving "compania" of technicians with various skills, who built many buildings in the area, coming from Lehovo, a mountainous village in west Macedonia. Concerning the environmental space, behind the mill, parts of the walls of the fortification of the town, including a tower, are preserved and on top old houses and a mosque, all dating from the 19th century. At the east corner of its ground another building is preserved, where taxes was paid to enter the town. Behind the walls parts of the old town are preserved in good condition. At the mill's south side, the waters of the torrent that provided movement to the industrial installations developed across it are nowadays conveyed underground at the borders of the town and a road was constructed at its position. This road has an inclination that gives a hypsometrical difference of approximately 4m at the two edges of the ground of the mill.

Figure 2. The internal space before the restoration works

5. STATE OF PRESERVATION

Due to the fire of 1981, all timber work was demolished and the iron construction was badly distorted, causing serious cracks to the two narrow walls to which it was connected with. In 1993, when the conservation project started, the condition of the mill was still stable, though exposed to adverse weather conditions. This fact proved a very good quality of structure. However, research works on site and in the laboratory were carried out to get further information about the condition of the fabric and the foundation soil. Borings at a depth of approximately 15m proved that the soil was of porous rock and that there were not underground waters. Test trial sections on the ground, next to the foundations showed that they were built with iron stones, a solid construction, their depth varied, to reach the rock, and a solid mortar was used at the bottom where they were seated. Core drilling and mechanical tests in the laboratory, together with hammer tests and mortar analysis gave information about the mechanical properties of masonries. All the information gathered and examined was very encouraging for the whole condition of the existing fabric. Though the internal space was demolished by the fire, traces on the walls and the distorted iron element, together with old photographs, gave evidence about its initial form and construction (Figure: 2). This evidence made possible reliable reconstruction drawings, valuable to the conservation plan for its restoration and reuse.

6. VALUES AND CONSERVATION PROJECT

Historic documentation proved that the building was unique in the area. The introduction of iron as a building material was an innovation, as well as some of the construction details. Innovating was also its equipment that gave many possibilities at the production of flour. The whole quality of the structure was exceptional. The collaboration with foreign engineers, as well as the import of building materials and equipment was not a usual practice in the area. The mill played an important role in a wide geographical area. Furthermore, its owner was a public person and the "compania" known at the time for the number of buildings they built in a large region. Finally, the building is located in an area where different aspects of the history of the city are revealed. The values of the building, together with the reliable reconstruction drawings, lead to the decision to rebuild the carrying system of the construction, in simpler form and details, so that at short distance the contemporary of the construction is distinguished. In that way the material evidence of the innovating technology of the period is preserved and highlighted. Small parts of the original iron construction are displayed at the courtyard of the museum. The equipment of the mill was all destroyed by the fire. The only evidence by its operation by using hydro-power was a detail on the wall that shows the entrance of the pivot that gave movement to the machines. This detail was preserved and is displayed. The internal space was left plain, as used to be, taking the use of exhibition areas. Moreover, this choice permits the audiences to get to know the museum contents and the building itself. Timber beams were reconstructed in the same size and position, while double timber floors were used, placing shock-absorbing materials and installations in between. New windows were also made in the same form and materials, but double panes were used for heat insulation reasons. The information about the structure of the roof was not adequate. Therefore, a timber roof was built in modern form and technology. Similarly, the position and geometry of the staircase was not clarified. A modern staircase was designed in relation to an elevator that was introduced. Generally, all new additions were designed in modern forms to be distinguished from the original form and structure of the building.

The size of the mill was not enough to house the additional functions of a museum, such as laboratories, training rooms, storerooms, offices, boilers, etc. To face this necessity, the building was extended to new constructions. Taking advantage of the inclination of the ground, a new building was inserted on a level with the ground, invisible from the road side due to this inclination, with a two storey basement,. This building was built in touch with the mill at the position of two

later storehouses of minor importance. The visible part of the façade at this level was kept visible by positioning a covered atrium. The laboratories were located at the ground level of the extension. The visitors, through windows of the mill, have the image of the laboratories. A basement was also added under the mill for multiple uses, such as, temporal exhibitions and training programs. The construction of these extensions was based on advanced technology, to ensure the safeguard of the old building and to be clearly differentiated from the old construction. Finally an external staircase was added to the mill for security reasons. This staircase, as well as the roof of the atrium, the only actually visible parts of the extensions, was constructed by iron and glass to match the building materials of the mill. Furthermore, the use of glass permitted the view of the city walls at this position, behind it. The whole idea at the design of the extensions was to be as unobtrusive as possible, so that not only the industrial building but the whole site are not disturbed.

Figure 3. The transformed mill to a museum

Figure 4. Ground floor

Figure 5. External staircases and the roof of atrium

7. EXHIBITION AREAS

The internal space of the mill, after the restoration works, was imposing. Therefore, the exhibition design had additional difficulties. It should respond to the demands of a museum exhibition where the focus is on the exhibits, to the display of the building itself as a reminder of the later history of the city and to the museology study, which entailed the division of the space. The aim of the plan was to get on a balance with different levels of view. The exhibits should gather the concentration of the visitor, so planning should focus on them, highlighting their importance and the scenario of the museology study. At a second level, the visitor should have the image of the internal space of the old factory, after its restoration. Therefore, all the constructions for the division of the space should have the minimal dimensions to correspond to their role. At a third level, the constructions themselves and all exhibition equipment should be elegant, equivalent to the qualities of the building and the excellent art of the exhibits. Within this frame, all the partitions were plain, following clear geometrical forms, creating slots between them to leave fragmentary views, at a limited number, the necessary one to define units, with maximum height 2,20m. Double face icons were supported by simple metal stands, while show cases have minimal dimensions and simple forms. In addition, a glass corridor was positioned over a part of a mosaic to permit its view. Glass, iron, mortar or smooth plasters were used to fit to the building materials of the museum. The final result, according to public and experts opinion was quite successful, accomplishing the aims of the architectural plans [1].

Figure 6. Exhibition area

The values of the mill of Markou, as it was preserved after the fire, were not obvious. Therefore, a conservation project for its reuse, without the detailed and systematic historic documentation, could lead to quite different decisions and part of its meanings could be lost forever. The creation of a new building within it, irrelevant to its initial form and construction and the preservation only of the facades, a common practice when dealing with historic buildings of the late periods, could lead to attractive solutions, solutions however that wouldn't make the internal space differ from that in a contemporary construction. It was proved that history was a strong tool for transforming the historic building to accommodate its new use and a means of inspiration for the creation of a different space, where past and present live together in harmony.

REFERENCES

1. The project was awarded by Europa Nostra with a diploma: "for the careful structural research and restoration of the shell of the "Markou" Watermill and for an imaginative conservation plan securing its future as the Byzantine Museum of the city of Veria".

Afternoon session

Workshop on the technical aspects of eco-restoration of historical buildings

The afternoon of the second day of the workshop was dedicated to the discussion of technical aspects of eco-restoration of historical buildings. During the preparation the ad hoc working group Technical issues prepared and distributed a checklist of technical aspects to be dealt with and a case study format, an adaptation of the URBACT case study format specific for sustainable refurbishment and energy upgrade of historic buildings. Meanwhile during the first day the whole group had the chance to discuss the two main projects of BK City (Delft) and Ecole Veterinaire (Anderlecht), in the second day new case studies were introduced with short presentations by the representatives of the city of Budrio (Water Tower and Theater), Anderlecht (Pretoire), Bayonne (Bourgneuf), Freiberg (Nullenergiehaus), Delft (De Witte Roos) and Almeria.

Roundtable 1 - Freiberg and Almeria

The case study Nullenergiehaus introduced by the city of Freiberg is characterized by a strong energy high performance approach whereby the role of cultural heritage do not stand in foreground. As a matter of fact the building that has been refurbished as a zero-net house has not an outstanding heritage value, is in private ownership and has benefited some exceptions to the heritage conservation rules due to the character of pilot project. If this has brought more benefits in the reduced environmental impact or losses in the historical value of the building remains an open question.
On the positive side there is the cooperation between the private sector (owner), the university, enterprises (sponsors), public administration and civil society (potential beneficiary). The project has been widely communicated and publicly monitored with the aim to open the way to many other similar initiatives (multiplier effect). The University of Dresden took part in the project and has installed 300 sensors in the house to monitor the results in a very detailed way. This is very useful in the case of an historical building where computer simulations are not so reliable as in new buildings. The intensive use of technological solutions and new materials represent a quite radical approach for the conservation of traditional architecture and heritage values and makes the calculation of overall sustainability of materials and techniques very difficult. Also the economic sustainability of the project has been seen a possible weakness of this project, which on the other side has been promoted by a private owner without public subsidies. How far can such an experience generate a transfer of knowledge? Are building management systems (bms) a problem or an opportunity? Is the freedom of choice of occupants guaranteed? How far do occupants have to change way of life and behavior?

The city of Almeria has introduced a radically different approach from the one of Freiberg. The case studies of Almeria (Cinema House and Dwellings) had been introduced and visited during the last workshop, so the representatives of Almeria concentrated on the principles of the municipal policy regarding conservation and upgrading of historical buildings. Highest priority of this policy is conservation of of historical heritage through implementation of traditional skills and materials, the coordination of different levels of intervention and competences: regional and municipal government, heritage conservation departments, support of the construction sector with

local craftsmen and local materials. Beside heritage conservation this policies have the aim to boost the local economy and capitalize experience in traditional materials. That is why a local research institute has been appointed to monitor the projects under the sustainability point of view.
The municipality has established cooperation with a research team of architects in the framework of Intelligent Energy Europe Program for the development of a specific energy assessment tool.

In the comparison of the 2 case studies it became clear that the notion of sustainability in Almeria has a stronger social and cultural focus, meanwhile the environmental (in the sense of CO2 emissions) and technological side is much stronger in the case study of Freiberg. Both case studies aim at having an impact on the local economy, but from very different starting point and with different tools.

Roundtable 2 - Budrio and Anderlecht

The case study Water Tower introduced by Budrio was awarded in an Italian competition among heritage regeneration projects (Concorso Cento Città). It is exemplary from various points of view: the participated approach, pioneering project of industrial archeology, creative management of "young" heritage promoted by the public administration, implementation of sustainable techniques (like floor heating and condensation boiler) that could have positive feedback on other public buildings. A major obstacle was set by the heritage authorities that contaminated the design with a questionable constraint, limiting the height of glass tower. This constraint made not possible the use of the upper cistern, cutting out an important part of the project. Nevertheless the project was accomplished and is in use with positive social return and an efficient environmental profile.
The city of Budrio introduced also another case study, the restoration project of the local Theater which, as a public building with a frequent and very intensive kind of use, has very peculiar energy demand and requires a specific strategy to improve its energy profile. The city of Budrio highlighted that the cooperation with the energy service provider was determinant to elaborate an energy saving strategy and, in order to introduce additional improvements related to summer internal ventilation and cooling, the cooperation with Heritage Authority will be very important too.

Anderlecht presented the project "Pretoire", the conversion of an historical building into social housing project with use of ecological materials. Preservation of historical features of the facade on the main street, internal insulation and external insulation on roof and back facade. Due to the small budget (public funding for social housing) it was clear that the most expensive technologies (like Photovoltaic or building management systems) could not be implemented and that the quality of work delivered by the building company had to be carefully controlled. Standard simulation software has been used during the project but the end result has not been monitored yet. A strong effort was made to take into account the sustainability and eco-compatibility of building materials: solvent free paint, wood-wool, etc.

Roundtable 3 - Bayonne and Delft

City of Bayonne introduced as case study the refurbishment of a residential building in private ownership in Rue Bourgneuf. The project was about the renovation of the 9 apartments of the building and involved the attica conversion for residential purposes.
Listed buildings in the historical center of Bayonne are subject to tight heritage prescription.

Reduction of energy consumption, improve buildings efficiency, implement renewable energies are the targets of the main building refurbishment. To achieve these targets a Life Cycle Analysis was implemented to assess the environmental impact of different scenarios for the restoration of the building. A panel of technical solutions was proposed to achieve energy efficiency according to a cost-benefit calculation. A Dynamic Thermal Simulation allow to find the most efficient solution for energy saving end thermal comfort

The city of Delft proposed the refurbishment of a traditional brick building from the 16h century Also due to the fact that the building hosts the Foundation De Witte Roos dealing with sustainability, the project had the aim to be exemplary of an iterative process between general /comprehensive approach and research about new technical solutions. Insulation has been added but only when compatible with the architectural features of the building. The addition of a modern extension on the backyard has given the opportunity to insulate the existing building and to bring the use of renewable energy, with Photovoltaic panels as shading element of the glass-house. Energy saving technologies have been applied for the water supply, lighting and ventilation systems. To simulate the result of the refurbishment in the planning phase it has been used the so-called “dumo-model” (du=duurzaam=sustainable; mo=monument), which tries to combine assessment of energy footprint as well as heritage value.

Discussion

The presentations were followed by three parallel round-table sessions supported by flip charts were two case studies were discussed in detail and compared. The exercise was structured around the questionnaire prepared ahead of the workshop and the result of the roundtable was then reported by the rapporteurs of each roundtable in a plenary session were the main differences and similarities, strengths and weaknesses were discussed. It was clear that the approach shown in some case studies was radically different: in some case almost opposite: high-tech experimentation in Freiberg, low-tech to boost local economy in Almeria, exemplary demonstration project in Delft, low-budget social housing project in Anderlecht, participative and community oriented public initiative in Budrio, private initiative in the framework of urban heritage conservation plan in Bayonne. The lively discussion pointed out also some critical points regarding the overall sustainability of the projects, in terms of cost and benefit for the local community, long term sustainability of technologies and materials, appropriate design etc. Interim conclusions were drawn by the external expert prof. Job Roos as far as approach, technologies and end result were analogized.

Conclusions

Prof. Job Roos highlighted that a great deal of inspirations were to be drawn by the variety of case studies. Looking at a house as a human being the first impression is that the case studies are dealing with something else: insulation, technological equipment, etc. It is evident the need of new methods for the assessment of buildings under the point of view of what they are now and what they were in the past in combination with social, economical and environmental factors. In other words there is a need for an integrated energy assessment methodology. A simple way to prepare such a methodology could be to adopt a template and learn by doing in some new projects. Testing the tool in different projects would help adapt the template towards a well balanced assessment method. Instead of being influenced by the market, we should try to guide it, treating the urban context in a conceptual way. Cities can be seen as an intelligent self-organising system, not just a conglomeration of buildings. The first and most important step is to set the priorities, like some of

the case studies show.
Although we live in a global world, we have to find de-globalised solutions because challenges are different in every urban context. On the other side we feel pretty much the same in relationship to environmental protection and heritage conservation. Planners and owners of historical buildings should avoid frustration from committees setting too many constraints towards innovative concepts. The integrated approach can be promoted only in an iterative process, taking into account many factors, especially in the complex environment provided by the eco-restoration of an historical building. Professionals and public authorities shall react to the ready made solutions offered by the market with strong arguments. The URBACT LINKS Network can contribute to this reaction with a strong paper on heritage eco-restoration and management in which the experience that have been reported, analyzed and compared are capitalized into a framework of common conclusions.
Issues to be addressed in this paper are, among others, the fact that eco-restoration is not only about energy saving, but also about comfort and quality of life. Furthermore the discussion should not deal only with constraints but especially with potential.

Concert of traditional music in Sarafanoglou Mansion House.

DAY 3 : 26th May Action	***What can we do in our cities to improve the quality of building restoration and renovation process, enhancing their energy performance, safeguarding and valorising their cultural value?***

Morning session

Site visit at the Ancient city of Aigai

12:00-13:00 Press conference with the ***Mayor of Veria Mrs Charikleia Ousoultzoglou Georgiadi*** in the Council room of the Municipality building followed by the presentation of the restoration works carried out in the Ractivan Building and its conversion into the City hall of Veria by ***Mr. George Oursouzidis*** (Civil Engineer)

The city of Aigai

(The following text is published in http://odysseus.culture.gr/h/3/eh351.jsp?obj_id=2362)

History

The ancient city lying on the north slopes of the Pierian mountains is securely identified as Aigai, the capital of the kingdom of Lower Macedonia. Archaeological evidence proves that the site was continuously inhabited from the Early Bronze Age (3rd millenium BC) while in the Early Iron Age (11th-8th centuries BC) it became an important centre, rich and densely inhabited.

The city reached its highest point of prosperity in the Archaic (7th-6th centuries BC) and Classical periods (5th-4th centuries), when it was the most important urban centre of the area, the seat of the Macedonian kings and the place where all the traditional sanctuaries were established. Moreover, it was already famous in antiquity for the wealth of the royal tombs which were gathered in its extensive necropolis. The finds from the excavations are exhibited in the protective shelter over the royal tombs of Vergina and in the Archaeological Museum of Thessaloniki.

The first excavations on the site were carried out in the 19th century by the French archaeologist L. Heuzey and were resumed in the 1930's, after the liberation of Macedonia, by K. Rhomaios. After the Second World War, in the 1950's and 1960's, the excavations were directed by M. Andronicos, who investigated the cemetery of the tumuli.

At the same time, the Palace was excavated by the University of Thessaloniki and part of the necropolis by the Archaeological Service of the Ministry of Culture.

In 1977, M. Andronicos brought to light the royal tombs in the Great Tumulus of Vergina (Megale Toumba). The most remarkable of these was the tomb of Philip II (359-336 B.C.) and its discovery is considered to be one of the most important archaeological events of the century. Since then, continuing excavations have revealed a series of significant monuments.

Description

The most important monuments on the site are the following:

The royal tombs in the Great Tumulus. This group includes three Macedonian tombs and one cist-grave. One of them was the tomb of king Philip II and another probably belonged to king Alexander IV. These two graves were found unplundered and are lavishly decorated with splendid wall paintings, made by great and famous artists.

The royal tombs to the NW of the city. Two Macedonian tombs are included in this group, the so-called "Rhomaios Tomb", an Ionic, temple-shaped structure, dated to the beginning of the 3rd century B.C. and the "Tomb of Eurydice", which probably belongs to the mother of Philip II and is dated to ca. 340 B.C. To the same group also belong three cist-graves dating from the 5th and 4th centuries B.C., as well as four pit-graves of the late Archaic period.

The cemetery of the tumuli. This is the imposing necropolis of the Iron Age (11th-8th centuries B.C.), which includes more than 300 small earthen tumuli, constructed over clusters of burials which contained rich offerings.

The Palace and the Theatre. These two important monuments are parts of the same complex, dated to the 4th century B.C. The palace is organized around a large, central peristyle court and comprises a circular shrine (Tholos) dedicated to Herakles Patroos, and luxurious banquet halls for the king and his officers. One of these rooms includes a fine mosaic floor.

The temple of Eukleia. It lies to the north of the theatre and includes two temples of the 4th and 3rd centuries B.C., a monumental peristyle and a series of offerings among which two bases of the votive statues dedicated by queen Eurydice, grandmother of Alexander The Great.

The acropolis and the city walls. It is located on a steep hill to the south of the settlement. The fortification wall extends to the east of the city. Excavations on the acropolis have revealed parts of the circuit wall and Hellenistic houses in the enclosed area. The fortification of Aigai dates to the early Hellenistic period (end of 4th-beginning of 3rd century B.C.).

Museum

A sense of awe in the face of death, the splendours of regal glory, the emotions stirred by the tragic finale of the royal house of the Temenides, are all associated with the site of the royal tombs at Aigai. This conception dictated the scenario; the basic settings were guided by the principle that only the ancient artifacts should be lit up and warm in a dark neutral setting.

The visitor descending into the underground area of the tombs begins his tour with a reconstruction of the Great Mound, the monument that originally marked the site of the Royal Tombs and which no longer exists.

Next are grave stelai and finds from tombs of ordinary Macedonian citizens, who after their death became neighbours of the king, and whose presence provides a yardstick of comparison.

The ruined 3rd c. BC tomb, the collapsed heroon, cult place of the kings, the fascination and sorrow inspired by Persephone's abduction prepare the visitor as he approaches the dead king.

Philip now takes the stage. His splendid weapons vividly convey the feeling of the ruler's power. The pile remains of the funerary pyre, found scattered all-over the tomb, are reminders of the tragic holocaust and at the same time an allusion to his passing into another dimension. Next comes the gold coffin (larnax) that contained the bones of the heroozed King Philip II, and the oak crown worn by the dead man. The Gold Larnax it is made of 7,820 gr. of hammered pure gold. Its lid is decorated with a 16 - rayed star symbol and two rosettes, the inner of which is filled with blue enamel. On the sides relief palmettes and lotus buds frame five enameled rosettes. The feet are decorated with rosettes and end in lion-paws. The gold oak crown is the heaviest and most impressive wreath surviving from Greek antiquity. It has 313 leaves and 68 acorns and weighs 714 gr. The exhibition is dedicated to the memory of Professor Manolis Andronikos, the archaeologist who brought the treasures to light and had the knowledge and perceptiveness to recognise them for what they were.

History of the museum

On the discovery of the Royal Tombs of Vergina (Aigai) in 1977, an immediate programme was launched to preserve the magnificent murals which adorned them. At the same time a conservation laboratory was set up on the spot to save and restore the extremely important portable objects they contained. For the preservation of the Royal Tombs themselves a subterranean structure was built

in 1993 to encase and protect the ancient monuments by maintaining a constant temperature and humidity, both indispensable for the preservation of the wall paintings.

Externally the structure has the appearance of an earth mound; inside it are the treasures found in the Royal Tombs, which have been on exhibition since November 1997.
Visit the museum with the Royal Tombs, among which the Grave of Philipus II, the father of Alexander the Great, which was found unplundered, together with a second one which probably belonged to the king Alexander IV, both lavishly decorated with splendid wall paintings. The museum is in fact a subterranean structure, built in 1993, at the appearance of an earth mound, for the preservation of the Royal Tombs themselves (encase and protect them by maintaining a constant temperature and humidity).

The royal palace is one of the largest in size ancient buildings of the classic antiquity. Restoration problems relevant to materials, mosaics, etc., as well as problems relevant to archaeological work and documentation will be discussed here.

Picture of the group and Mr Ioannis Graikos, archaeologist of the Ministry of Culture, 17th Ephorate of Prehistoric and Classic Antiquities, /guide during the visit to the Royal tombs

The Press Conference

The URBACT LINKS network representatives have been received by the Mayor of Veria and local journalists in the council room of the town hall. After the welcome speech the activities of the network were illustrated and discussed for about one hour. The focus of the discussion was concentrated on the local problematic connected to the restoration of buildings. The main topics were the possibility to find new models of financing restoration and activate the local economy and the simplification of approvals by the competent authorities. The network was challenged to provide Veria with knowledge about good practises that could serve as a model to solve the local problems. The meeting was documented by several articles in the local press.

Ολοκληρώνονται οι εργασίες του URBACT II στη Βέροια για τα κτίρια των ιστορικών κέντρων

Ολοκληρώνεται σήμερα στη Βέροια, στο αρχοντικό Σαράφογλου η τριήμερη συνάντηση εργασίας ειδικών Ελλήνων και ξένων επιστημόνων σχετικά με τις τεχνικές αναστήλωσης και βελτίωσης της ενεργειακής συμπεριφοράς των κτιρίων σε ιστορικά κέντρα πόλεων. Η συνάντηση γίνεται στο πλαίσιο λειτουργίας του προγράμματος URBACT II - Links στο οποίο συμμετέχει η Βέροια μαζί με άλλες 8 πόλεις της Ευρώπης. Το σχέδιο δράσης που «τρέχει» ο Δήμος Βέροιας αφορά το ιστορικό κέντρο της πόλης αλλά όχι με τους παραδοσιακούς τρόπους των μελετών. Είναι ένα σχέδιο που περιλαμβάνει διάφορους παράγοντες «Ο ένας είναι τα γνωστά προβλήματα που έχει ένα ιστορικό κέντρο, προσπελάσεις, ασφάλεια, κυκλοφοριακό, η ποιότητα του δημόσιου χώρου κ.λ.π., το δεύτερο είναι το κομμάτι που συνδέεται με τα διατηρητέα και πώς μπορούμε να τα επισκευάσουμε με φιλικό προς το περιβάλλον τρόπο ώστε να ανταποκρίνονται στις σύγχρονες ανάγκες και να είναι ενεργειακά πιο καλά... Και από αυτό θα προκύψουν συστάσεις και όποιος θέλει αξιοποιεί αυτές τις γνώσεις... Και το τρίτο συνδέεται με τη συμμετοχή των πολιτών γι' αυτό και κάνουμε ένα ερωτηματολόγιο που παρουσίασε ο πρόεδρος των αρχιτεκτόνων Δημήτρης Τροχόπουλος με το οποίο προσπαθούμε να προσεγγίσουμε τους κατοίκους οι οποίοι ουσιαστικά χρησιμοποιούν το ιστορικό κέντρο. Προς το παρόν ξεκινήσαμε πιλοτικά και θα προχωρήσουμε ανάλογα με το πώς θα διαμορφωθεί το πρόγραμμα» μας είπε η αρχιτέκτων, ειδική συνεργάτης του Δήμου και εταίρος υποδοχής του προγράμματος για τη Βέροια κα Πάτρα Θεολογίδου.

« Ένα άλλο κομμάτι που δεν το θίξαμε ακόμα, αφορά την οικονομική ανάπτυξη μέσα από καινοτόμες δράσεις και προσεγγίσεις . Ετσι θα μπορέσει να κινηθεί η οικονομία της πόλης από τον τομέα της κατασκευής έως τον κόσμο που μπορεί να ρθει και να δει κάτι διαφορετικό» συμπληρώνει η **κα Θεολογίδου**.

Το τριήμερο των εργασιών στη Βέροια είναι αφιερωμένο στις τεχνικές αναστήλωσης και στο τι μπορεί να γίνει ώστε να βελτιωθεί η ποιότητα αποκατάστασης των κτιρίων που να είναι πιο φιλικά προς το περιβάλλον προάγοντας την ενεργειακή συμπεριφορά τους και διαφυλάσσοντας τις πολιτισμικές αξίες τους.

Από τις εργασίες και τις εισηγήσεις των συμμετεχόντων αναμένεται να προκύψουν κάποια χρήσιμα συμπεράσματα. «Εκτός από αυτά όμως, έχουμε πολλή δουλειά να κάνουμε ακόμα και στην επόμενη συνάντηση εργασίας που θα γίνει στην Bayonne της Γαλλίας θα πάμε πιο έτοιμοι και με πιο ολοκληρωμένες προτάσεις πάνω στα προβλήματα που έχει κάθε πόλη για τα δικά της διατηρητέα, με τις ιδιαιτερότητές τους και πώς μπορούν να αντιμετωπιστούν αυτά τα προβλήματα» επισημαίνει η κα Θεολογίδου.

Το ζητούμενο βέβαια και το ιδανικό, όπως εκτιμάται για την αξιοποίηση του προγράμματος, θα ήταν να περάσει το σχέδιο δράσης μέσα από το Δημοτικό Συμβούλιο και να μπει, ως μια βιώσιμη πρόταση, σε μια διαδικασία υλοποίησης.

Για τα αποτελέσματα των τριήμερων εργασιών θα δοθεί συνέντευξη Τύπου σήμερα στις 12 το μεσημέρι στην αίθουσα του δημοτικού συμβουλίου Βέροιας.

Σ. Γκ.

Μακεδονική

Καθημερινή Εφημερίδα του Ν. Ημαθίας - Παρασκευή 27 Μαΐου 2011 - Αρ. Φύλλου: 3684 - Τιμή: 0,50 €

ΜΑΧΟΜΑΣΤΕ
κατά του Αθηνοκεντρισμού

Πλήθος λατρευτικών και πολιτιστικών εκδηλώσεων στο φετινό πρόγραμμα

«Η πνευματική πατρότητα στην παράδοση της Εκκλησίας» το θέμα των ΙΖ΄ Παυλείων

ΣΕΛΙΔΑ 9

Συνεδρίασε η Νομαρχιακή Επιτροπή του ΠΑΣΟΚ Ημαθίας

«Σε πολιτική ...αμηχανία»

έχει περιέλθει το ΠΑΣΟΚ σύμφωνα με τα λεγόμενα του μέλους του Εθνικού Συμβουλίου Νίκου Κριθαρίδη

Σκληρή κριτική απέναντι στην πολιτική που ακολουθεί η κυβέρνηση άσκησε η κομματική βάση του ΠΑΣΟΚ στην Ημαθία, στην πρώτη διαδικασία, εν όψει της Συνδιάσκεψης της 3ης Σεπτέμβρη 2011, που πραγματοποιήθηκε στην Βέροια το βράδυ της Τετάρτης στο ξενοδοχείο Αιγές. Οι 40 περίπου παρευρισκόμενοι τόνισαν πως είναι αντίθετοι με την πολιτική της κυβέρνησης του Γιώργου Παπανδρέου.

ΣΕΛΙΔΑ 3

Ολοκληρώθηκαν οι συναντήσεις του ευρωπαϊκού δικτύου πόλεων URBACT II - Links στη Βέροια

ΣΕΛΙΔΑ 7

Ομιλία του Ν. Μέρτζου στη Βέροια, με θέμα: «Ευεργέτες Αρμάνοι-Βλάχοι»

ΣΕΛΙΔΑ 6

«Αποκλείστηκε» προσωρινά προς συμμόρφωση η ΕΑΣ Βέροιας από τη διαδικτυακή πύλη του ΟΠΕΚΕΠΕ

ΣΕΛΙΔΑ 3

Εγκαινιάστηκε η πολυαισθητηριακή «αίθουσα της Λένας»

Αίθουσα «Snoezelen» στο Ειδικό Σχολείο Βέροιας

ΣΕΛΙΔΑ 4

Μακεδονική
Καθημερινή Εφημερίδα των Νομών Ημαθίας
Σάββατο 21 - Κυριακή 22 Μαΐου 2011 7

ΗΜΑΘΙΑ

Τεχνικές Αναστήλωσης και Βελτίωσης της Ενεργειακής Συμπεριφοράς των Κτηρίων σε Ιστορικά Κέντρα Πόλεων

Συνάντηση εργασίας στη Βέροια στο πλαίσιο του Προγράμματος URBACT II- LINKS

Ειδικοί Έλληνες και ξένοι από 9 χώρες της Ευρώπης θα συναντηθούν την επόμενη εβδομάδα στη Βέροια από τις 24-26 Μαΐου σε συνάντηση εργασίας, στο πλαίσιο του Προγράμματος «Low tech Inherited from the old European city as a key for performance and Sustainability (LINKS)» (Παραδοσιακή τεχνολογία, κληροδότημα από την παλιά Ευρωπαϊκή πόλη, κλειδί στην απόδοση και βιωσιμότητα) στο πλαίσιο του URBACT II, στο οποίο συμμετέχει ο Δήμος Βέροιας.

Η συνάντηση της Βέροιας, η οποία θα γίνει στο αρχοντικό Σαράφογλου, είναι αφιερωμένη σε τεχνικές οικολογικής αναστήλωσης, δηλαδή τεχνικές που θα βελτιώσουν την ενεργειακή συμπεριφορά των παραδοσιακών κτηρίων και παράλληλα θα είναι συμβατές με τις πολιτιστικές και περιβαλλοντικές αξίες τους.

Γενικός συντονιστής είναι ο Δήμος της **Bayonne** (Γαλλία) και συμμετέχουν οι δήμοι **Delft** (Ολλανδία), **Anderlecht** (Βέλγιο), **Veria** (Ελλάδα), **Almeria** (Ισπανία), **Budrio** (Ιταλία), **Kilkenny** (Ιρλανδία), **Freiberg** (Γερμανία) και **Brasov** (Ρουμανία)

Η πρώτη μέρα της συνάντησης, είναι αφιερωμένη στη γνώση, τι θα πρέπει δηλαδή να γνωρίζουμε για τα διατηρητέα κτήρια για να τα αναστηλώσουμε και για να βελτιώσουμε την ενεργειακή τους απόδοση, αεβόμενοι τις εσωτερικές τους ποιότητες, και πολιτιστικές και περιβαλλοντικές.

Το πρόγραμμα της 1ης μέρας

Πρωινή ανοιχτή συνάντηση

8:30-9:00 Προσέλευση - εγγραφή

9:00-9:15 Καλωσόρισμα και ξενάγηση στο Αρχοντικό Σαράφογλου από τις **κκ. Άρτεμη Καλογήρου** και **Στέλλα Σιδηροπούλου**, αρχιτέκτονες

9:15-9:30 Χαιρετισμοί, **Χαρίκλεια Ουσουλτζόγλου Γεωργιάδη**, Δήμαρχος Βέροιας, **Νίκος Ουσουλτζόγλου**, Πρόεδρος του Επιμελητηρίου Ημαθίας, **Βίλμα Μαυροματίδου**, Γραμματέας του Συλλόγου Αρχιτεκτόνων

9:30-10:00 **Frederique Calvanus**, επικεφαλής εταίρος **Κλεοπάτρα Θεολογίδου**, εταίρος υποδοχής. Εισαγωγή στη συνάντηση εργασίας

10:00-11:00 Κεντρική ομιλία από τον καθ. **Job Roos** (TU Delft), «Αναζητώντας την ισορροπία» Η ανακάλυψη της εκχώρησης μέσα από την ολοκληρωμένη προσέγγιση

11:00-11:30 Διάλειμμα για καφέ

11:30-12:00 **Antonio Borghi**, επικεφαλής εμπειρογνώμων, Εισαγωγή στη δομή της συνάντησης εργασίας του LINKS «Εισαγωγή στη Μεθοδολογία για την ανάλυση των αναγκών των ιστορικών κτηρίων στο πλαίσιο του περιεχομένου τους»

12:00-12:30 **Δημήτρης Τροχόπουλος**, αρχιτέκτων «Τι σκέφτονται οι πολίτες για το ιστορικό κέντρο της Βέροιας: - Παρουσίαση των αποτελεσμάτων ερωτηματολογίου»

12:30-13:00 Ερωτήσεις και απαντήσεις

13:00-14:00 Γεύμα

Απογευματινή ανοιχτή συνάντηση

14:00-15:00 Καθ. **Ιωάννα Παπαγιάννη** (ΑΠΘ – Πολυτεχνική Σχολή), «Η παθολογία των ιστορικών κατασκευών στη Βέροια στο πλαίσιο της ολοκληρωμένης προσέγγισης για την οικολογική αναστήλωση και το πρόγραμμα εργασιών στο πλαίσιο του LINKS»

15:00-16:00 **Αικατερίνη Δράκου**, αρχιτέκτων, Καθηγ. **Αριστείδης Τσαγκρασούλης** (Πανεπ. Θεσσαλίας – Πολυτεχνική Σχολή), *«Διερεύνηση της συμπεριφοράς και της ικανοποίησης των ενοίκων από τις εσωτερικές περιβαλλοντικές συνθήκες σε ένα τυπικό ιστορικό κτήριο της Βέροιας. Προκαταρκτικά αποτελέσματα από δοκιμές του αεροστεγούς στην οικία Χατζήκου»*

16:00-16:30 Διάλειμμα για καφέ

16:30-17:30 **Pouria Shoeibi**, αρχιτέκτων, **Bart Blanquart** αρχιτέκτων designer, Παράδειγμα μελέτης «Κτηνιατρική Σχολή στο Anderlecht»

17:30-18:30 Σύνοψη από τους προσκεκλημένους καθηγητές **κκ. Job Roos, Ιωάννα Παπαγιάννη, Αριστείδη Τσαγκρασούλη** στη θεματική προσέγγιση και στο περιεχόμενο των παρουσιάσεων της πρώτης μέρας

Ερωτήσεις και Απαντήσεις. Θα υπάρχει ταυτόχρονη μετάφραση.

Στις επόμενες 2 μέρες οι συναντήσεις είναι μεταξύ των εταίρων του Προγράμματος. Η 2η μέρα είναι αφιερωμένη στην ανταλλαγή γνώσεων μέσα από την επεξεργασία των σχεδίων – έργων οικολογικής αποκατάστασης με τα οποία συμμετέχει η κάθε πόλη. Την 3η μέρα η συζήτηση θα κινηθεί γύρω από το τι μπορούμε να κάνουμε στις πόλεις μας για να βελτιώσουμε την ποιότητα της αποκατάστασης των κτηρίων και τη διαδικασία ανακαίνισής τους, προάγοντας την ενεργειακή συμπεριφορά τους και διαφυλάσσοντας και προβάλλοντας τις πολιτισμικές αξίες τους, μέσα από τη λειτουργία των Τοπικών Ομάδων Στήριξης και της παραγωγής Σχεδίων Δράσης.

ΕΛΛΑΔΑ

Πυρά δέχτηκαν συνοριοφύλακες στον Έβρο

Πυρά από σύγχρονους Τούρκους δουλεμπόρους δέχτηκε νωρίς το πρωί της Παρασκευής μικτό κλιμάκιο αστυνομικών της Φρόντεξ που περιπολούσε στο Τυχερό Έβρου.

Σύμφωνα με τις πρώτες πληροφορίες, οι Τούρκοι επιβίβασαν σε βάρκες περίπου 90 λαθρομετανάστες και επιχείρησαν να τους περάσουν προς την Ελλάδα. Τότε το κλιμάκιο αστυνομικών της Φρόντεξ, ανάμεσα τους και Έλληνες, τους αντιλήφθηκαν και επιχείρησαν να τους εμποδίσουν.

Ξαφνικά οι Τούρκοι δράστες, όταν κατάλαβαν τι συνέβαινε, άρχισαν να πυροβολούν προς την πλευρά των αστυνομικών χωρίς να υπάρξουν τραυματισμοί. Τελικά οι λαθρομετανάστες επέστρεψαν στην Τουρκία. Η υπόθεση διερευνάται από τις ελληνικές Αρχές και δεν αποκλείεται να υπάρξουν ανακοινώσεις εντός της ημέρας.

Να σημειωθεί ότι το τελευταίο διάστημα διαπιστώθηκε συστηματική μετατόπιση των εισροών από τα χερσαία σύνορα χαμηλότερα προς το Τυχερό, με τους δουλέμπορους να αποβιβάζουν κατά ομάδες τους πρόσφυγες στη νησίδα, αφήνοντας τους στη συνέχεια

να διανύσουν μόνοι τους και με ασφάλεια το δρόμο προς την Ελλάδα.

Για το συγκεκριμένο λόγο, σύμφωνα με πληροφορίες, αποφασίστηκε να τοποθετηθούν μικτές αστυνομικές δυνάμεις πάνω στη νησίδα, ώστε ν' αποτρέπονται οι αποβιβάσεις.

ΤΟΠΙΚΑ
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Οι συμμετέχοντες στο ευρωπαϊκό πρόγραμμα URBACT II:

«Η Βέροια κρύβει πολλούς θησαυρούς»

Τους σκοπούς, τους στόχους και τα συμπεράσματα που προέκυψαν από την εφαρμογή του προγράμματος URBACT II, περιέγραψαν οι υπεύθυνοι του προγράμματος σε συνέντευξη τύπου που έδωσαν χθες το πρωί, στην αίθουσα συνεδριάσεων του Δημαρχείου Βέροιας.

Στην αρχή της συνέντευξης η Δήμαρχος Βέροιας Χαρίκλεια Ουσουλτζόγλου αφού καλωσόρισε τους φιλοξενούμενους του Δήμου, τόνισε πως «η πόλη της Βέροιας τις ημέρες αυτές είχε την τιμή να δεχθεί ειδικούς Έλληνες και ξένους επιστήμονες από 9 χώρες της Ευρώπης (Δήμος της Bayonne (Γαλλία) και συμμετέχουν οι δήμοι Delft (Ολλανδία), Anderlecht (Βέλγιο), Veria (Ελλάδα), Almeria (Ισπανία), Budrio (Ιταλία), Kilkenny (Ιρλανδία), Freiberg (Γερμανία) και Brasov (Ρουμανία)), σε μια συνάντηση εργασίας, στο πλαίσιο του Προγράμματος URBACT II : Παραδοσιακή τεχνολογία, κληροδότημα από την παλιά Ευρωπαϊκή πόλη, κλειδί στην απόδοση και βιωσιμότητα, στο οποίο συμμετείχαμε και εμείς ως Δήμος Βέροιας. Η συνάντηση της Βέροιας, η οποία έγινε στο αρχοντικό «Σαράφογλου», ήταν αφιερωμένη σε τεχνικές οικολογικής αναστήλωσης, που βελτιώνουν την ενεργειακή συμπεριφορά των παραδοσιακών κτηρίων και παράλληλα είναι συμβατές με τις πολιτιστικές και περιβαλλοντικές αξίες τους.

Στο σημείο αυτό η Δήμαρχος δεν παρέλειψε να αναφερθεί στο σημαντικό και ιδιαίτερης αρχιτεκτονικής αξίας κτήριο «Σαράφογλου» λέγοντας ότι «γραφειοκρατία και έλλειψη χρημάτων δεν μας επέτρεψαν ακόμα να λειτουργήσει το συγκεκριμένο κτήριο ως Λαογραφικό Μουσείο, όπως είναι δρομολογημένο. Ευελπιστούμε σύντομα να μπορέσουμε να το παρουσιάσουμε με τα πολύτιμα εκθέματά του.

Στη συνέχεια αναφέρθηκε εν συντομία στο πρόγραμμα που ακολουθήθηκε στο τριήμερο που διήρκεσε η επίσκεψη στη Βέροια λέγοντας: «Η πρώτη μέρα της συνάντησης, ήταν αφιερωμένη στο τι πρέπει να γνωρίζουμε για τα διατηρητέα κτήρια για να τα αναστηλώσουμε και να βελτιώσουμε την ενεργειακή τους απόδοση, σεβόμενοι την πολιτιστική και περιβαλλοντική τους ιδιαιτερότητα.

Η δεύτερη μέρα ήταν αφιερωμένη στην ανταλλαγή γνώσεων από την κάθε πόλη σε θέματα οικολογικής αποκατάστασης. Ενώ την Τρίτη ημέρα η συζήτηση κινείται γύρω από το τι μπορούμε να κάνουμε στις πόλεις μας για να βελτιώσουμε την ποιότητα της αποκατάστασης των κτηρίων.

Από την συνάντηση αυτή αναμένουμε χρήσιμα συμπεράσματα, τα οποία μπορούν να βοηθήσουν τον κατοίκους να ανακατασκευάσουν τα σπίτια τους, αλλά και τις πόλεις μας ώστε να μην χαθεί ο παραδοσιακός χαρακτήρας τους.

Απευθυνόμενοι στους συμμετέχοντες στο πρόγραμμα δήλωσε πως « είμαστε ιδιαίτερα ικανοποιημένοι για αυτή τη διοργάνωση και χαιρόμαστε που σας φιλοξενήσαμε. Ελπίζουμε να σας βοηθήσαμε αποτελεσματικά στις εργασίες σας, ενώ παράλληλα επιχειρήσαμε να σας δείξουμε την περιοχή μας, την ιστορία της, τον πολιτισμό της και τις φυσικές ομορφιές της. Θα είμαστε ευτυχείς να σας συναντήσουμε και πάλι, να ξαναβούμε εσάς ξανά μαζί με τις οικογένειές σας και τους φίλους σας.»

Αμέσως μετά η συντονίστρια του προγράμματος από το Δήμο της Bayonne (Γαλλία) αφού ευχαρίστησε την πόλη για την υπέροχη φιλοξενία επισήμανε τη σπουδαιότητα του προγράμματος λέγοντας ότι η συνάντηση στη Βέροια ήταν αποδοτική, ενώ αυτό που βγήκε ως συμπέρασμα μέσω του προγράμματος είναι πως πολλές πόλεις της Ευρώπης υποφέρουν από έλλειψη ενδιαφέροντος για τα σημαντικής αρχιτεκτονικής κτήρια, τα οποία κινδυνεύουν από τη φθορά και το χρόνο και την εμπορευματοποίηση. «Τα προβλήματα των πόλεων είναι κοινά σε όλη την Ευρώπη και οι διαφοροποιήσεις λίγες. Μερικές πόλεις τα κατάφεραν καλύτερα συγκριτικά με κάποιες άλλες, πετυχαίνοντας να μην μετατρέψουν το ιστορικό τους κέντρο σε υπαίθριο μουσείο.»

Συμπερασματικά, όπως σημείωσε «είναι αναγκαίο να βρεθεί η ισορροπία για τη διατήρηση της αρχιτεκτονικής κληρονομιάς από τη μια, σε συνδυασμό με την απαραίτητη εξέλιξη που θα απαντά ταυτόχρονα στις ανάγκες των κατοίκων και λαμβάνοντας συγχρόνως υπ΄όψιν την ενεργειακή συμπεριφορά αυτών των κτηρίων.

Ο ειδικός εμπειρογνώμων του προγράμματος Antonio Borghi, αφού εξέφρασε τις ευχαριστίες του και έκανε ειδική αναφορά στην επίσκεψή τους στη Βεργίνα λέγοντας ότι «ο τόπος μας είναι η ρίζα του Δυτικού Πολιτισμού» μίλησε γενικά για το πρόγραμμα τονίζοντας πως οποιαδήποτε ανάπλαση- αναγέννηση θα πρέπει να λαμβάνει υπ΄ όψιν τους ανθρώπους κατά κύριο λόγο και όχι μόνο τα κτήρια απομονώνοντάς τα από το αστικό και πολεοδομικό περιβάλλον.»Η αρχιτεκτονική κληρονομιά που έχουμε και βρίσκεται στην καρδιά της πόλης είναι το πιο σημαντικό. Η προσπάθειά μας είναι να την διατηρήσουμε σε καλή κατάσταση για τα παιδιά μας»

Η υπεύθυνη του προγράμματος από την πλευρά του Δήμου Βέροιας και ειδική συνεργάτις της Δημάρχου Πάτρα Θεολογίδου, ήταν αυτή που βοήθησε τη συζήτηση και τη συνέντευξη μεταφράζοντας από τα ελληνικά στα αγγλικά και αντίστροφα.

Παράλληλα περιέγραψε τις εντυπώσεις των φιλοξενουμένων και ειδικότερα του καθηγητή Job Roos του οποίου τα λόγια μετέφερε στην αίθουσα. «ο καθ. Job Roos δήλωσε απογοητευμένος από την πρώτη ημέρα της μικρής περιήγησε λέγοντας ότι δεν μπορεί να εντοπίσει το λόγο για τον οποίο επελέγη η Βέροια να συμμετέχει στο συγκεκριμένο πρόγραμμα. Μετά όμως την περιήγηση της δεύτερης ημέρα που ήταν πιο ολοκληρωμένη δήλωσε εντυπωσιασμένος τονίζοντας πως «η Βέροια έχει πολλούς κρυμένους θησαυρούς».

Σε σχετικό ερώτημα ένας εκ των επισκεπτών είπε πως αφ΄ενός η κατάσταση των κτηρίων της πόλης είναι άσχημη και η αποκατάσταση τους δύσκολη και αφ ετέρου είναι αναγκαία η εκπόνηση μιας πολεοδομικής- αστικής μελέτης, να υπάρξει δηλαδή ένα πλάνο για όλη την περιοχή πάνω στο οποίο πρέπει να κινούνται τα όποια έργα.

Σημείωσε δε ότι οι σωστές αποκαταστάσεις με τα σωστά υλικά φέρνουν αστική αναγέννηση, τονώνουν την οικονομία και τον τουρισμό.

Μετά το τέλος της συνέντευξης το Μέλος του ΤΕΕ Ημαθίας Γιώργος Ουρσουζίδης ανέλυσε την τεχνική που χρησιμοποιήθηκε προκειμένου να γίνει η αποκατάσταση και επανάχρηση του ιστορικού κτηρίου που φιλοξενεί σήμερα τις υπηρεσίες του Δήμου.

ΗΜΕΡΗΣΙΑ Σάββατο 21 Μαΐου 2011 ΗΜΑΘΙΑ σελίδα 9
www.imerisia-ver.gr

Συνάντηση εργασίας στη Βέροια στο πλαίσιο του Προγράμματος URBACT II - LINKS

Τεχνικές Αναστήλωσης και Βελτίωσης της Ενεργειακής Συμπεριφοράς των Κτιρίων σε Ιστορικά Κέντρα Πόλεων

Ειδικοί Έλληνες και ξένοι από 9 χώρες της Ευρώπης θα συνα-ντηθούν την επόμενη εβδομάδα στη Βέροια σε συνάντηση ερ- γασίας, στο πλαίσιο του Προγράμματος «Low tech Inherited from the old European city as a key for performance and Sustainability (LINKS)» (Παραδοσιακή τεχνολογία, κληροδότημα από την παλιά Ευρωπαϊκή πόλη, κλειδί στην απόδοση και βιωσιμότητα) στο πλαίσιο του URBACT II, στο οποίο συμμετέχει ο Δήμος Βέροιας.

Η συνάντηση της Βέροιας, η οποία θα γίνει στο αρχοντικό Σαράφογλου, είναι αφιερωμένη σε τεχνικές οικολο-γικής αναστήλωσης, δηλαδή τεχνικές που θα βελτιώσουν την ενεργειακή συμπεριφορά των παραδοσιακών κτηρίων και παράλληλα θα είναι συμβατές με τις πολιτιστικές και περιβαλλοντικές αξίες τους. Γενικός συντονιστής είναι ο Δήμος της Bayonne (Γαλλία) και συμμετέχουν οι δήμοι Delft (Ολλανδία), Anderlecht (Βέλγιο), Veria (Ελλάδα), Almeria (Ισπανία), Budrio (Ιταλία), Kilkenny (Ιρλανδία), Freiberg (Γερμανία) και Brasov (Ρουμανία)

Η πρώτη μέρα της συνάντησης, είναι αφιερωμένη στη γνώση, τι θα πρέπει δηλαδή να γνωρίζουμε για τα διατηρητέα κτήρια για να τα αναστηλώσουμε και για να βελτιώσουμε την ενεργειακή τους απόδοση, σεβόμενοι τις εσωτερικές τους ποιότητες, και πολιτιστικές και περιβαλλοντικές.

Στις επόμενες 2 μέρες οι συναντήσεις είναι μεταξύ των εταίρων του Προγράμματος.

Η 2η μέρα είναι αφιερωμένη στην ανταλλαγή γνώσεων μέσα από την επεξεργασία των σχεδίων – έργων οικολογικής αποκατάστασης με τα οποία συμμετέχει η κάθε πόλη.

Την 3η μέρα η συζήτηση θα κινηθεί γύρω από το τι μπορούμε να κάνουμε στις πόλεις μας για να βελτιώσουμε την ποιότητα της αποκατάστασης των κτηρίων και τη διαδικασία ανακαίνισής τους, προάγοντας την ενεργειακή συμπεριφορά τους και διαφυλάσσοντας και προβάλλοντας τις πολιτισμικές αξίες τους, μέσα από τη λειτουργία των Τοπικών Ομάδων Στήριξης και της παραγωγής Σχεδίων Δράσης.

Σύσκεψη για τη λειτουργία του νέου Νομικού Προσώπου Πρωτοβάθμιας Εκπαίδευσης του Δήμου Αλεξάνδρειας

Σύσκεψη, με τη συμμετοχή των διευθυντών όλων των σχολικών μονάδων πρωτοβάθμιας εκπαίδευσης που λειτουργούν στα διοικητικά όρια του δήμου Αλεξάνδρειας, θα πραγματοποιηθεί την Τετάρτη 25 Μαΐου στις 12:30 π.μ. στην αίθουσα συνεδριάσεων του δημοτικού συμβουλίου Αλεξάνδρειας. Σύμφωνα με το έγγραφο της πρόσκλησης, που έστειλε χθες ο δήμαρχος Αλεξάνδρειας κ. Φώτης Δημητριάδης στον προϊστάμενο του 2ου Γραφείου Πρωτοβάθμιας Εκπαίδευσης, η σύσκεψη θα έχει ενημερωτικό χαρακτήρα ενόψει της ενεργοποίησης του νέου νομικού προσώπου πρωτοβάθμιας εκπαίδευσης του δήμου Αλεξάνδρειας, στο οποίο συγχωνεύθηκαν οι 27 υφιστάμενες μέχρι πρότινος σχολικές επιτροπές δημοτικών σχολείων και νηπιαγωγείων.

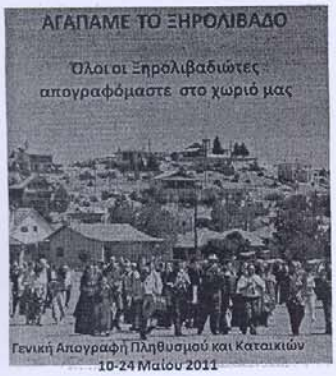
Το νέο νομικό πρόσωπο του δήμου, σύμφωνα με το νέο πλαίσιο λειτουργίας των σχολικών επιτροπών που θεσπίστηκε με την 8440/24-02-2011 απόφαση του Υπουργού Εσωτερικών, θα είναι πλέον αρμόδιο για τη διαχείριση των πιστώσεων που διατίθενται για την κάλυψη των λειτουργικών δαπανών των σχολείων πρωτοβάθμιας εκπαίδευσης του δήμου Αλεξάνδρειας, την καταβολή της αμοιβής στις καθαρίστριες των σχολείων, την εκτέλεση έργων για την επισκευή και συντήρηση των σχολικών κτιρίων και του κάθε είδους εξοπλισμού τους, την υποβολή εισηγήσεων προς την οικεία διεύθυνση πρωτοβάθμιας εκπαίδευσης για τον εφοδιασμό των σχολείων και της βιβλιοθήκης τους, τη διαχείριση των εσόδων και τη λήψη μέτρων που κρίνονται αναγκαία για τη στήριξη της διοικητικής λειτουργίας των σχολείων.

Τη διοίκηση της νέας σχολικής επιτροπής θα ασκεί 13μελές διοικητικό συμβούλιο που ορίστηκε ήδη από το δημοτικό συμβούλιο, με πρόεδρο τον δημοτικό σύμβουλο κ. Χρήστο Κωτούλα. Συμμετέχουν επίσης οι δημοτικοί σύμβουλοι κ.κ. Όλγα Μοσχοπούλου (αντιπρόεδρος), Δημήτριος Παπαδόπουλος, Ισαάκ Χαλκίδης και Χρήστος Αλευράς, τέσσερις διευθυντές δημοτικών σχολείων και τέσσερις, επίσης, εκπρόσωποι συλλόγων γονέων.

Το διοικητικό συμβούλιο, αφού συγκροτηθεί σε σώμα (αναμένεται να γίνει ευθύς αμέσως μετά τη δημοσίευση στο ΦΕΚ της πράξης σύστασης του νέου νομικού προσώπου), θα πρέπει να προχωρήσει στη συγκρότηση 5μελών «Συμβουλίων Σχολικής Κοινότητας» σε κάθε σχολείο ή σχολικό συγκρότημα πρωτοβάθμιας εκπαίδευσης που τελεί υπό την εποπτεία του.

Στη σύσκεψη αναμένεται να συζητηθούν θέματα οικονομικής διαχείρισης της νέας σχολικής επιτροπής και να τεθούν διάφορα προβλήματα που αντιμετωπίζουν τα σχολεία.

Ανάλογη σύσκεψη θα πραγματοποιηθεί και για το νέο νομικό πρόσωπο δευτεροβάθμιας εκπαίδευσης του δήμου Αλεξάνδρειας, σε ημερομηνία που θα ανακοινωθεί από το δήμαρχο τις προσεχείς ημέρες.



■ Αύριο Κυριακή 22 Μαΐου

Απογραφή στο Ξηρολίβαδο

Ο Πολιτιστικός Όμιλος Ξηρολιβάδου ενημερώνει όλους τους Ξηρολιβαδιώτες ότι την Κυριακή 22 Μαΐου 2011 θα βρίσκονται στο Ξηρολίβαδο οι απογραφείς που επισκέπτονται το χωριό στα πλαίσια της Γενικής Απογραφής Πληθυσμού και Κατοικιών.

Επισημαίνεται οτι η διαδικασία αυτή ενεργοποιείται κάθε 10 χρόνια και τα στοιχεία που συλλέγονται χρησιμοποιούνται από την πολιτεία και τους δημόσιους φορείς για τον οικονομικό προγραμματισμό και την γενικότερη αναπτυξιακή πορεία του τόπου.

Καλούνται ΟΛΟΙ ΟΙ Ξηρολιβαδιώτες που δεν έχουν ακόμα απογραφεί να προσέλθουν την Κυριακή 22 Μαΐου 2011 στο Ξηρολίβαδο.

Για περαιτέρω πληροφορίες οι ενδιαφερόμενοι μπορούν να επικοινωνούν με το Δ.Σ. του ΠΟΞ στα τηλέφωνα : 697765611, 6982201275, 6946461136, 6973044040, 6973802735, 6972915427 και 6944435992.

■ Στη Νάουσα για πρώτη φορά

Αγώνες κατάβασης με ποδήλατα mountain

▸▸ *Στις 4 και 5 Ιουνίου η οργάνωση του αθλήματος*

Η ερασιτεχνική ομάδα ορεινής ποδηλασίας cross country & downhill στη Νάουσα διοργανώνει στις 4-5 Ιουνίου στα 3-5 Πηγάδια για πρώτη φορά αγώνα κατάβασης με mountain ποδήλατα σ' ένα άθλημα που είναι στα σπάργανά του στην Ελλάδα και γνωρίζει μεγάλη άνθηση στο εξωτερικό.

Ηδη μέχρι σήμερα έχουν δηλώσει 268 αθλητές απ' όλη την Ελλάδα και αναμένεται ο αριθμός να ξεπεράσει τους 450 μέχρι τέλος Μαΐου. Αφετηρία έχει δηλωθεί η κορφή του Βερμίου Αγιο Πνεύμα, στα 5 Πηγάδια και ο τερματισμός θα είναι στην πύλη του πάρκου στη Νάουσα...

Πληροφοριες για δήλωση συμμετοχης στο 6974004880.

The restoration of the Ractivan building and its transformation into the City Hall of Veria *by Mr. George Oursouzidis*

On behalf of the technical chamber of Central Macedonia, we welcome you in Veria. I am going to present in brief, the history of this particular building, along with its technical characteristics, the description of the progress of the restoration works, and last but not least the basic building materials.
The building as you can see, is situated in the city center, directly connected to a restored territory, where commercial, administrative and cultural activities coexist. This significant restored neoclassical structure was constructed in the beginning of the 20th century, (1906), which was towards the end of the Turkish occupation. It is among the few representatives of monumental neoclassical architectural structures that still exist in town.

Figure 1. Town hall of Veria

It is worth mentioning that prior to its initial construction, back in 1906, there was a request of the local church authorities to the Bezyr Abid Vahid Han the 2nd, including the following reference:
Bezyr, you with your deep thinking ability who governs with wisdom your people, are begged to accept our request, and allow us to construct a boys' school in this City. The cost will be covered by donations of the locals with Ractivan being the most important of all. His statue was then erected at the entrance of the building.
During the German occupation, the building stopped serving as a school, only for a short period of time, during which it housed the administration of the local occupational forces. During the same

short period the basement served as a prison. After a while, it continued as a school, following the request of the citizens.
It housed the needs for schooling until 1996 when the administrative authorities of the city of Veria begun the restoration works after a lot of friction with the local church as far as its ownership was concerned. Finally after reaching some sensible conclusion both sides came to an agreement, according to which the city could finally acquire its City Hall while the church kept part of the basement along with the 77% of the three-story underground parking lot, constructed beside the City Hall in its backyard.
In 1990 the construction licence is issued concerning the restoration of the Ractivan building and its transformation into the City Hall.
In 1996 the licence is re-examined as to the space plan, as it included for instance a mayors office, and the local council hall, as well as the reinforcement of the building's structure, which initially included the reinforcement of the wall units with an inner mantle of beton arme of a width of 10 cm. which would inevitably affect negatively the building's facade since all the openings would have to be shortened by 10 cm.. The new study respecting the new existing evidence then proved that the previous one was based on wrong assumptions.

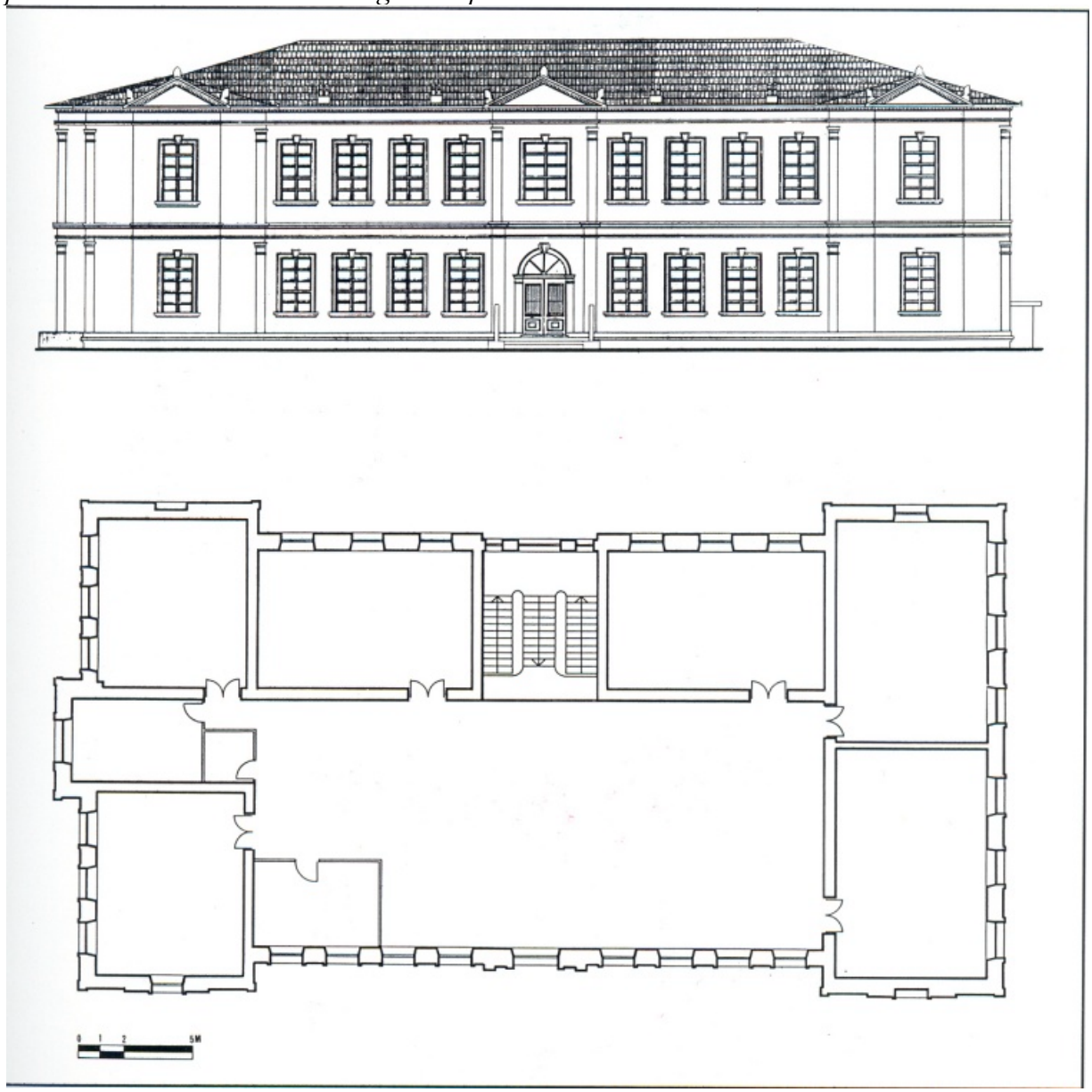


Figure 2: Plan and Elevation of the Ractivan schoolbuilding

Description of construction

The general dimensions of this building are approximately 40 by 21 meters, a total area of 780 sq. meters on each floor. It includes a basement, a ground floor and a first floor. The total height reaches 12 meters. The roof frame is made of chestnut-timber, held together by metal straps, every 2 meters, which are embedded in the walls.
All the walls are armed wall units, within which metal peripheral rods, run along its perimeter. The cross section of these rods is 70 by 8 millimetres, and are connected to vertical ones at the corners of the wall units.

The width of the walls are diverse, starting at 80 cm. at the ground floor to 60 cm. at the 1st floor as far as the external walls are concerned. For the rest of the interior walls, the width is 50 cm. in all floors.
The basement was initially only partly accessible. More precisely, only 150 sq. meters could be accessible. The rest was cleared during the restoration works in 1996, and the area of 780 sq. meters was recovered. The width of the basement walls, which actually consist the foundation of the structure, exceeds 1m.
The building materials in the basement walls are a mixture of solid hard rock put together using strong cement.
For the ground and first floors locally found pored rock was used with layers of compact bricks.
The flooring was also made with chestnut wood, with an arrangement of rafters every 55 cm. which hold the weight of the floor, while being connected to the walls. The rafter's cross section is 8 by 14 cm. and are mounted on the walls with the help of metal rods. It is actually an arrangement of vertical and horizontal metal rods at the rims of the walls along the rafters. Wherever wide openings exist, in order to achieve elasticity and flexibility, there was enforcement with metal rods, on both sides.

Further restoration works

The walls were stripped of all the plaster covering them, in the interior of the building and the pored rock and bricks came to the surface. On seeing this magnificent effect, approval was sought by the 4th division of archaeology, so that the existing walls were kept as seen today. They of course had to be cleaned and scraped by hand and special tools, which was done. The connecting plaster was removed, to a depth of 4 to 5 cm. and new connecting material was used. This included white sandstone, white cement, fine powder made of brick, ochre and a special clear ritin, acting as glue. These are the basic reconstructing works and the building materials used.

The budget was 350 million drachmas, (1 million euros).

During the 1st phase (1996) 60,000 euros was required. During phase 2, (1997), another 300,000 euros and phase 3, (1998), 220,000 euros. A total of 580,000 euros until 1998.
The rest of the money, (420,000 euros), was used to cover electrical and mechanical installations, air-conditioning as well as for the purchase of furniture, computers etc.
Finally I would like to refer to the energy efficiency of the premises and note that this building served as school for more than 100 years housing more than 40 students per class. This alone indicates that the choice of material and cross sections was enough to ensure the efficiency of this structure. Let's then look elsewhere for the evident reasons of energy waste.
Concluding, I would like to thank you all for listening and express my wish that all the important knowledge you possess will be used for the benefit of society.

Afternoon session

Guidelines for drafting your Local Action Plan *by Lead Expert Antonio Borghi*

INTRODUCTION

URBACT Program was born out of the wish to capitalise the experiences collected by the cities that had implemented Urban and/or Urban II project. It was felt that the "European way" to urban regeneration and urban development was different from the national and local urban policies and that, after implementation, reflection and capitalisation was needed.

The re-financing of the URBACT program was preceded by an evaluation of the response by the cities and a survey of the result that had been achieved. On the basis of this analysis it was not only decided to re-finance it, but also on one side to provide the programme with more resources and increase the percentage of EU funding for every partner city, on the other to make the selection of the partner cities and the project harder and to enlarge the scope of work of the networks.

URBACT II has made a step further: reflection and capitalisation are now the basis for the production and implement a LOCAL ACTION PLAN according to the demand and analysis of the state of play at local level made by the LOCAL SUPPORT GROUPS and the guidelines drafted by the NETWORK.

All URBACT II partners in Thematic Networks are required to elaborate a Local Action Plan as a consequence of the knowledge sharing process that takes place within the network to respond to the demand and the suggestions that arises from the Local Support Groups. The Local Action Plans should provide the city with a concrete roadmap and range of solutions to tackle the issues identified at the beginning of the Network and furthermore, at program level they will represent an output for sharing of knowledge and capitalisation process.

Therefore it is important that the LAP have a comparable framework and format. Discussions between the partners on goals, actions, stakeholders, resources etc. are only possible if every partner makes an effort to use the same language, with comparable definitions and format.

All partners have experience with urban programming and planning. For some of you what I am going to say will be familiar, for others it might sound strange, too detailed, or too simple, missing essential information. This presentation seeks to offer a structure which should be suitable for most existing planning context and methods, but it is also open for improvements or adaptations, to better suit the needs of the partners.

What we shall keep in mind is that LAPs should be drawn up in a definite and clear way, so that they can form the basis for potential requests for EU funds. They should be consist of single actions aiming at an overall objective in line with the city's development strategy and the EU goals.

The structure of the document itself could be as follows:

1. ***What is your vision?*** *Title/Motto of the Local Action Plan summarising its Concept and Vision. This is a very important part of the LAP that will serve as a guide for the whole document and its content. Ideally it should be discussed in depth and agreed among the*

stakeholders as the first step of building the Local Action Plan, but if the management team or its Stakeholders group cannot find an agreement it can also be decided at a later stage.

2. ***What is the state of play?*** *Analytical introduction of the cities challenges and potential with regarding to the issues to be addressed. This part is a further development of the city profile that was attached to the application form and should highlight the progress that has been made during the last months and thanks to the participation to the LINKS Network.*
3. ***How do you describe your strategic approach?*** *General overview of the strategic objectives of the Local Action Plan, in the framework of the local policy targets, mentioning the list of actions proposed and resources available or to be activated.*
4. ***How are you going to tackle the single targets?*** *Detailed description of each action in relationship to objectives, resources, responsibilities, implementation steps and deadlines.*
5. ***Which legal and institutional framework are you going to deal with?*** *Legal and institutional framework for each action with special regard to the Governance of the Local Action Plan.*
6. ***Who does the work?*** *List of the stakeholders involved in the action plan and the responsibilities to be assumed by each of them.*
7. ***How much money will it cost and where will it come from?*** *A cost estimate (even if not complete) for each action, including information on funding already allocated, potential source of additional funding and financing programmes that partners can apply for.*
8. ***When will result be visible?*** *An overall time schedule to visualise the sequence of various actions.*
9. ***What does others think about your strategy and actions proposed?*** *The outcome of consultations on the actions proposed.*
10. ***How could you visualize the rational of your strategy?*** *Illustrations such as statistic, research findings, plans, pictures, articles related to the issues tackled and the actions proposed.*
11. ***Any examples?*** *Comparable projects that have been already implemented in that field or with a similar approach, in the city itself or elsewhere.*

Presentation of Local Support Groups and activities carried out so far by partners - Synthesis *by Lead Expert Antonio Borghi*

After the presentation of the guidelines the partners have been invited to present the state of play of activities within the Local Support Group and the ideas intended to be at the heart of the future Local Action Plans. In an informal tour de table every city representative has illustrated the subjects involved and the ongoing activities, showing a variety of attitudes that reflects the diversity of urban environments and culture. Just like it was noted in the presentation of the case studies the day before, the activities of ULSG in the different cities showed a great variety of approaches to the given problematic and a large number of ongoing activities. The chance to put all these activities in the same format and discuss them in a peer review was welcomed by the partners who agreed to do it at the earliest possible stage on the basis of the first drafts of Local Action Plans. Following you will find relevant samples of the ongoing activities by ULSG and in some cases a first draft of the Local Action Plan.

State of play of U.L.S.G. and L.A.P. in BRASOV

Composition

(1) Brasov Metropolitan Agency (coordinating, promoting); (2) Brasov City (beneficiary, promotion); (3) Brasov City Council (:mediation with local council); (4) Architects Order of Romania (technical consultant); (5) Department of Culture Brasov (tehnical consultant); (6) Efficiency Management Agency and Environmental Protection Brasov (technical consultant); (7) Urban art depot (promotion); (8) Growth Pole Brasov (consultation); (9) Transilvania University of Brasov - Faculty of Civil Engineering (technical consultant); (10) Chamber of Commerce and Industry Brasov (consultant); (11) Management Authority (consultation)

Activities

Until now we have collected data from various institutions of interest trying to make a audit of the historic center. In this order we have collected:

- Total number of the houses existing in the historical center
- Total number of the people living in the historical center
- Which building is listed or not etc

The ULSG will meet after each visit planned in the project work plan and before the final meeting of the project. The ULSG group will meet on a regular basis, in order to organise the Local Work Programme, coordinate the preparation of the Local Action Plan, integrate the learning from the exchanges with the other partners. We debate with ULGS members good practice examples from the other partners of the project in order to create our own models and working tools. We will disseminate all project information during implementation. ULGS members are involved in Local Action Plan elaboration.

Members of ULGS will be encouraged to participating in other regional or national network for exchange of knowledge. We will inform the MA about the project deployment. The MA will be invited to participate at all project meetings, both ULGS and project partners.

The categories of the audiences that we want to reach at local/national level are: Local politicians and political authorities, universities, inhabitants, local entrepreneurs, national authorities, national and local heritage institutions, national and local educational organizations.

Setting up our Local Action Plan

We will make a public debate in July with the people that are living in the historical center to show them the right way to rehabilitate a building. For this debate we will make flyers, examples of picture to highlight which is the right and the wrong way. With this we could highlight the real

issues and so we can provide solutions in LAP. The LAP will be correlated with the strategies that we have: Integrated Development Plan. We have made a draft of the LAP.

State of play of U.L.S.G. and L.A.P. in DELFT

Objectives and Vision

Our goal is to elaborate a coherent and integrated plan for the protection and development of sustainable built heritage on various scales, such as there are: the building, the urban fabric, integrating re-use and an integral approach in policies. Slogans as "conservation by development" and "Delft Creating History" are illustrative for these.

Unless more than ten years of successful and intensive inner city management there is an on-going need to respond to changing needs. Energy-saving issues, major urban developments including activities of re-use around the inner city, gathering the essential stakeholders and integrating existing local policies are major points in this.

Bullet points for the Local Action Plan

- Knowledge about eco-restoration /cooperation with KISSZ network (regional) and Nyenrode network (national)
- Pilot integral policy towards inhabitants /subsidy-program department of Environment "Bestaande Stad bespaart": program to be planned
- Innovative pilot project BK-City SLIM /see presentation Veria (Job Roos), member ULSG
- Evaluation governance policy urban renewal inner city (existing policies) /in progress
- People participation event "open monumentendag" /organizing, theme "Re-use of historical buildings"
- Theme Zuid-Holland: re-use religious heritage /Pilot-project "de Witte Roos" (see also case-study presented in Almeria)
- Cooperation on technical and social focus /participation Almeria ULSG-member Witte Roos (Cor Rademaker)

State of play of U.L.S.G. and L.A.P. in Veria

The ULSG of Veria was created during the first phase of the programme. It consists of 14 members, representatives of different legal entities and associations, relevant to the theme of LINKS. In this ULSG a small group is more active and prepares information and material for the plenary sessions, where decisions are taken. This group has regular meetings, while the plenary meets approximately every three months.

In the first stage of the action plan and during the first meetings of the ULSG, the time was mostly dedicated to definitions, which are the concept and the contents – themes of the action plan.

Up to-date, the activities for the action plan are as follows:

Analysis of the existing situation in the different themes of LINKS

Citizens' participation – urban challenges

Emphasis is given to citizens' participation – urban challenges, how to involve local people to the eco-restoration of the historic center, in order to transform it to a place where everybody wants to live. For this purpose a questionnaire was prepared addressed to current and past residents of the historic center. A first sample of answers has already been gathered and the results were presented in the first day of the meeting in Veria. This questionnaire is planned to be addresses to a bigger sample. Based on the above results and the LINKS experience, further actions are planned to be taken.

The type of uses allowed in historic buildings is a major theme, as well as the quality of the public space. The analysis of the existing situation is in progress.

Techniques

Collaboration with the Aristotle's University of Thessaloniki and the University of Thessaly, in order to analyze the different characteristics of the local traditional materials, assess the energy behavior of listed buildings in Veria and propose methods of eco-restoration, taking into account the values of the historic buildings. For this purpose, based on existed literature and recordings on site, maps are made where basic types of historic buildings (architecture, construction) are distinguished as well as the state of preservation – extent of damage.

Economy

There were not taken any activities so far for this sector. A meeting is organized on Friday the 8th of July with the Chamber of Imathia, which represents the SMEs in the county, discuss the theme and programme actions.

Training

Efforts are made to get funds from Life Long Learning Programmes for training people involved in eco-restoration.

The Municipality of Veria is participating to a relevant Project, submitted by the Aristotle's University of Thessaloniki in order to be funded by the INTERREG Programme.

Based on the experience gained and the work made so far in the context of LINKS, the detailed contents of the Action Plan are going to be discussed and decided in the plenary of the ULSG planned to take place on Friday the 16th of July.

Local U.L.S.G. Freiberg

Immediately after the project start in 2010, a Local Support Group was created in Freiberg. Consisting of various actors of Freiberg's economy and administration, this group is constantly working on the LAP.

In close cooperation with the Urban Development Office of the City of Freiberg is tested how they can work with the results of the LINKS project and integrate them in the "12 Commandments" of the urban development framework plan of the old town of Freiberg.

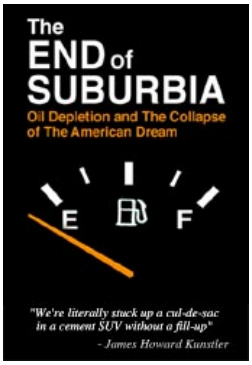
Contact points for implementation of project results:

- Creation of a "13th Commandment " regarding sustainability and renewable energy sources in the urban development framework plan of the old town of Freiberg
- Establish a guideline on citizen participation in urban development and design processes
- Development of best-practice examples in the small area / neighborhood-related energy efficiency audit
- Eligibility check of possible future projects for investing on eco-restoration of historic town centers

At the moment the ULSG is in a process of analysing the actual urban development framework plan. We want to point out how far we can go in adjusting the existing framework plan and if we can build in our imaginations of a contemporary instrument of town planning. For this we work close together with local actors and our MA to prevent a limited view on this subject. The next step will be a sketch of our improvements that have to be approved by Freiberg's City Council.

State of play of U.L.S.G. and L.A.P. in Bayonne

PREAMBLE **WHAT IS THE VISION OF THE STAKES**



A preliminary challenge: to make the scope of the project understandable and to explain why an integrated approach is necessary.

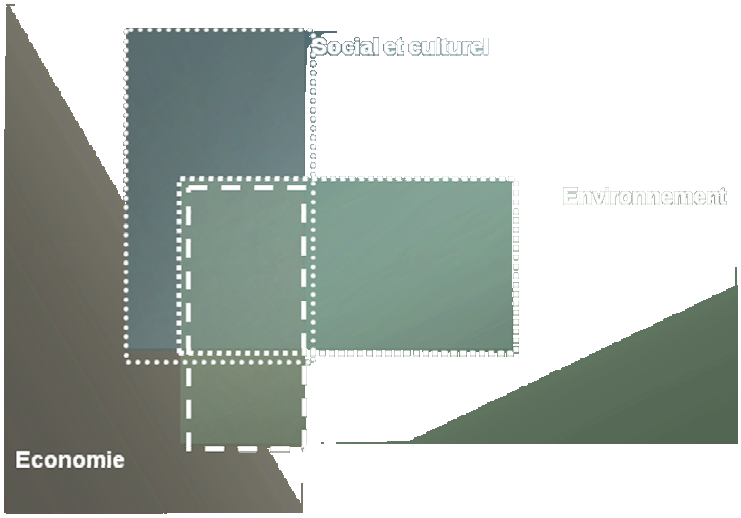
The genesis of the project :

The Revenge of the historic centres :

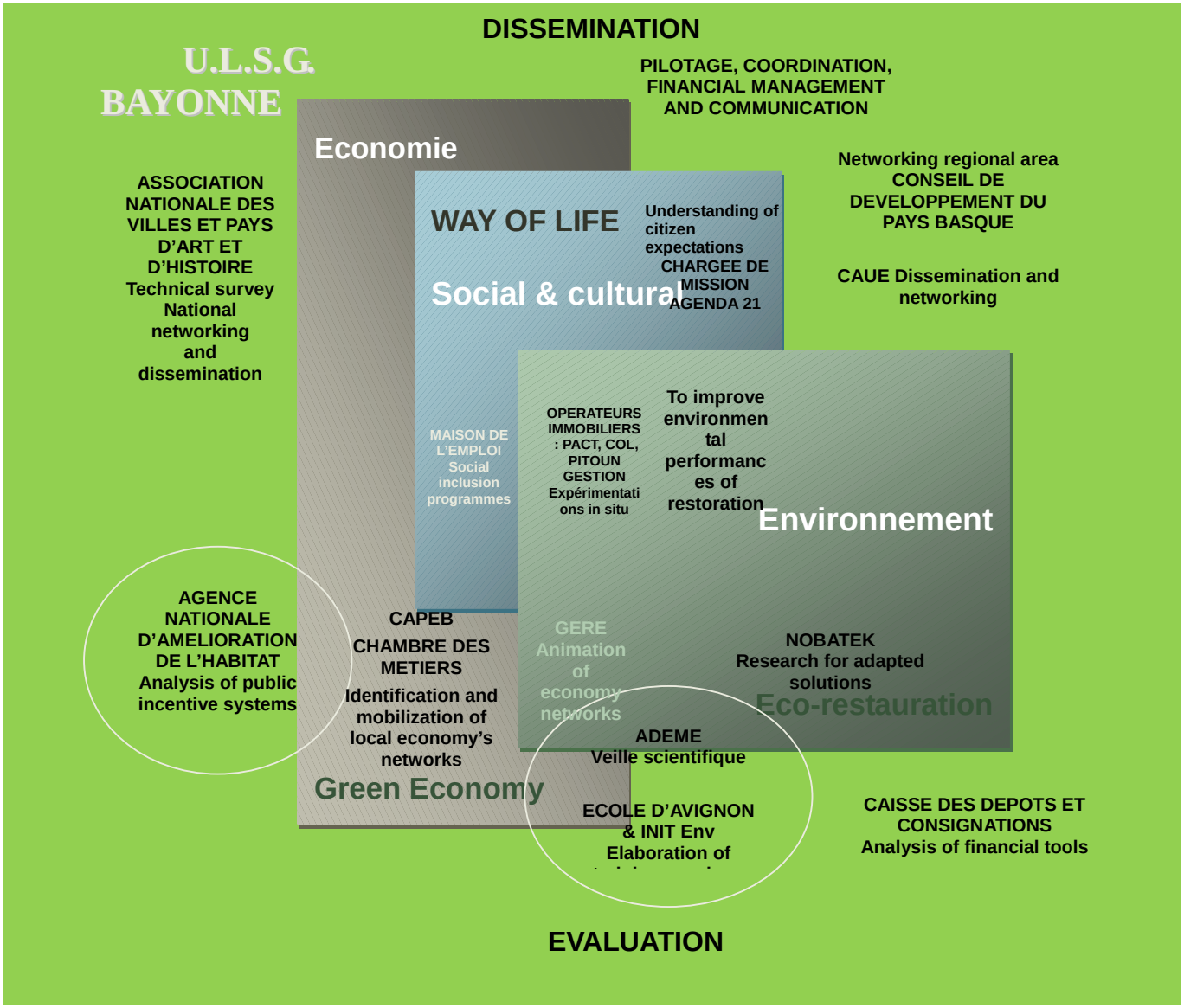
The historic centres are « pic-oil proof »

Historic centres are considered as potential future eco-districts.

What is the scope of LINKS ? A wide scope where urban, social, cultural, environmental and economic dimension must be considered. An integrated approach which fits the pillars of sustainable development



What are the issues to address within this comprehensive scope ?



To tackle these different aspects of the project, the city of Bayonne has chosen to organize its ULSG in 3 different subgroups.

Bottom-up **ORGANIZATION OF BAYONNE ULSG's Sub-groups**

CONNECTION between subgroups

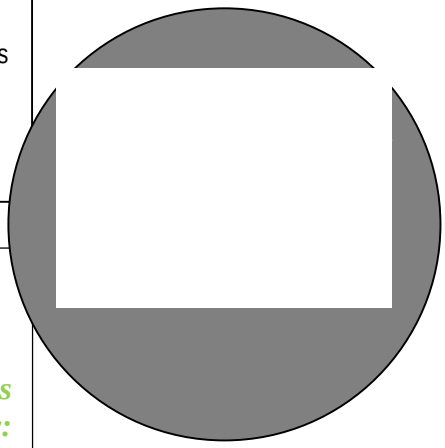
ULSG subgroup 1 : Social expectations

Making life in the historical centre an opportunity for all

Participants: inhabitants (in the framework of the Agenda 21 process), NGOs, architects, management agents, Developers, public servants

Questions to examine: quality of housing (quality of living spaces, energy efficiency, acoustic comfort…), urban comfort (quality and use of public places and collective spaces or inner courtyards, urban cleanliness, noise pollution, accessibility, social and fubnctional diversity…;)

In charge of the edition of the L.A.P. : to be defined (probably an architect)



ULSG subgroup 2 : Searching for Technical, Legal and financial solutions to implement eco-restoration

Traditional building techniques & materials as assets for sustainability: how to preserve & promote them ?

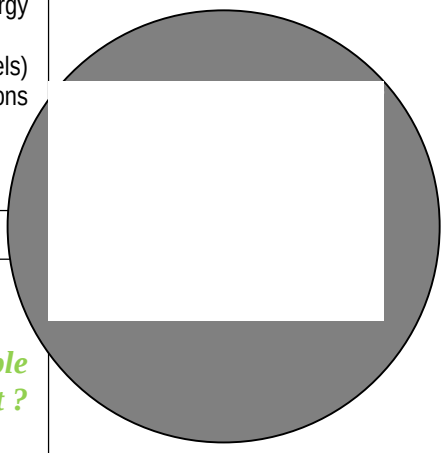
Participants: architects, craftmen, developers, SD specialists, lawyers, public servants

Questions to examine: inventory of:

1/ qualities regarding Sustainable development, (energy preservation, CO2 reduction, impact on health, etc)

2/ technical, legal & financial tools (at national and local levels) easing eco-restoration, identification of necessary evolutions and improvements (standards, skills development…).

In charge of the edition of the L.A.P.



ULSG subgroup 3 : Sustainable Economical Development

Eco-restoration : an asset for sustainable local development ?

Participants: able and interested local professional networks: architects, engineering consulting firms, tradesmen trained or to be trained, suppliers' networks in adapted building materials …

Questions to examine: inventory of local resources and lacks, needs in training, associating to the network the key stakeholders so as to organize the local training session plan.

In charge of the edition of the L.A.P. GERE, Groupement des enterprises respectueuses de l'environnement

STATE **LOCAL SUPPORT GROUPS TO DEFINE A COMMON STRATEGIC APPROACH**

The assets

The first approach we had before to apply to the URBACT programme :

- Ancient buildings are (theorically) not so bad in terms of energy performance,
- What is the real situation?

The treats :

The loss of interest :

- The translation of the french proverb is :
- "One who wants to kill his dog says that the dog suffers from rabbies."
- That means that we also can find good reasons to get rid of something.
- Here for old buildings, we can say that they are uncomfortable, dangerous, expensive to refurbish …

A pernicious threat : the trivialization and the slow decay

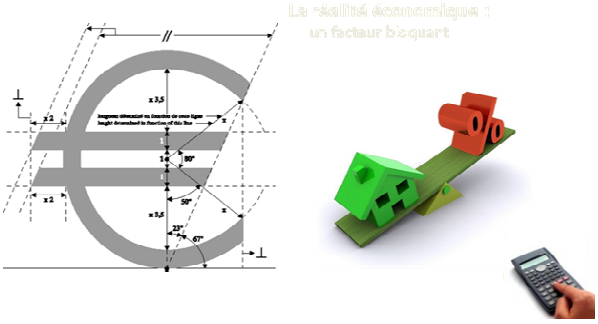
How to face the expectations :

- **To create confortable housing :** it is necessary to deepen the reflexion about « functionnalities » of dwellings : uses, relation between indoor and out door …
- It is necessary to find ways to **introduce contemporary architectures**,
- To improve energy efficiency of buildings **but** … not at any price…

How can we act ?

The recent technical literature is very abundant; **the role of the technical ULSG is to clarify the messages to make knowledge available** for a wide audience.

The aims given to the sub group dedicated to economy



- To **develop local market, to enhance local materials and know-how**.
- To **make knowledge and technics available** : to improve the information pole, to create an exhibition of eco-materials…
- To incentive the restoration

Question of method — **TO GET STAKEHOLDERS' INVOLMENT**

Understand the objectif of URBACT programme and get interested by LINKS partners' experiences :

- Knowledge in Europe and presentation of the baseline study has been done to ULSG's members byNOBATEK who realized the baseline study,
- Illustration of general stakes or echo of local situation is given by photos coming from LINKS partners.

U.L.S.G. and L.A. P. in Bubrio

1. INSTITUTIONAL STEPS

In April 2011 Budrio Municipality held a meeting with Managing Authority (Emilia Romagna Region Industry and Trade Council councillorship General Manager). The aims were:

- To update Managing Authority on LINKS project activities and results;
- To present LAP issues in the framework of regional support to Municipal actions for a sustainable development;
- To verify the coherence among LAP aims and pilot projects and the financial support by ERDF and ESF funds managed by the region, also in framework of Regional Energy Plan recently approved.

Managing Authority confirmed its participation in ULSG and the synergy between LAP and Municipal energy Plans promoted by Regional energy Plan. Citizens participation is the important condition requested in both plans. Regional energy plan can also provide financial contribution to LAP actions realisation.

In May 2011 LAP priorities were presented to Municipal Council and received its approval. ULSG members composition was also defined.

Budrio LAP priorities are focussed on:

- Constitution of a “Municipal Reserved Desk” in order to Provide citizens interested in energy efficiency interventions with information on financing, solving of bureaucratic questions and technical assistance for project implementation;
- Energy saving and renewable energy production in public building in historical centre;
- Involvement of private investors in renewable energy plants realization (Photovoltaic above all);
- Definition of right procedures for energy efficiency interventions in historic buildings and city centre sustainability involving EU and Regional Funds (ERDF and Regional Energy Plan);
- To improve near future cooperation/agreement with Provincial Cultural Heritage safeguard Body;
- To provide historical centre with:
  - Energy saving in public lighting
  - Light pollution elimination
  - Video-superintendence
  - Citizens information panels
  - WI-FI internet access points

Pilot projects:

Eco-restoration of:

- Water Towers
- Historical Theatre
- Main square (Filopanti square)

2. ULSG Members composition

1 Managing Authority representative

4 Municipal administrators

5 Municipal technicians

1 Provincial Cultural Heritage safeguard Body representative

2 Commercial Associations representatives (ASCOM and CNA)

3 Education sector representatives (University and Committee of students)

2 Representatives of relevant companies of Budrio territory (firms with energy intensive production processes)

2 Representatives of Energy sector companies

5 Professional sector representatives (engineering, architecture, environmental issues)

1 Energy supplier Company

26 - Total participants/stakeholders

3. NEXT STEPS

ULSG meetings agenda

- September 2011
- December 2011
- March 2012
- June 2012
- September 2012

Up to now working groups has been defined as follow:

1° Focus group: Eco-restoration in historical centre

- Energy saving and renewable energy use in private sector (residential buildings and enterprises)
- Energy saving and renewable energy use in municipal properties (building and public spaces)

2° Focus group: Financial issues – fund rising (EU and Regional funds) for eco-restoration

3° Focus group: Citizens needs analysis and municipal tools (Help desk) to be provided

"Value Creation and New Business Models by Energy Efficiency measures in Historic Buildings" International expert seminar on May 13, 2011 in Koblenz in Fortress Ehrenbreitstein

Report on external activity by Lead Expert Antonio Borghi

***EVOCH** is a European network dedicated to explore the economical aspect of heritage conservation, restoration and management. Partners are diverse: national, regional or local institutions, technical companies, sectoral associations, cities administrative departments, witnessing the transverse interest raised by the issue.*
*The partnership is coordinated by **the Castilla and Leon Regional Government (Spain)** who is the authority responsible for legislating, ruling and implementing actions over Cultural, Historic and Archaeological Heritage in the region. Another partner from Spain is **Tecnalia,** a Multidisciplinary Research and Technological Centre with a wide experience in Cultural Heritage issues. As a private research centre close to market application, it has been involved in several research projects dealing with Cultural Heritage issues, at both National and European level.*
*The italian partner of the network is **Assorestauro** the Association of Building companies skilled in Art and Urban restoration. It is the first association in Italy of material, equipment and technology producers, restoration and building companies and providers of services for architectural and monumental heritage conservation.*
*The partner from Germany, who organized the expert seminar in Koblenz, is the association **Kultur und Arbeit e.V.** which offers expertise as well as seminars and workshops for start-up companies in the cultural economy and companies, which want to open up new business fields. The association has published books and brochures on cultural economic topics and started a new working field recently in supporting municipalities in tourism, town marketing and regional development with instruments of cultural economy.*
*From Norway the **Riksantikvaren – Directorate for Cultural Heritage** is the Government authority under the Ministry of Environment in charge of protection and enhancement of Cultural Heritage and responsible for the application of the Cultural Heritage Act and for specific planning issues under the Planning and Building Act. Active in the field of multidisciplinary research for issues related to Cultural Heritage, such as new technologies, energy efficiency and climate change.*

*As stated in the EVoCH website the **specific objectives** of the project are:*

1. *To promote the dialogue between international experts from European countries with different experiences in terms of economic valuation of Cultural Heritage.*
2. *To discuss and analyse different approaches to create and interactive debate aimed to produce common guidance at European-wide level.*
3. *To establish a solid network of cultural operators, public institutions, public bodies, cultural industries and experts in the field of Cultural Heritage, that can be the foundation of the future European Network and Observatory for the study and promotion of the Economic Value of the European Cultural Heritage.*
4. *To promote and exchange good practice in different European countries of approaches to heritage from different regions within Europe.*
5. *To raise awareness in different countries about the need to have a common approach in the direction of taking advantage of cultural Heritage assets towards the consecution of the Lisbon Agenda goal of a more dynamic and sustainable European economy.*
6. *To produce a series of working documents based on the conclusions of the seminars to be used as the basis for an in-depth research agenda on the subject to be implemented at a European wide level.*

The network is funded by the Culture Program of the DG Education and Culture of the EU Commission and is going to be active until 2012.

The conference in Koblenz was focused on "Value Creation and New Business Models by Energy Efficiency Measures in Historic Buildings".
Below you will find a list of the speakers and the main topics of their contributions which were high level and definitely inherent to the LINKS topics.

Welcome and chair of discussion ***Heidi Schumacher,*** *Head of Cultural Department of the Rhineland-Palatinate Ministry of Education, Science, Youth and Culture/Germany and* ***Joe Weingarten,*** *Head of Department "Innovation, Small and Medium-Sized Businesses, Telecommunications" of the Rhineland-Palatinate Ministry of Economy, Traffic, Agriculture and Viticulture/Germany.*

Energy efficiency in historic sites – value creation and new business segments in Rhineland-Palatinate and Guided tour: "Energy-efficient restoration of Fortress Ehrenbreitstein" ***Thomas Metz,*** *Director General of the Rhineland-Palatinate Directorate-General Cultural Heritage/Germany*
"Only a well restored and maintained Heritage can be adequately and thrillingly presented, becoming attractive for visitors and inviting them to stay longer with positive effects on the local economy"
The restoration of the Fortress Ehrenbreitstein offers many examples of good practices valuable for other buildings to be restored. The building has a very peculiar typology and was not easy to

convert in a low energy office building. Utilizing its architectural specificity with compatible uses, the large masonry for wall heating, its strategic location position for geothermic energy and high efficiency heat pumps, the building is an almost net zero building, despite the rigid German weather and the budget constraints of a public building.

Historical buildings - players, interests and options **Dietmar Wiegand,** *Chair for Real Estate Development and Project Management at the Vienna University of Technology/Austria*

"If we manage to take into account the interests of all stakeholder of built heritage restoration we can produce an added value for the urban and the regional development but also for the users of the buildings themselves".

Prof. Wiegand underlines the fundamental role of a careful programming the process of heritage restoration in which all stakeholders should be actively involved form the beginning. Simulation of economic return of investment should take into account the complexity of urban and regional social, economic and cultural environment and predict the outcome of different scenarios in the long term. Programming includes a wide range of activities such as preliminary analysis, evaluation and optimisation of alternative concepts, branding and marketing. In case of historical buildings these activities are even more complex due to the intangible character of social and cultural values.

The socio-economic rationale for historic building reuse, employment and business potential **Terje Nypan**, *Senior Counsellor for Riksantikvaren, Directorate for Cultural Heritage under the Royal Ministry of the Environment/Norway*

"When looking to set the value of cultural heritage objects we must make use of socioeconomic theory. Cultural heritage must be treated as a (consumable) good."

Based on actual real estate and labour market analysis in Germany and UK Nypan describes the renovation and energy efficiency improvement of the existing building stock as a priority in the European development agenda. Cost efficiency, labour intensiveness, environmental impact, cultural dimension are all aspects of this major challenge we have to be prepared to face. European legislation and norms must be updated, the industry, the public sector and the professions must prepare to do it and do it quickly.

Santiago de Compostela: an integrated approach in energy efficiency and cultural heritage protection **Angel Panero Pardo,** *Architect and Director of the Engineering Office of the Santiago Consortium, Santiago de Compostela/Spain*

"Our World Heritage city is a model of hope and best future for mankind in urban life"

The presentation highlighted the long term and integrated strategy that has been successfully put in place for the regeneration of the historical city center on the famous galitian city. Based on a detailed plan of renovation and maintenance in 1994 started the initiative "No todo es Fachada" , which means that "it is not just about Facade", meaning that the city center had to remain a nice place to live for citizens and not an attraction for tourists. The concentration of formal competences at local level, a good urban plan and a cooperative local administration has given birth to a good governance of this process that was managed by a Consortium between public and private sector (Tecnalia). The project went on for 18 years with 1500 interventions approved and supported by the municipality to preserve the historical fabric of the city center and improve its habitability. Away from the high end design debate the Santiago Consortium concentrated to find the balance between what is obvious, necessary and enough. After renovation maintenance has become the highest priority of the public administration, a necessary and labour intensive activity that stimulates local economy, education and innovation (National renovation training center for workers of the building industry).

The Renewable Energy House in Brussels. Lessons learned from an ambitious energy concept applied to a 19th century building **Kim Vanguers,** *Secretary General Renewable Energy House Brussels/Belgium*
"The Renewable Energy House tells us how an ambitious energy concept applied to a historical building helped in its safeguard."
This house in the European Parliament quarter of Brussels is the permanent representation of European Renewable Energy Council (EREC) and showcases all kind of renewable energy sources applications, energy efficiency measures, technologies and materials. It is true that the first implementation of these technologies is sometimes not cost efficient, but taking into account price trends of fossil fuels they often turn out to be more convenient than the traditional ones. http://www.rehbrussels.eu/ *EREC took part to the project New4Old.*

Interdisciplinary Networking as Success Factor for Value Creation in Cultural Heritage Renovation **Karin Drda-Kühn**, *Managing Director Association Culture & Work, Bad Mergentheim/Germany*
"Networks are determinant factors of success in the chain of value creation in the eco-restoration of historical buildings"
On the basis of a comprehensive analysis of the social and economic issues related with restoration, maintenance and energy upgrading of historical building Mrs. Drda-Kühn has shown the importance of networks to fill the gaps and overcome obstacles that make heritage management in many cases so difficult. Having agreed on what has to be done and how much it would cost, the questions are always the following: Who will do the work? And who will get the money? The recent restoration of 4 towers in Germany showed not only that this is possible, but also that the positive effects on the local economy are evident in a short time.

The event was quite compact, without any space for discussion and external contributions, therefore *my presentation of LINKS network took place during the coffee breaks and after the conference itself. Contact details were exchanged with different partners of the EVOCH network and interest in exchange and cross dissemination of outputs have been expressed by many of them.*

Next meetings of EVOCH network will be:

- *June 25, 2011, Rome: "The Role of Private Companies and Non-Profit Organisations in the Value Chain of Cultural Heritage";*
- *August 24 and 25, 2011, Helsinki: "The State of the Art of the Research and Methodologies in Cultural Heritage";*
- *March 2012, Vienna: "Cultural Tourism and Preservation of Cultural Heritage";*
- *April 2012, Brussels: Closing Conference*

Many of the expertise gathered together in Koblenz could be interesting for LINKS network workshops and some of the documents produced should be exchanged. In particular the ***Questionnaire*** *and the* ***ten point conclusions paper*** *has been disseminated to the participants as an outcome of this expert seminar.*
It was especially mentioned the need for a ***repertoire of good practices*** *on the web, on which LINKS and EVOCH could cooperate in a concrete way.*