

NEWSLETTER 5

June 2015

This 5th newsletter will be edited for the PIRATE project final meeting - our journey is close to its end!

PIRATE partners will present their work during a public Info Day in Verden, on June 17th, at the Northern-German Centre for Sustainable Building www.nznb.de.

We will have plenary presentations and info tables about mobility, earth construction in higher education, our new MoU (memorandum of understanding) for ECVET Earth Building, all our teaching, communication and assessment tools available in many languages and of course about assessment of learning outcomes in earth construction with the new units of learning outcomes developed during PIRATE project.

More info about this public day is online on the PIRATE news page:

http://pirate.greenbuildingtraining.eu/public/?page_id=2003



In this edition you will find a focus on the certification process for the ECVET Earth Building units in 4 out of our 8 project countries: UK, Spain, France and Serbia.

Also there is a summary about our last work group meeting called BRICK Test.

Finally, partners present some other dissemination and workshop activities. Lots of things are developing for earth construction training all over Europe and beyond!

We will give you some more news in our last edition, newsletter 6, in September 2015. In the meantime it would be great to meet at one of the many earth building courses during this summer: have a look at the PIRATE partners program on their websites:

http://pirate.greenbuildingtraining.eu/public/?page_id=144



yours sincerely

Lydie Didier, CRAterre, PIRATE project leader

<http://pirate.earthbuilding.eu>



PIRATE news from UK

P13

1. Recognition of Learning Outcomes in Earth Construction within reach

The Pirate project has produced new training standards for building with earth and this takes the earlier ECVET project writing training standards for clay plasters to the next level. But what does this mean in terms of a certified training standard in the UK?

The UK training and assessment model allows for training and assessment either in training centres or on site, but the emphasis is on-site. This is why the UK qualification is called the National Vocational Qualification NVQ. To achieve this training at whatever level there has first to be a National Occupational Standard, NOS, a standard which is overseen by a body with representation from the 4 UK nations, England, Scotland, Wales and Northern Ireland.

In fact the NOS was amended to take account of the ECVET process a few years ago but a thorough review to include both plasters and structures was deemed relevant with the production of the Pirate work. Representatives from the Scottish and English nations NOS bodies invited stakeholders to discuss the new content and how it sits within the existing NOS. It was suggested that the new work should sit within what is called Heritage Skills where there is already mention of earth as a building material. But a major amendment to the existing structure was made to include 'New Build' in the title structure, making it clear that although many of the skills are old, what they can be used for is new.

Each line of the NOS has to be examined and amended where necessary, and this mainly concerns the descriptions and activities while much of the mandatory health and safety issues remain unchanged.

Two meetings covered the structures and plasters documents, crucially the plasters work from a few years ago did not have the 'New Build' wording. These documents have now been circulated for comment amongst all four nations and are expected to become the new NOS in mid-2015.

This puts Pirate work directly into the certified construction training framework in the UK and opens the door to earth structures and finishes NVQ's. The next step will be to implement training programs to take advantage of these changes, something EBUK has begun to work on!



2. Recent events

Earth Building UK held it's first Festival: In response to growing interest from EBUK members for more activities, EBUK has been organising a week-long programme of earth workshops and events around its annual conference. The theme of the conference was the culture of earth building. So Clayfest was at Errol an old Scottish town built in a lost clay tradition of mudwall, also known as cob or bauge in French, celebrating the important clay architecture of this area.

<http://www.ebuk.uk.com/ebuk-2015-clayfest>

June 8th – 11th: 4 days of workshops covering arrange of techniques including rammed earth, cob, mudwall conservation, clay plasters, turf building, and clay/fibres.

June 12th : Annual EBUK Conference

June 13th: Clay Community Day

Clayfest was supported by Historic Scotland
<http://conservation.historic-scotland.gov.uk/home.htm>

Clayfest was part of a 3-year programme of activities to explore and celebrate local earth heritage <http://www.taylp.org/gallery.php>

PIRATE news from Spain

P14

1. Certification:

Official discussions with the INCUAL, Instituto Nacional de Cualificaciones (National Qualifications Institute) and Regional Certification agencies needed to have a complete translation of the Learning outcomes as elaborated in PIRATE project: English is not well understood in Spain and we were asked to complete translations before starting to talk. Now that the work is translated, this certification phase starts, looking for the recognition of the units in vocational education. However, beyond the implementation of the diploma "Earthbuilder"- utopian in our current reality - PIRATE modular structure can integrate into existing qualifications, enriching the training of other professionals within and beyond the field of construction, and that's the perspective we are giving to our ECVET Earthbuilding presentation.



2. Recent events

- **May 19th to 24th** / Casas del Rey, Paredes de Nava, Spain / Estepa hosted a Partner meeting of the Leonardo da Vinci project "New members for ECVET Earthbuilding, with a public presentation and private working session on Mediterranean particularities.
- **May 21st** / COAL – Board of Architects, Palencia, Spain / Public presentation of the PIRATE Project: New Units of learning outcomes and Mobility issues.
- **May 29th** / Les Grands Ateliers, Villefontaine, France / Estepa presented PIRATE and ECVET Earth Building in Spanish to 25 people at the Festival "Grains d'Isère", mostly trainers from Spain and Latin America; further activities are already being programmed with many of them and a Spanish-speaking "learning outcomes approach" network may be about to be born.



3. Upcoming workshops

- **July - August 2015** / Casas del Rey, Paredes de Nava, Spain / Estepa workshops:
Traditional adobe and Light clay&straw blocs (terre-paille)
Ovens – Traditional castellan double chamber oven, public community equipment
Clay plasters: new and restoration

www.estepa.org



PIRATE news from France

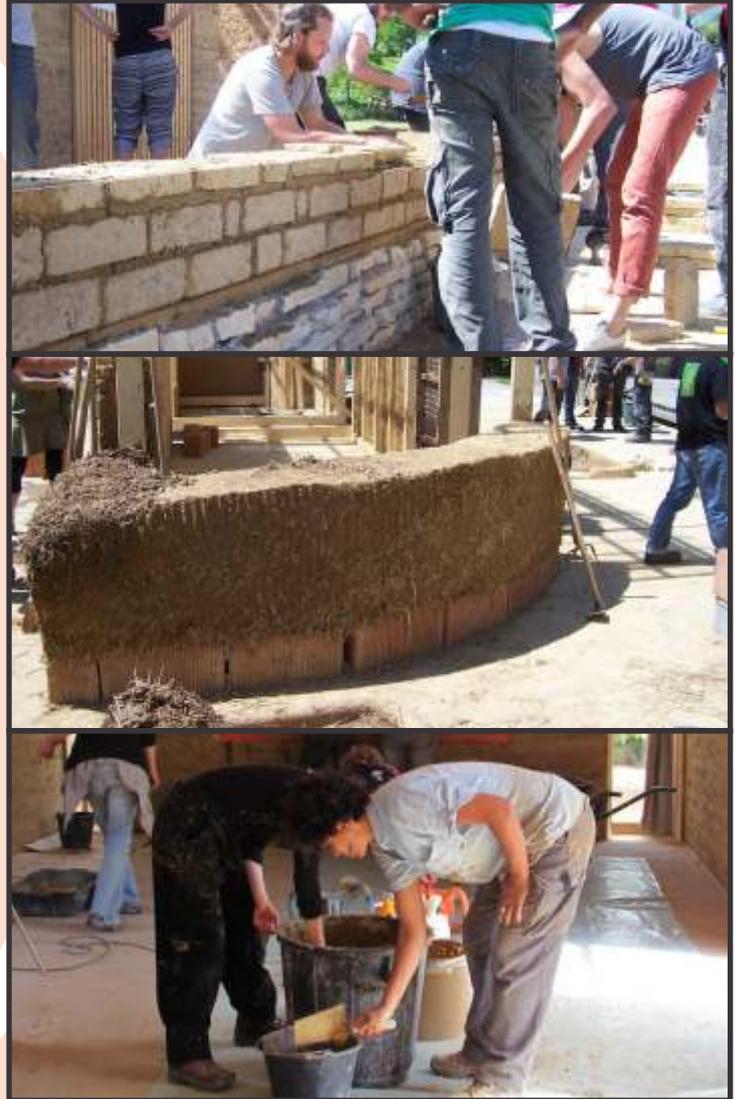
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1. Certification process

In September 2014, after several smaller preliminary meetings, the French PIRATE project partners invited training providers and trainers to a national certification meeting. It took place in Valence, with two ECVET experts. As a result, PIRATE partner AsTerre and Fédération Ecoconstruire, gathering French training providers specialised in sustainable construction techniques initiated a process to demand a new qualification specific to earth construction.

This qualification is to be registered in the national qualifications directory RNCP. This new qualification will be based on the ECVET Earth building units of learning outcomes, some already developed during the Leonardo da Vinci project LearnWithClay as well as those developed within PIRATE project. Since September regular phone meetings allow the group to work on the proposal.

Currently, a student is running a survey to assess the earth construction market. This will allow the group to decide whether the proposal for a new qualification will be on Level 3 or 4 of the EQF (European Qualifications Framework). A working meeting with 16 representatives was held during the Grains d'Isère Festival in May 2015 in Les Grands Ateliers in Villefontaine.



2. Recent event

- **May 27th-30th /14th** Festival Grains d'Isère, Les Grands Ateliers, Villefontaine, France / International workshop and conferences

<http://www.amaco.org/webapp/website/website.html?id=101&read=true&pagelid=636>

3. Upcoming workshops

- **June 20th** / Parc Naturel Régional des Caps et Marais d'Opale, Desvres (62), France / Workshop with PNR and MPF 62 "Pratiquons la terre crue": repair of wattle and daub walls / contact:

torchis@parc-opale.fr

- **June 30th** / St-Marcellin, France / first annual seminar for ECVET Earth building trainers and assessors: up-date from LearnWithClay to PIRATE.

4. Video Link: build a cob hut in your garden!

<https://www.youtube.com/watch?v=M74cXyOulkQ&feature=youtu.be>

<https://www.facebook.com/asterre>

PIRATE news from Serbia

P18

1. Certification process

It may seem that young people in Serbia are not interested in learning crafts (formal secondary education did not record a single mason in 2014), so it's very important to try to introduce earth among the 'official' construction materials onto qualified training courses. As unemployment in Serbia is very high, this could be a way for many young people to get new skills and find jobs.

Another advantage is that there are so many earth houses that are really cheap - one of the ways to solve the problem of overpopulated and expensive apartments in the cities is to offer these houses to the young people or to the people willing to move back to the villages.

While it's not yet accepted in technical schools, we managed to create a course on 'Earth Architecture' at the Department of architecture and urbanism at the Faculty of Technical Sciences of University of Novi Sad. There are also lectures for the Postgraduate studies at the Faculty of Architecture in Belgrade.

We are considering bringing 'ECVET earth building' experts to Serbia or sending representatives from our associations to Europe to get familiar with those qualifications in other countries and start working in Serbia.

Although there is NQF (national qualification framework), ECVET is still not recognized in Serbia, so we will continue working with Institute for Improvement in Education on that topic. We also have contact with several decision makers (Ministry of construction and Provincial Secretariat for Economy, Employment and Gender Equality) and we will work on development of certification strategy with them too.

Meanwhile, we continue with setting up of non-qualification courses, driven by different associations.

2. Recent activities

- An article **“Problems in Conservation of Earth Buildings in Vojvodina”** by Dragana Kojić in the publication “Modern conservation” of National Committee ICOMOS Serbia funded by Ministry of Culture and Information: <http://icomos-serbia.com/>

- The first PhD: **“Energy performance of traditional house in Vojvodina”** by Vesna Šunjki

- A new project **“Role of the women in earth architecture by association”** Fine art and crafts club and Provincial Secretariat of Economy, Employment and Gender Equality

3. Up-coming workshops

- **Several courses** organized by “Fine art and crafts club” on earth floors and clay plasters during summer <http://zemljanarhitektura.com/>



PIRATE news from Slovakia

P16

1. Certification process

Despite having rich traditional vernacular earth architecture, earth is at the moment in Slovakia not recognized as building material. There is no legal document for building with earth. That is why ArTUR – Slovak PIRATE project partner, aimed its activities in the last two years to prepare Technical Normative Information (TNI) for Earth building.

- What we did:

The document TNI for earth building has been completed in the beginning of this year 2015 and submitted to the Slovak Standards Institute (SUTN).

To prepare for training in earth techniques we run two workshops and one pilot course for rammed earth technique.

- Next steps will be:

In order to start training in earth building techniques, we will start creating supporting material for teaching earth building. For this purpose we submitted Erasmus Plus project with Polish, Czech partners and Slovak vocational school. Now we are waiting whether our application is successful or not.

Once the training is running, we will try to include earth building into formal education. Then hand in hand with formal education we can try to create profession earth builder (or include earth into existing professions). By this time Czech republic will have profession earth builder accepted so it will be a precedent for Slovakia too.

2. Developing training at the new Eco center next to Bratislava

In February 2015 ArTUR opened its new Eco center – a renovated old school in Hruby Sur village. The building shows how to renovate old buildings in a sustainable way, with natural materials into low energy standard with passive house components. Building has some earth plaster surfaces, decorations, clay paint and rammed earth wall.

In Slovakia there is no formal education in the field of earth building, so ArTUR is the only organization to offer informal further education. So far they have been mostly courses for earth plastering. Since the opening of our new Eco center, ArTUR has organized 7 earth plaster courses and 7 ECVET exams for units 1 to 5 on levels 2 and 3.

ArTUR plans to extend training to other earth building techniques, such as rammed earth and earth bricklaying.

Therefore, in March 2015, members of ArTUR organized in our eco-center a course focused on rammed earth technique. With our European partners from Germany, Cyprus, Czech Republic we not only tried and tested how to teach it, but also discussed criteria developed in PIRATE project for evaluating the knowledge, skills and competences.

3. Recent activities

Two members of ArTUR established a new company: www.arterre.sk

- **In March 2015** ArTUR organized creative earth workshop for 12 American students. They thought it was “awesome”.

- **In April 2015** ArTUR made a creative earth workshop for kids at local primary school.

- **In May 2015** ArTUR organized the annual two day long International Conference Healthy Houses – Healthy Interiors 2015. The conference focused on natural materials, therefore earth was the topic of several presentations. During the 1st day full of presentations at Faculty of Architecture in Bratislava, Bee Rowan from UK presented ways of stabilizing earth in Pakistan, Paul Lynch presented results of experiment in Aalto University, compering quality of air between standard office at university and office with clay surfaces. Lubica Gulasova from SK presented esthetical trends of earth surfaces. During the conference, PIRATE project was promoted with its newly published leaflets. The new aspect of the conference was the 2nd day in eco center ArTUR, where 7 workshops and seminars took place. Two of them were devoted to earth surfaces. Photos and presentation will be available at:

www.healthyhouses.eu

- **In May 2015**, ArTUR also had two big presentations about slovak achievements in earth building techniques and surfaces at the Ekotop Film Festival in Bratislava and Banská Bystrica.

Summary of the rammed earth meeting in Hruby Sur, Slovakia, 9-12 April 2015

<http://ozartur.sk/mobilita-learnwithclay-na-slovensku/>

The meeting was organised within the Moby Dick Project (Leonardo da Vinci project “New partners for ECVET Earth building”) and hosted in the new Eco center.



Day 1.

The first activity was sourcing of raw materials : looking for different kinds of local clay, and making field tests.



Forms we picked up from a local company “Peri” near Senec. Different mix were prepared and tested. For these samples, size of the formwork is not so important , but it should allow the filling and ramming technology as on the real wall. Before filling the formwork, moisture content must be checked.



Day 2.

Morning: Preparing the formwork for a wall construction, approximately 1 m long and 30 cm wide. Three different mix were prepared and compacted. After lunch formwork was removed and result discussed.



Day 3.

Second measuring of the samples: The results were clear, the fattest clay has the greatest shrinkage and there were also cracks.



In the afternoon we visited a ruined typical adobe house in Stefanova



On the way back we made a stop at a straw bale house in Nova Dedinka



PIRATE and EARTH news from Portugal P15

1. Certification strategy

Although there is a national qualification framework, ECVET is still not generally applied in Portugal in the construction sector. For that reason we will continue working with Institutions for improvement in education on that topic. In the meanwhile we got in contact with several professional training institutions and associations in the construction sector Portugal, which provide qualification and non-qualification courses, and the majority expressed that they would like to apply ECVET PIRATE units in their training courses.

2. Publications 2014-2015

International conference papers presented at 40th IAHS World Congress on Housing in Madeira. There was a section devoted to Earth housing construction and there were other papers (and presentations) concerning the use of earth as building materials, namely from France, Portugal and South Africa. 20 persons attended the earth building thematic session; about 400 received the paper in CD-rom, from countries from all over the world.

- PIRATE project: JÖRCHEL S, DIDIER L, KEABLE R, FARIAP (2014) - Provide instructions and resources for assessment and training in earthbuilding - the PIRATE project. 40th IAHS World Congress on Housing. Sustainable Housing Construction. Funchal, 16-19 December 2014 (CD-rom). ISBN:978-989-98949-1-4; ID 355.
<http://run.unl.pt/handle/10362/14086>

- The hygroscopic potential of earth plasters from Barrocal, Algarve, for indoor hygrothermal comfort.: LIMA, J.; FARIA, P. (2014) - Earthen plasters: the potential of the clayey soils of Barrocal region in Algarve. 40th IAHS World Congress on Housing. Sustainable Housing Construction. Funchal, 16-19 December 2014 (CD-rom). ISBN:978-989-98949-1-4; ID 217.
<http://run.unl.pt/handle/10362/14088>

- The mechanical and hygrothermal properties of earth plasters with different additions: FARIA, P.; SANTOS, T. (2014) - Hygrothermal behaviour of earthen plasters for sustainable housing construction. 40th IAHS World Congress on Housing. Sustainable Housing Construction. Funchal, 16-19 December 2014 (CD-rom). ISBN:978-989-98949-1-4; ID 40.
<http://run.unl.pt/handle/10362/14085>

International conference paper presented at PATORREB 2015 – 5ª Conferência sobre Patologia e Reabilitação de Edifícios (Conference on Buildings Pathology and Rehabilitation), in Porto, 26-28 March 2015. About 20 persons attended the presentation; about 400 received the paper in CD-rom, mainly from Portugal, Spain and Brazil (<http://paginas.fe.up.pt/patorreb/pt/multimedia.htm>)

- Advantages of using earth as a building material; hygrothermal behaviour of earth plastering mortars as a function of sand particle size distribution: SANTOS, T.; SILVA, V.; FARIA, P. (2015) - Argamassas de terra. Comportamento higrotérmico função da granulometria da areia (Earth mortars. Hygrothermal behaviour as a function of sand particle size distribution – in Portuguese). PATORREB 2015 – 5ª Conferência sobre Patologia e Reabilitação de Edifícios (Conference on Buildings Pathology and Rehabilitation), V. Freitas, C. Diaz, E. Qualharini, E. Barreira, N. Ramos, R. Almeida (Eds.), 26-28 Março 2015, Porto, FEUP, p. 177-182 (ISBN: 978-972-752-177-7). <http://run.unl.pt/handle/10362/14731>

International conference papers presented at ICNF2015 – 2nd International Conference on Natural Fibres. From Nature to Market, 27-29 April 2015, S. Miguel, Azores, Portugal. About 150 persons attended the conference and received the book of abstracts and the full paper in CD-rom.

- Advantages of using earth as a building material, of using natural fibers to optimize earth plasters; the influence of the type and proportion of oat and typha fibers on earth plastering mortars characteristics: LIMA J, FARIA P (2015) - Eco-efficient earthen plasters: the influence of the addition of natural fibers. ICNF2015 – 2nd International Conference on Natural Fibres. From Nature to Market, 27-29 April 2015, S. Miguel, Azores, Portugal, Proceedings U-Minho. Book of Abstracts, p.39, ISBN 978-989-98468-5-2. CD-Rom ID-47, ISBN 978-989-98468-4-5. <http://run.unl.pt/handle/10362/14878>

Paper in the professional journal of the Portuguese building companies dedicated to repair existent architectural heritage.

- Role of PIRATE for craftsmen professional skills and validation on earth building: FARIA, Paulina (2014) – Construção com terra. Tradição e inovação. Pedra & Cal (December), 57, 24-29. <http://run.unl.pt/handle/10362/14426>

Paper accepted for publication in international scientific journal from USA, soon available on line.

- Earth plastering mortar testing: FARIAP, SANTOS T, AUBERT J-E. (2015) - Experimental characterization of an earth eco-efficient plastering mortar. Journal of Materials in Civil Engineering. DOI: 10.1061/(ASCE)MT.1943-5533.0001363

Book released the 23th May 2015 at the Portuguese Architects Association headquarters.

- Earth building techniques. An introduction: Rocha, Miguel (2015) – Técnicas de construção com terra. Uma introdução. Cadernos de Construção com Terra. Argumentum, Lisboa, ISBN 978-972-8479-87-9.

PIRATE and EARTH news from Portugal P15

3. Recent events

● Workshop Gypsum Plasters, Castelo Branco, Portugal, 8th-9th May 2015

Organized by "Aldeias de Pedra" and Catarina S. Pereira, old school at Vila de Rei. Short term practical training for 18 people (students, conservators, academics and professionals). Luís Prieto e Monica Bujalance (Spain) introduced gypsum materials, the most used types, how to prepare gypsum plasters; a gypsum element was produced and a pigmented gypsum plaster was applied on a rammed earth Wall and on a gypsum board.

<http://oficina-estuques-gesso-2015.blogspot.pt/>



● Conference "The Construction that we Want", Évora, Portugal, 12th-13th May 2015

Conferences about different subjects mainly concerned with buildings and dwellings indoor quality, health, durability and financial support. Attended by People from universities, town councils, associations and other institutions mainly concerned with housing, the majority from Alentejo region, Portugal.

● Seminar tribute to Teresa Beirão, 23rd May 2015 at the Portuguese Architects Association headquarters, in Lisbon

Teresa Beirão was of the architects which contributed for contemporary Portuguese earth architecture. Tribute by Bartolomeu Costa Cabral about the help she gave him on how to design earth buildings, by Miguel Mendes about a training building experience in Momemo, Moçambique, with Teresa, by Alexandre Bastos about the way Teresa worked, and Carlota Bastos about Teresa as a person.

4. Ongoing exhibition

● Exhibition of some of the work of Teresa Beirão (projects and earth buildings), at the Portuguese Architects Association headquarters until the 5th June 2015.

The exhibition will be presented in other several institutions and universities during **2015 and 2016**.

The exhibition includes earth construction books and dissemination of PIRATE leaflet in Portuguese with abstract of PIRATE units.

5. Up-coming events

● 3rd-12th July 2015 - Building and exhibition of an exterior rammed earth cube with 3 m edge during the Artistic festival "Temporary Gardens", Viseu, Portugal.

● 5th June 2015 - Conference "European professional qualification in earth building – the PIRATE Project" during the Seminar "Traditional construction and rehabilitation techniques", Instituto Politécnico de Tomar, 2300-313 Tomar, Portugal.

● July 2015 - PIRATE Workshop organized by FCT UNL and Centro da Terra.

Trial assessment for rammed earth with criteria for ECVET Earth building units, level 3 and hopefully 4. It is foreseen that the majority of the trainees will not have previous professional experience on earth building. A part from those trainees, masons from an earth building company with professional experience will be invited to participate in the final evaluation, while other masons from the same company will be invited to assess the training and proceed for the final evaluation. This will allow to test if the PIRATE unit criteria can adapt to these three different situations.

● 7-9 August 2015 - Natural Building & Art Workshop (mural decoration), Casal das Tojeiras de Baixo, Gaviãozinho, 2140-206 Chouto, Chamusca; Portugal. with Javier Bonifaz from Cusco, Peru.

PIRATE and EARTH news from Czech Republic P17

1. Certification process

The Ministry has recently informed us that the new professional qualification "Earthbuilder" (Zhotovitel hliněných staveb) which we worked out in the spring 2014 should be on web very soon!

„Fund further education“ - governmental organization MLSA asked us for the cooperation with this new profession called Earthbuilder. We have agreement with fund for this work till the end of this year.

The National Institute of Education asked us to prepare some new qualifications level 4 or 5 for earthen buildings. We made suggestion for 2 new qualifications:

- technician foreman in level 4 (man, who is leader of some workmen and is responsible for a small building site)
- inspector in level 5 (man who controls quality of realized earthen constructions).

Now we start to prepare it. Term seems to be the end of 2015.



2. Preparation for the new qualification "Earthbuilder"

As a result of the certification process, the Czech PIRATE partner SHS will create this new qualification in their country. They want start teaching and assessing officially in next year. That is why they now start experimental teaching of the most important units: material for load bearing structures, production of bricks on building site, walling, rammed earth technique, earthen flooring making and historical technique "války". New information about material (unit 1 becomes unit M) has been added.

By end of May 2015, a series of temporary courses called K2 (bricks, walling), K3 (rammed earth, flooring) and workshop for "valky" have been done.

During these courses SHS could see how much time every unit requires and what they need to teach (tools, material...).

These courses were a very good opportunity to speak with participants about earth buildings and also about project PIRATE, how important is and what it will bring in future. So it served also as good opportunity for dissemination.

Some pictures from K2 (bricks): Wall made of new earth bricks made in factory / How to fit the door frame / Arch made from „green“ bricks.



3. Recent workshop : revival of a historical technique, May 2015

We built a wall with a historical technology called "války".

We also cooperated with Czech TV to prepare film about earth buildings. It will be on TV 13th June at 10:00 in a program called Folklorika on CT2. Here are some photos from this very special workshop.



Second PIRATE European trial assessment: BRICK Test meeting

Venue: Böhlen

Date: 25-27 February 2015

Organiser: Berufliches Schulzentrum Leipziger Land (P9)

Participating countries: Czech Republic, France, Germany, UK, Spain, Portugal

What did we do at our BRICK Test?

The German partners in Leipzig set up a practice exam for earth brick building so that we could carry out a trial assessment using the criteria from the Brick Units of Learning outcomes. Our assessment was mainly focussed on the use of clay brick laying with clay mortar. The exam comprised one day building test walls using Claytec unfired bricks and mortar plus an oral exam. A written exam had been done during the previous day. There were 8 candidates in the exam included two from France (mobility) and a mixture of tradespeople and self-taught craftspeople. This group had two and a half preparatory days together before the assessment began.

The trial assessment provided a realistic testing ground for the criteria and indicators of the ECVET Earth building units. There was much lively debate and discussion about how to fine tune the assessment process including scoring issues, how to test individuals working in a team, how to work with varying levels of skill and understanding at both Levels 3 and 4 (including language differences), and how to remain sufficiently flexible to the needs of the various countries in terms of training and assessment standards and procedures already in place. We also discussed how the Earth Masonry Unit has to be responsive to a diverse range of techniques including clay mortared stonework, mud/fibre blocks (adobe), compressed earth bricks and unfired commercial bricks and mortars.

As is often the case at PIRATE gatherings the earthy discussions continued beyond the meeting room and into the night at a local restaurant. It is these times when we can really share our experiences and create more solid networks that will sustain the ECVET work into the future. PIRATE partners came away with a much clearer idea about how to run their own trial assessment of earth building trainees. It also became apparent how useful the lists of criteria and indicators will be in setting up this new training program in collaboration with established industry standards.



News from German PIRATE partners

Belgian visitors for rammed earth projects in Berlin, 31st March 2015 - P10

By Jorg Depta

PIRATE partner Lehmbau Werk, a small rammed earth construction company, organised a visit for eight 18-19 year old students and teachers from a Waldorf school from Belgium. The students are in their last school year with a focus on Green buildings, industrial organization and architecture. In addition, all have just completed a six-week internship in an eco company. They visited the rammed earth wall in a childrens kindergarten "Spielplatz Haus" in Berlin and the workshop of Irmela Fromme. The students showed great interest in information about our PIRATE Earth building project. They regret that there aren't any PIRATE partners in Belgium. Indeed, up to now there hasn't been any EU earth building project in Belgium nor Holland: for future projects the LearnEarth Memorandum of Understanding partners should try to include these countries !



Introductory course about building with clay at the north German centre for sustainable building NZNB in Verden, Germany

www.nzn.de - P19

PIRATE partner BiWeNa (Bildungswerkstatt für nachhaltige Entwicklung e.V.) regularly organises this 4 days introductory course

The last run was 18th - 22nd May 2015. This course is open for everybody. The only requirement is that people are interested in the material clay! So there are self-builders, architects, students, craftspeople...

The course is mostly practical experience, mixed with some theoretical information about earth as a construction material. Five different techniques are introduced during the workshop:

1. Clay plaster
2. Making earthen bricks
3. Building a Nubian Vault
4. Rammed earth
5. Filling a timber frame with earthen bricks and light loam

Participants are divided into groups, mixing the different professions and experiences. It is a good method, for people to learn from each other. Each participants works with each of the techniques for half day.

Contact: Dittmar Hecken / dh@biwena.de / Web: www.biwena.de



PIRATE in Benin-Africa

P2

Several PIRATE partners operate in countries beyond Europe. Transfer of PIRATE project results across seas and oceans thus has already started! This is one example for Africa, there are also a lot of contacts with Latin America.

Since one year, PIRATE partner CRAterre was asked by several organisations for consultancy about the use of local materials in Benin, the missions demand ranging from analysis of local potentials to evaluation of undertaken building projects. In December 2014 work has been done the education ministry (MESFTPRIJ, Ministère de l'Enseignement Secondaire, de la Formation Technique et Professionnelle, de la Reconversion l'Insertion des Jeunes), in charge of initial and vocational training.

There are two ways to learn a trade in Benin (and it's about the same in the other western Africa countries):

A) Going to technical and industrial high schools such as the ones visited (Lycée Technique Coulibaly in Cotonou, economic capital of Benin). They offer training and titles of EQF level 3, with a pedagogy and training standards often based on French ones - thus lacking content specific to earth material and techniques. Some trainers however address this issue (in Djougou, North of the country, Yarou Sero is the most involved in teaching about earth as building material).

B) Another way to learn a trade is to be employed and learn on site with some follow-up by institutions. It is by far the most used and is called Dual. These learners have a better chance to get hands on earth which remains the most used building material in Benin. So far there are too few Dual situations to give a basis on good practice in earth building.

Interest for earth building is growing, as it is seen as a potential for cost reduction, better comfort, and promotion of local resources. It grows in institutions where researchers and PhD interested in local materials are employed, in companies and NGOs who work for their development, even in training centers such as DEDRAS in Parakou.

Some of these actors were met during a mission in February for Sens Benin, a French company working to develop local and solidary products. Sens Benin is involved with companies using local materials since a few years, they requested help from CRAterre in their task of developing the use of local materials in buildings.

PIRATE freshly translated units were used as a basis to analyze the abilities of local workers supported by Sens. They build with CEB and adobe. A draft of level 2 units (M, P, Bb, Bc, E) was produced to provide a reference point for a skilled worker. The result of this work is made available for the consortium to discuss on the internal project platform (group pirate global, folder unit redaction&review, L2 proposals/only in French).

How will PIRATE consortium and LearnEarth Memorandum allow modifications of the units of Learning outcomes, to adapt to extra-European contexts, without losing the spirit of the ECVET Earth building matrix? This is an important question for its sustainability. Although the situation is quite different in west Africa compared to Europe, the use of earth as building material is common and remains rich in variety of techniques, architectures and social organisation to produce the building. Adapting ECVET to another context made clear that while earth building units can be useful to structure knowledge and practice, it can't be applied as it is everywhere in the world. Looking at it from other extra-European contexts is needed to make it relevant.



Use of ECVET Earth building units for Clay plaster in Estonia

Clay plaster workshop “Decorative elements” at Saviukumaja, Põlvamaa, Estonia,
July 1015

see also PIRATE newsletter n°4: Northern Clay Plaster Project and
<https://www.youtube.com/watch?v=gpi6Kv5Ctx4>

UNIT 4 (now called Unit O) - LEVEL 3

“Decorative elements with clay plaster” is a 4 days training course teaching modelling and design techniques, followed by an exam according to ECVET Earth building Unit 4 on Level 3, on fifth day. The course is directed for professionals whose routine work involves clay plaster and other natural finishing materials. The trainers, recognised authorities in their own field, are from the European School of Earth Building /FAL e.V./ Germany.

EXAM AND GRADING

The training is followed by an exam. The participants will be graded based on the ECVET (European Credit System for Vocational Education and Training) system. A more detailed introduction of the evaluation criteria will be sent to the participants. The participants of an exam are issued two types of certificates: certificates of attendance for participants and LearnEarth certificates for those that successfully pass the exam.

Certificates bear the names of their respective owners, and the names of participants that have passed the exam will be added to the list of recognised craftsmen, who will be recommended to clients in Estonia and abroad to perform works involving clay plaster.

TRAINING COURSE INFORMATION

Date: Workshop 6–9 July 2015. Examination 10 July 2015.

Place: Mooste Manor, Restorers' House, Põlva County 64616, Estonia

Languages of the training course: English (translation into Estonian if needed)

Additional information and registration: mikk@saviukumaja.ee Phone: +372 56226066



For info about partners activities and courses:

P1	CRAterre	www.craterre.org
P2	AE&CC	http://craterre.hypotheses.org/ https://cartoterra.net
P3	AsTerre	www.asterre.org https://fr-fr.facebook.com/asterre
P4	AFPA St-Etienne	www.rhone-alpes.afpa.fr
P5	Compagnons du devoir	www.compagnons-du-devoir.com
P6	UPS-LMDC	www-lmdc.insa-toulouse.fr
P7	FAL e.V.	www.earthbuilding.eu , www.fal-ev.de
P8	Dachverband Lehm	www.dachverband-lehm.de
P9	Berufliches Schulzentrum Leipzig	www.bsz-leipziger-land.de
P10	LehmBauWerk	www.lehmbauwerk.de
P12	Fachhochschule Lübeck	www.fh-luebeck.de
P13	EBUK	www.ebuk.uk.com
P14	ESTEPA	estepa1@gmail.com
P15	FCT-UNL	www.fct.unl.pt/en
P16	ArTUR	http://centrumartur.blogspot.sk www.ozartur.sk
P17	Hlina SHS	www.hlina.info
P18	Kuca Cuvarkuca	www.kucacuvarkuca.com
P19	BiWeNa	www.biwena.de

PIRATE aims to create learning outcomes units (http://ec.europa.eu/education/lifelong-learning-policy/doc/eqf/note4_en.pdf), which define skills, knowledge and competence a skilled or professional in the construction sector needs to build earthen walls. Each unit can be assessed at different levels according to the type of job and can be linked with credit points. Three work groups (WG) are developing the matrix of ECVET units: Two concentrate on craftspeople of European qualification levels 3 (mason) and 4 (foreman), the third focuses on levels 5 (clerk of works) and 6 (site manager).

