

Editorial

Dear Co2olBricks friends and partners, our project is now on full steam ahead, after two more productive meetings and attached seminars in Helsinki and Malmö we finalised the baseline studies for work package 3 and 4 and for work package 5 is almost ready. After the layout during the next weeks they will be published. Based on these studies the further steps are under preparation and especially the researches and pilot projects in work package 4 are getting very concrete. With our next project partner meeting and international seminar we are going to extend and fill with life our network to Veliky Novgorod in Russia in February. I wish you an interesting reading of this second Co2olBricks Newsletter

Yours sincerely



Co2olBricks Project Coordinator



Successful seminar and intensive work in Helsinki

From October 10 to 12, 2011 the partners of the EU-Interreg IVB Baltic Sea Region project „Co2olBricks“ met in Helsinki, Finland to compile their work of the last five months and to discuss the results with external experts, architects and planners during a one day seminar.

The seminar on October 12, 2011 was opened by Tommi Lindh from the Finnish Ministry of the Environment (YM), Department for the Built Environment / Living with an overview over the various words for built heritage or listed buildings and continued with insights into the development of the built stock in Finland mainly during the last 100 years and the future prospects.

Afterwards Kari Kolu, managing director of Renor ltd presented how his company refurbished an old factory to become a shopping centre, including a geothermal heating system.

Mr. Wolfram Spehr of Schwan & Spehr Architects presented his experiences of wall tempering systems. These systems are said to save energy and are systems applicable on the inside of buildings and thus not compromising the outer facade.

Finally Mr. Prof. Ola Wedebrunn gave an overview over the long tradition of brick buildings and how it is used in many ways through the centuries up to our days also in modern buildings.

The seminar took place during the regular meeting of the project „Co2olBricks“ when the partners met to discuss the interim results of the three baseline studies that are currently under preparation in the work packages.

During an excursion to two government buildings from the beginning of the 20th century and a university building from the 1960ies the participants got an insight into the contemporary way of refurbishment of historic buildings in Finland.



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Official Co2olBricks Seminar in Malmö, Sweden



In December the „Co2olBricks“ partners met in Malmö to continue discussing the project's development and how to proceed. Baseline studies for policy development for technical solutions and for education and training in the partner countries have been developed and needed to be discussed in order to see how these should and could be used to argue and move forward the issue of energy efficiency in historic buildings.

On December 14, 2011 the project partners of Co2olBricks and 8 guests attended a very intensive and interesting seminar about internal insulation, development of standards for energetic refurbishment of listed buildings and the stakeholder participation in the implementation of energy efficiency measures.

Dr. Rudolf Plagge of the Technical University of Dresden, Institute for Building Climatology gave extensive insights into the possibilities of internal insulations. Internal insulation is on the one hand an alternative to exterior insulation but on the other hand can cause problems with moisture and mould. An interior insulation is one of the solutions to preserve the historic value of listed buildings because it does not change the exterior outlook. The problem can be that when wrongly implemented mould grows, especially in corners.

Dr. Plagge has developed capillary active insulation material that can absorb moisture from the room and from the exterior wall and is able to evaporate the moisture back to these medias when their humidity has dropped. Before an internal insulation is applied he conducts thorough simulations with his computer programs and thus can tell very exact how thick and in what way the internal insulation has to be applied.

Marte Boro of the Directorate for Cultural Heritage, Norway gave a report about the current state of a feasibility study to develop “Guidelines for improving energy efficiency of architecturally, culturally or historically valuable buildings” by the European Committee for Standardisation (CEN). She is member of the respective working group. Co2olBricks can contribute in the development process of the standard via the national mirror groups of the CEN-Organisation. A contact list will be available through Co2olBricks.

Marte Boro additionally presented some examples of energetic refurbishments of historic houses in Norway. She emphasized the need to look at the whole lifecycle-costs of building materials, that means the stored energy in old houses.



Rainer Schepplmann of the International Climate Cooperation Agency at the Hamburg Ministry for Urban Development and Environment held a lecture how in the project EU CO₂ 80/50 stakeholders were involved in regional climate mitigation strategies. The main tool were workshops where the different stakeholders, such as industry, environmental groups, politicians, building companies, university / research, public enterprises and the chambers of commerce sat around a table and had a simulation tool at hand where they could simulate what happens to the CO₂-emissions when they implement certain measures. The main aim of the workshops is to make it clear that all stakeholders have to agree on a coordinated strategy. An important outcome was that it is often very well possible to achieve a good result. Sometimes maybe not as ambitious as intended but usually much better than with out consensus.

Mr Schepplmann offers to make a workshop with the simulation software within one of the next Co2olBricks meetings.



Seminar on „energy efficiency in historical brick buildings“ in Riga, Latvia

Riga City Council, City Development Department organized an expert seminar on „Energy Efficiency in Historical Brick Buildings: Issues and Opportunities“ on October 13, 2011, in Riga. A wide range of expertise of 75 representatives were present ensuring fruitful discussions between administrative institutions, architects, engineers, housing and building companies and universities. The seminar highlighted energy efficiency issues, as well as provided an opportunity for discussions in groups to jointly talk about the solutions to the problem of energy efficiency measures in the historical brick buildings.

One of the highlighted issues during the seminar concerned the preservation of cultural values while implementing technical solutions and measurements of energy efficiency in historical brick buildings. During the seminar it was concluded the chosen technological solutions (even when they correspond to energy-saving measures) have damaged the historical value of cultural heritage so far and there are no appropriate technical solutions to meet both criteria to protect historical buildings and at the same time not to destroy them.

So, within the project specialists will develop different innovative technical solutions and integrate them in practical applications, pilot implementations and pilot projects and wide spread these solutions during coming seminars in Riga.

3rd Belarusian Innovation Forum and Innovative Projects Contest in Minsk

In the frame of Belarusian Innovation Week an International Workshop-Conference „3rd Belarusian Innovation Forum“ and an Exhibition of Innovative Products took place in Minsk on November 15–18, 2011.

In the context of the Forum a session „Innovation Technologies for Improving the Energy Efficiency in Historic Buildings and the Contest of Innovative Projects“ which included a nomination of the „Best innovative (technology) project for restoration of historical buildings“ were held.



The session took place on November 18, 2011. Representatives of educational and research institutions made presentations on the topic. At conclusion during roundtable discussion participants discussed the problems of energy-efficient restoration of historic buildings and their solutions.

At the closing ceremony of the Belarusian Innovation Week and 3rd Belarusian Innovation Forum the director of the RCTT, Alexander Uspenskiy, presented diplomas to winners of Innovative Projects Contest. In the nomination „Best innovative (technology) project for restoration of historical buildings“ diplomas were presented to Belarusian State Technological University for the project „Architectural products for restoration of historic buildings“ and Institute NIPTIS for the design of „Vacuum Insulation Panels for Restoration of Historic Buildings“.





Seminar „Energy Savings in Construction“ in Lida, Belarus

In the context of the project „Urb.Energy – Energy Efficient and Integrated Urban Development Action“ the „Energy Savings in Construction“ seminar took place in Lida (Belarus) on November 24–25, 2011.

Urb.Energy is a European transnational joint project, part-financed by the European Union in the frame of the Baltic Sea Region Programme 2007–2013. The project Urb.Energy started in January 2009 and has duration of three years.

The seminar was organized by Lida-Business Incubator and the branch office of the Republican Centre for Technology Transfer at Apsel Ltd. (Lida).

Over 30 experts from different regions of the Republic of Belarus participated in the seminar including representatives of the Republican Centre for Technology Transfer (RCTT). The head of the technology transfer department of RCTT Mikhail Dzenisenka delivered a report on the subject „Efficient building products of Belarusian manufacturers which can be used to reduce the energy consumption of historic buildings, and principal specialist of RCTT Aliaksei Uspenski gave a presentation on „Energy efficient restoration of historic buildings in Saxony (Germany)“.

Seminar in Stockholm and Kalmar

During October and November 2011 The Swedish Association for Building Preservation held a seminar on energy efficiency and cultural heritage values in single family houses.

At the seminar in Stockholm on October 25, 2011 with around 40 participants, the Stockholm City Museum represented „Co2olBricks“ in the seminar program and in Kalmar on November 30, 2011 with over 130 participants, the Swedish project partner, Energy Agency Southeast Sweden represented the project.

The speakers talked about small measures that one can do as a private owner without large investments and with little or no negative effect on the cultural values. One example was Mikael Söderström Rosén, civil engineer specializing in energy at Kan



Energi AB, who spoke about sustainable energy systems in buildings and how they relate to the buildings cultural values. Another example was Varis Bokalders, architect and author, who described different types of insulation material and differences, properties and influences on buildings.

Tomas Örn from The Stockholm City Museum talked about „Co2olBricks“ and how the new energy directives and implementation in Swedish building regulations effects the house owners. Daniel Uppsäll from Energy Agency Southeast Sweden described the „Co2olBricks“ from the perspective that in addition to the important work the private person does concerning energy efficiency in cultural buildings these questions are also discussed and investigated in large projects on national and European level.

Private persons were the main target group, but a large number of the participants had knowledge and an interest related to their daily work. There were representatives from municipalities, regional counties, regional county museums and other working areas of interest for coming meetings with stakeholders and round table discussions in the „Co2olBricks“ project.



BFW Workinggroup „Energy“ in Hamburg - Climate Protection versus Heritage Preservation

Invited by the Bundesverband Freier Immobilien- und Wohnungsunternehmen (BFW) (Federal Association of Free Real Estate and Housing Companies) the project Co₂olBricks performed a workshop in the Exhibition Center of „CO₂-Sparhaus“ in Hamburg on December 8, 2011.

Over 50 interested participants from private and cooperative housing companies, authorities, architects, banks, lawyer offices, energy consultants and further stakeholders listened to speeches from representatives from Hamburg Monuments Preservation Department. Mr. Prahm presented the Co₂olBricks project, Mr. Bürgener explained the importance of the brick buildings for Hamburg's history and the new challenges concerning the energetic qualification of brick buildings.

Then Mr. Schett gave detailed insights into technical problems and solutions for energetic refurbishment of historic brick buildings. After explaining their point of view a fruitful discussion started. Especially technical and financial questions had been discussed and the status of monuments and possibilities of an energetic refurbishment of brick buildings as well as funding have been a subject. In the end a new network has been created and all participants agreed satisfied to meet again in the next year.

Workpackage 3: Policy Development

The second period of the project in work package 3 has been devoted to compile the inventory of the current status in each country concerning management of cultural heritage and energy efficiency questions, laws on protection, building regulations and financial mechanisms.

The first draft of the compilation of the base line study was sent out to the partners so that they could comment and come up with suggestions. The work package had a meeting in Helsinki in October where a first draft of the baseline study was presented. All partners took part in group discussion where the content and layout of the baseline study was discussed.



It was also discussed which questions could be identified and brought up as topics in the stake holder groups and round table meetings. Some of the topics appointed for further discussions in stakeholder groups and expert seminars were:

- Evaluation and selection - categorisation of built heritage within the project. That is defining categories of heritage and listing the amount of buildings for each category. Investigations, statistics and figures of energy consumption of (that defined) built heritage. Thereby it will be possible to find potential savings and compare to the whole building stock.
- Models for decision-making processes before starting energy efficiency measures in built heritage/historical buildings.
- Development of financial mechanisms to support preservation of heritage and energy efficiency



Workpackage 4: Technical Innovations

In period 2 the work in WP4 started to accelerate after the first get to know of the partners and work tasks in period 1. Within the second half of the year the handbook “Energy efficient refurbishment of historic brick buildings in member states of the Baltic Sea Region” has been finalised and supplemented by contributions from further partners, so that now seven states give an insight into their way of energetic qualification of historic buildings. The handbook will be published in the beginning of 2012.

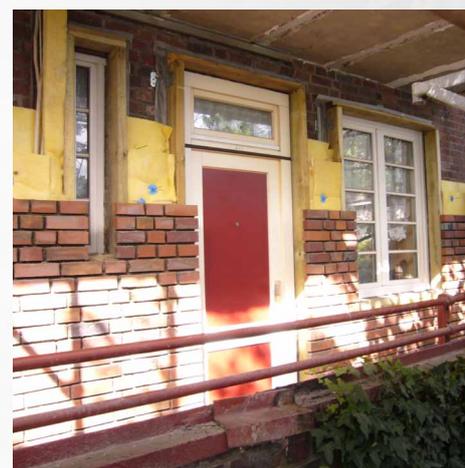
During the partner meeting in Helsinki and Malmö besides the handbook the further tasks have been started. First of all the envisaged researches of the PPs have been reconciliated and discussed. The main point was to combine the different researches and to implement steps to guarantee their comparability. The researches are set up differently: On the one hand they concentrate on technical solutions for interior insulation, on the other hand they are looking for detailed information about physical processes in brick masonries to suggest refurbishment strategies. Furthermore a material analysis will be performed as well as energetic refurbishments will be evaluated.

In parts the researches started already in period 2, the others will follow in the first half of 2012. Also the envisaged pilot projects in Riga, Kothla-Järve, Malmö and Hamburg have

been discussed, first steps for the implementation prepared and problems thematised. Furthermore different meetings had been held in which stakeholders and interested persons participated. E.g. one meeting was organised to present a wall heating system to housing companies, architects and authorities; at another one the importance of historic brick buildings and the new demands of energetic qualification had been discussed by interested participants. Of course “Co₂olBricks” has been presented at the meetings, so that the project is on the minds.

Workpackage 5: Education and Economic Promotion

The baseline study “Education situation and Labour Market Conditions” is now completed with more information about the labour market in BSR countries. WP5 LP is making further investigations, collecting the information about demands of different professions related to historical building refurbishment.



The next steps in WP5 during project periods III and IV will be:

- Start of development of workshop concepts, training modules, curricula and training material with support of Educational Groups in cooperation with Technical Boards (WP4)
- Execution of workshops
- Ongoing meetings of Educational Groups
- Articles published in magazines and presentations at other events

The lectures, presentations and other educational, recommendation and credential materials will be prepared for public in general, house owners and stakeholders, building companies, apprentices in crafts of bricklayers, plasterers, lagging, construction and architecture students, working craftsmen, architects, building supervising staff, energy auditors.

Four main categories of learning packages will be:

1. Cultural heritage and historic constructions
2. Energy efficient refurbishment measures and technical services (heating, ventilation, indoor climate)
3. Quality Management and work planning
4. Market opportunities

The preliminary themes for the lecture materials were already discussed in VGTU and were presented during the PP meeting in Malmö.



Schwan & Spehr Architects wall tempering system

On September 16, 2011 the architects Christoph Schwan and Wolfram Spehr presented their wall tempering system at a stakeholder meeting in the Department for Heritage Preservation in Hamburg. 16 participants from housing companies, architectural offices and authorities listened to the informative explanations of the architects.

The low-tech-refurbishment as Mr. Schwan and Mr. Spehr describe their system reduces the energy consumption of a building by half they say. Contrary to common heating systems (60-80°C) the wall tempering system works with a low temperature of around 35°C. This means one needs only half the energy to heat the water.

Within the wall tempering system the walls work as a radiator. The aim is to heat the walls up to 21°C on the surface. That guarantees that the comfortableness for human beings is given, moisture on the surface does not appear and therefore no mold fungus will grow. Furthermore the temperature in the wall profile rises and therewith the insulating properties like J.S. Cammerer calculated it: the less moisture in the wall the more the insulation effect!

The wall temperature system by Schwan and Spehr works in new construction as well as in existing buildings. The system is installed on the inside of the outer walls: Plastic covered copper pipes of a diameter of 14mm are put in loops on the inside of the outer wall. In existing buildings the pipes can either be installed on the inside shell of the plaster and are then covered by 30mm of plaster. Or the pipes can be installed in a slit on the inside of the outer wall and are then plastered so that the wall thickness is not increased. The installation in existing buildings can be implemented even in inhabited flats during a few days. During the construction a foil wall is set up 1.5m behind the outer wall within the flat to keep the dust out.

After the installation of the system the heating system runs with 35°C. This gives the opportunity to completely supply the system by renewable energies. Solar collectors, geo-thermal heat pumps and buffers can provide a low energy house.



Dates and Events

- 26.-29.01.12 | **Bozen | Italy**
 - 02.-04.02.12 | **Vilnius | Lithuania**
 - 21.-22.02.12 | **Velikij Novgorod | Russia**
 - 29.02.12 | **Minsk | Belarus**

 - 21.-23.05.12 | **Tallinn and Kothla-Järve | Estonia**
 - 24.05.12 | **Minsk | Belarus**

 - 04.-07.09.12 | **Minsk | Belarus**
 - 17.-19.09.12 | **Malmö | Sweden and Copenhagen | Denmark**
 - 09.-12.10.12 | **Minsk | Belarus**
 - 12.-15.11.12 | **Minsk | Belarus**

 - 22.-24.11.12 | **Leipzig | Germany**
- Fair and Conference „Klimahouse 2012“
“Education Fair Vilnius”
Co2olBricks Partner Meeting
IV International Conference „Energy efficient construction: modern energy saving technologies“
Co2olBricks Partner Meeting
3rd Conference „Reconstruction and restoration of buildings and structures“
20th International Specialized Exhibition „BUDPRAGRES ,2012“
Co2olBricks Midterm Conference
- 17th Belarusian Energy and Environmental Protection Forum
International Workshop „Innovation Technologies for Improving the Energy Efficiency in Historic Buildings“
Fair and Conference “Denkmal 2012”

find more information and updated events on www.co2olbricks.eu

Contacts

Co₂olBricks

Lead Partner

Department for Heritage
Preservation Hamburg
Jan Prahm
fon: +49 40 42824-729
jan.prahm@kb.hamburg.de
www.hamburg.de/denkmalchutzamt



Hamburg | Ministry of Culture

Department for Heritage Preservation
Hamburg
Albert Schett / Bendix Bürgener
fon: +49 40 42824-728
bendix.buergener@kb.hamburg.de
www.hamburg.de/denkmalchutzamt



Hamburg | Coordination Center
for Climate Issues

Ministry for Urban
Development and Environment Hamburg
Rainer Scheppelmann
fon: +49 40 42840-2536
rainer.scheppelmann@bsu.hamburg.de
www.hamburg.de/bsu



Vocational Training Centre
Hamburg
Jens Schwarz
fon: +49 40 63900318
jens.schwarz@azb-hamburg.de
www.azb-hamburg.de

Landes-
hauptstadt Kiel



City of Kiel
Environment Department
Jens-Peter Koopmann
fon: +49 431 9013738
jens-peter.koopmann@kiel.de
www.kiel.de



City of Stockholm
Stockholm City Museum
Tomas Örn
fon: +46 8 508 31 556
tomas.orn@stockholm.se
www.stadsmuseum.stockholm.se



Energy Agency for Southeast Sweden

Daniel Uppsell
fon: +46 470723335
daniel.upsall@energikontorsydost.se
www.energikontorsydost.se



Swedish National Heritage Board

Therese Sonehag
fon: +46 851918414
therese.sonehag@raa.se
www.raa.se



City of Malmö
Environment Department
Roland Zinkernagel
fon: +46 40342079
roland.zinkernagel@malmö.se
www.malmö.se



Danish Building Research Institute,
SBI at Aalborg University; Depart-
ment of Construction and Health
Torben-Valdbjørn Rasmussen
fon: +45 99 40 22 72
tvr@sbi.dk
www.sbi.dk



Information Center for
Sustainable Renovation NGO
(SRIK NGO)
Tarmo-Andre Elvisto
fon: +372 6414434
info@renoveeri.net
www.renoveeri.net



Kothla-Järve Town Government

Jelena Dulneva
fon: +372 3378538
jelena.dulneva@kjl.lv.ee
www.kjl.lv.ee



Centre for Development Programs
(EMI-ECO)
Anne Randmer
fon: +372 5049798
anne@emico.ee
www.emico.ee



City of Riga
City Development Department
Amanda Saleniece
fon: +371 67105515
amanda.saleniece@riga.lv
www.riga.lv



Riga Technical University
Institute of Environment
Protection and Energy Systems
Dr. sc. Ing. Andra Blumberga
fon: +371 295 165 06
andra.blumberga@rtu.lv
www.rtu.lv



European Foundation of Monuments
Protection
Waclaw Wachnik
fon: +48 58 305 30 20
w.wachnik@efoz.org.pl
www.efoz.org.pl



Republican Centre for Technology
Transfer, Belarus
Dr. Alexander Uspenskiy
fon: +375 296114489
uspenskiy@mail.ru
www.icct.by



KIINKO - Real Estate Education

Marja-Leena Sallinen
fon: +358 40 550 79 14
marja-leena.sallinen@kiinko.fi
www.kiinko.fi



Vilnius Gediminas
Technical University
Marija Burinskiene
fon: +370 52744720
marbur@vgtu.lt
www.msk.ap.vgtu.lt

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p.5 European Parliament p.6 AZB
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Imprint

Co2ol Bricks Communication Management · Jan Gerbitz
ZEBAU GmbH · Große Elbstraße 146 · 22767 Hamburg · Germany
fon +49 40 380384-29 · www.zebau.de · co2olbricks@zebau.de

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