Provide Instructions and Resources for Assessment and Training in Earthbuilding

### ECVET Earthbuilding Europe 1)

Provide Instructions and Resources for Assessmen and Training in Earthbuilding

2012-2015



Learning Programme

Leonardo da Vinci DOI project (Development Of Innovation)

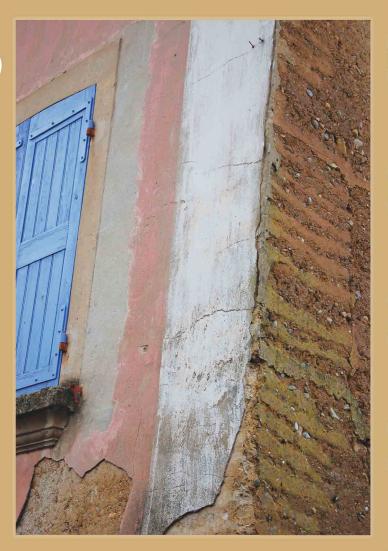
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**BSZ LL** 



















http://pirate.earthbuilding.eu

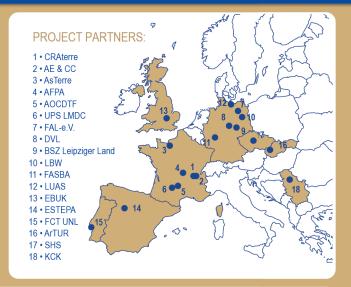
February 2013



#### **About PIRATE project**

#### **ECVET Earth building Europe**

PIRATE is a European project gathering 18 partners from 8 countries to establish the new standards of competence needed by the growing market of sustainable building with earth material. Units of learning outcomes will be created with and for professionals, trainers and certifying bodies.



For the first time, professionals of the construction sector and of VET and HE from 8 European countries analyse together the crafts and trades already or potentially using earth as a building material, with the aim to develop:

- units of learning outcomes
- ECVET certification procedures for EQF levels 3 to 6.
- a common-core syllabus for earthbuilding activities in traditional crafts and trades;
- a European-wide earth building matrix of ECVET units with assessment criteria, for EQF levels 3 to 6, and compatible with ECTS, both for earth bricks masonry and monolithic earth walls, available in 8 languages;
- guidelines for the process of certification in each participating country, and with qualification already launched at least in 3 countries (FR, DE, UK), with due respect to ECVET principles and quality standards.

VET = Vocationnal education and training. Prepare trainees for job and career

HE = Higher Education, e.g. Universities

Learning outcomes = knowledges, skills and behaviors that a student is expected to exhibit after the study period.

**ECVET** = European Credits for Vocational Education and Training.

Aims to promote mobility, life-long learning and trans-national recognition of learning outcomes.

**EQF** = European Qualification Framework. Goes from level 1 (basic knowledge) to level 8 (e.g. PhD).

http://ec.europa.eu/education/lifelong-learning-policy/eqf\_en.htm

**Syllabus** = outline and summary of topics to be covered in a course.

Reference that ensure consistency between schools. Exams can only test knowledge based on information included in the syllabus.

**ECTS** = European Credit Transfer and Accumulation System. Standard to compare the study attainment and performance of students of higher education across the EU and collaborating european countries.

**Qualification** = recognition of the certification by the professionnal sector.

#### PÍRATE: a matter of Spanish accent

As everyone knows we southern people have some problems introducing pirates -even these peaceful ones- in the serious scene our project requires. After several useless sessions of brain-crushing we realised the solution had always been there, only a lacking accent being enough to change things for good:

#### Pírate

(stressed i, pronounced as in "six", final e pronounced as in "pet")

informally meaning "leave quickly, dash out". So pirate means "girl, boy, dare leaving home and receive a solid earthbuilding training all across Europe, in independent units of your choice, and the credits will be recognised when you're back; so dash out, enjoy and take advantage". Nothing more Leonardian...

We want to thank you all for our brotherhood in earth, and our beautiful mother tongue for helping us becoming peaceful adventurers. ESTEPA

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#### Past PIRATE activities

Preparatory meeting in Senec, Slovakia, 17-21 November 2011, 17 participants from 7 countries The meeting was intensive with long hours, yet made time for exchange and networking betweeen participants and for presentations of participants' work. Cultural and Educational excursions were held on 2 different evenings. The meeting hosted newcomers to the ECVET system, many of whom did not understand how it works, so clear explanation was necessary. Discussion was good and flowed easily despite several different national langages. English was the agreed main language used, and the constant exchange led to a general understanding and agreement on the way this european group will engage, evolve and work together. The experience of working together so intensely at the meeting was very positive and inspiring, and bodes well for the future prospects for group work on shared projects within Europe.

The aims were fully achieved and even exceeded at this preparatory meeting: instead of one future project, we identified 3 future projects: the framework for a future co-operation programme in Transfer of Innovation was established and will be applied for; a Development of Innovation framework was explored and will be developed as was a Mobility project which will be enlarged.



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#### Past PIRATE activities

### Kick-off meeting, Grenoble France 27-28 of November 2012.

Program of the kick-off meeting:

- 1.Introduction of the PIRATE project and Presentation of the partners,
- 2. Presentation of the structure of the PIRATE project: aims, deliverable, calendar, exploitation; dissemination; collaboration tool and quality management; financial aspects,
- 3. Four workshops: our tools for collaboration and communication; partners budget and budget tables for financial reports, national certification strategies and committees and key actors directories, list of earth building activities (terminology, levels) in different crafts and trades,
- 4. Our work packages and project methodology, tasks and budget of the partners, responsible for WP, for WG, for deliverable, milestone progress report and introduction to the DACUM,
- 5. Constitution of the 3 project work groups MONO, BRICK, SUPERV, plan the WG meetings, method of work and tasks







### WG leader meeting and excursion 30 November 2012.

Pirate project can be interesting for protection of this heritage conservation because of the: 1. lack of know-how in a region where rural heritage is mostly made out of rammed earth, 2. today skills are almost lost and not taught in conventional trainings, 3. growing interest of the owners to renovate their houses...







Provide Instructions and Resources for Assessment

#### **Past PIRATE activities**

### First national MONO workgroup meetings FR Rammed earth builders 28th of January

Les Grands Ateliers, Villefontaine

Craterre and AsTerre invited to a common meeting, to inform about current ATEx process (appréciation technique expérimentale, which will enable companies to get insurance for rammed earth projects) and establish a list of competences required for level 3 and 4 people in rammed earth building. Establish a link between the 2 processes.

Day 1: 15 builders and architects together, 16 others are interested but could not be present ... (all will get the drafts and can give feedback). Several persons with high level of site experience. Sometimes artisans don't speak a lot in meetings, but not in this case. Start with an empty wall, end up with 7 lists of tasks. In the end of one days exchange, most of the time spent on new techniques, only 1 hour on rehabilitation, despite the fact that this is the biggest part of the market and where there is a lack of skills among the traditionnal building companies. Tasks seemed too obvious to the craftspeople Second day: 4 PIRATE participants reviewed the lists, put these tasks into 4 units (preparation of earth - preparation and set up of the formwork - building process - repair), separate skills and knowledge. As a complement they used the list produced by the German work group and the ATEx paper.



#### Cob builders 30th of January 2013 Schumacher College, Totnes

EBUK (P13) invited 6 practitioners for a one day workshop. The aim was to list the competence required for level 3 and 4 people in cob building. The group gathered cob experience from right around the country, and also covering everything from conservation and heritage to new build and products. Craftspeople from 10 to 30 years' experience building for clients, production/sales in earthen materials, coming from different regions from Devon to Scotland. They are from different horizons and use different cob building techniques.

The process began with an empty wall filled in gradually with cards written on a wide range of activities. Initially the process meets a lot of scepticism; they do because they do it. After a lot of explanation by lunchtime people got more interested and positive. French cob document was shown after lunch which gave a lot of energy to the group. By the end of the day there were 4 main topics: Business, design, building and repair.

Repair was the least well discussed, although it is a big part of the challenge about training craftspeople to correctly deal with earthen heritage buildings. It's the most complicated thing to do. There is an existing code for repairs to historic/heritage sites, but this is very light on detail.





#### **Next PIRATE activities**

The second European work group meeting BRICK 1 will take place on March 13-14-15th in Toulouse. The Compagnons du devoir P5 will host this meeting.

The third European work group meeting SUPERVISION1 will take place on April 18-19th in Germany. LUAS (Fachhochschule Lübeck/Luebeck University of applied sciences) will host this meeting.

#### Replacement of partner P11 FASBA by partner P19 BiWeNa

lernpunktlehm.de/wp\_gw

With the 1rst of February 2013 the PIRATE partner FASBA from Germany will be replaced by the new partner BiWeNa also from Germany.

BiWeNa "BildungsWerkstatt Nachhaltigkeit" is a training institution for sustainability and a registered society founded in October 2012 in the Eco Center Verden with the same post adress as FASBA. FASBA has been activily involved in its establishing process and is since an active member of BiWeNa.

Starting with the first of February Burkard Rüger and Dittmar Hecken will be employed by the new training organisation BiWeNa. They will develop a new training course for ecological inside insulation in the time period of two years. On top they will organise and offer courses in earth building and strawbale building and seminars and workshops mainly in Verden.

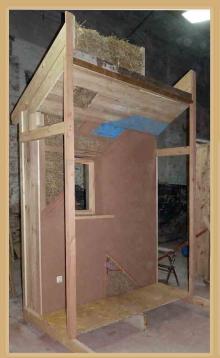
This means that there will still be a continuity for the PIRATE project, since there will be no change in personal engagement. All acretited activities of FASBA will be passed on unmodified to the new partner BiWeNa.

Ab dem ersten Februar 2013 wird der PIRATE Partner FASBA aus Deutschland durch den neuen Partner BiWeNa ebenfalls aus Deutschland ersetzt. BiWeNa "BildungsWerkstatt Nachhaltigkeit" ist ein Bildungsträger als gemeinnütziger eingetragener Verein, der im Oktober 2012 im Ökozentrum Verden gegründet wurde und hat die gleiche Postadresse wie der FASBA.

FASBA hat aktiv die Gründung des Vereins betrieben und ist seitdem ein aktives Mitglied im BIWENA.

Ab dem ersten Februar werden Burkard Rüger und Dittmar Hecken im Verein BiWeNa in einem neuen Bildungsprojekt eingestellt werden. Sie werden 2 Jahre an der Entwicklung einer neuen Ausbildung für ökologische Innendämmung arbeiten. Weiterhin werden sie im BiWeNa Lehmbaukurse und Strohballenbaukurse organisieren und anbieten und Seminare und Workshops, die überwiegend in Verden stattfinden.

Das bedeutet also, dass die Kontinuität für das PIRATE Projekt gewahrt bleibt, zumal es keine personelle Änderung geben wird. Alle zugesagten Aktivitäten von FASBA gehen also nahtlos über zu dem neuen Partner BiWeNa.













Pirate » and Training in Earthbuilding

#### Next partner's activities - P7 FAL e V

www.fal-ev.de, www.earthbuilding.eu

#### New project + course activities

The European School of Earth building is an initiative of FAL e.V. It is an officially recognised centre for continuous education and training. FAL e.V. started to operate this initiative in 2006 being encouraged by the exchange of earth building specialist within the European Leonardo da Vinci Projects: Clay Plaster. Follow up Life Long Learning projects like European Earthbuilder, Lehmbau mobil, Lernpunkt Lehm, Hlinarch, Lernpartnerschaft Lernpunkt Lehm have deepend contacts and co-operation. Currently FAL e. V. has applied for a new Partnership project 'New Members for ECVET Earth Building', which aims to strengthen the European network of educators in earth building.

Aim of the proposed project: In 2009 a core group of 8 partners from 4 countries (BG, DE, FR, UK) has agreed in a Memorandum of Understanding (MoU LearnWithClay) to apply the European tools ECVET and EQF offering possibilities for learners to take ECVET Earth Building exams. A previous Leonardo Partnership project LearnWithClay (2 010-2012) has deepened and enlarged the MoU-Partnership and developed recommendations and tools to apply ECVET Earth Building. Originally started by partners from 4 countries (BG, UK, FR, DE) now partners from 14 European countries are interested to cooperate in the MoU partnership. Some organisations (from IT, CZ, SK) have already entered the MoU LearnWithClay partnership, others are applying (CY, EE, ES, FIN, PL, PT, SW). Learners are looking for training and experience in natural building techniques across Europe, which result in transparent and transferable certificates. The proposed project "New members for ECVET Earth Building" (LearnWithClay partnership II ) will adjust the existing MoU-contract LearnWithClay to meet this growing interest. The project closely co-operates with the ongoing projects: LLL DOI Project "Pirate", LLL TOI Project "Northern clay plaster" and the ESF project PI - PWP 'Natruralne tynkowanie i wzomictwo - Natural Plastering and Finishing', allowing staff of the participating partners to learn from good practise, to gain and to exchange experience with ECVET exams of specialised building activities in the earth building sector: clay plastering and finishes, earth bricklaying, rammed earth.

#### **ECVET** courses offered

Der Lehmputz – fünftägiger Baustellenkurs mit ECVET Zertifikat L6/2013

Clay Plaster – learning on site with ECVET certificate

Date: 2013, April 25th – 30th

Trainers: Irmela Fromme, Piet Karlstedt.

You will learn to produce different clay plaster mixes and plaster base and finishing coats on site. ECVET exam for unit 1 and 2, level 2 (according to the European

Qualification Framework)

Languages: German, English on demand.

contact: herz@earthbuilding.eu

Grundtvig Course No. DE-2013-1355-001 - Clay Plaster Part I - 7/2013

New Educational Approach in Sustainable Natural Building PART I (Clay Plaster – Module 1- European Workshop for Educators and Trainers

Date: May 4th, 18 h - May 11th 10 h 2013 Trainers: Irmela Fromme, Burkard Rüger

Introduction into the teaching methodology of the training course 'Clay Plaster'

based on the training materials of module 1 - clay plaster basics as developed in the European Leonardo da Vinci Project 'Clay Plaster'

Assessment methods of ECVET Earth Building

Language: English

Contact: herz@earthbuilding.eu











Photo taken by photographer Hendrik Silbermann

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#### Next partner's activities - P9 BSZ LL

www.bsz-leipziger-land.de

#### Implementation of clay plaster courses

Our vocational school "Beruflichs Schulzentrum Leipziger Land" has been involved in European earth building projects since 2007. Since 2010, we teach clay plaster, on the basis of ECVET Earthbuilding Handbook.

Whenever possible, we integrate this course into the initial training of our apprentices. This allowed mason and painter apprentices and pupils of the vocational preparation year to be educated in clay and obtain ECVET certificates. Seven participants from the UK also took part in the course and exam. Two times painter apprentices were trained by project partners in France. In the future, we want to offer this training for also craftsmen and teachers.

Unser Beruflichs Schulzentrum Leipziger Land ist seit 2007 an europäischen Lehmbauprojekten beteiligt. Seit 2010 führen wir auf der Grundlage des Lehmhandbuches I -III aus Lern.Lehm die Ausbildung zu Lehmputzen durch. Wir versuchen diese Kurse in die Erstausbildung der Lehrlinge einzubinden. Dies ist uns auch schon hinreichend gelungen. So konnten Maurer- und Malerlehrlinge und Schüler des Berufsvorbereitungsjahres beschult werden und es nahmen 7 Teilnehmer aus UK bei uns am Kurs und an der Prüfung teil. Schon zwei Mal wurden Malerlehrlinge beim Projektpartner in Frankreich ausgebildet. Zukünftig möchten wir diese Ausbildung auch für Handwerker und Lehrer anbieten.









#### Next partner's activities - P10 LBW and P17 SHS

www.lehmbauwerk.de

## Rammed earth workshop "The colors of the earth", organized by Sdružení hlineneho stavitelstvi, o.s. will take place in Centre for Vocational Education in Hostim in Czech Republic on 05-08 Jun 2013

The workshop begins at 05 June with a lecture on modern rammed earth construction. In the following days we will process approximately 7cbm rammed earth wall in a historic building in Hostim. We want to show the properties of rammed earth material, how adequate formwork is built, to teach the process of filling and compacting rammed earth material in the formwork and to show how the formwork is rebuild.

We teach important details about the stability and the practical use of rammed earth

We will show how the finished wall can look like after its completion. We will teach something about the texture of rammed earth walls and what are the opportunities to give "face" to the rammed earth walls.

Kontakt: Ivana Zabickova (zabickova@gmail.com)

Trainer: LehmBauWerk, Jörg Depta Naturally build with earth www.lehmbauwerk.de, info@lehmbauwerk.de Breite Str. 13 in 12167 Berlin (Germany) Tel.: +49 (0) 30 790 164 59/67Fax











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#### Next partner's activities - P13 EBUK

www.ebuk.uk.com

#### EBUK aims, EBUK membership and how to become a member

The aims of Earth Building UK are to:

- promote earth building in contemporary construction
- assist the recognition, understanding and significance of earth buildings
- foster traditional skills and promote new technologies
- network our membership to promote earth building locally, nationally and internationally
- research and develop technical understanding
- share experience and knowledge through a program of seminars and annual conferences.

Earth Building UK is a membership organisation bringing together people interested in building with earth in the UK.

Earth Building UK members are builders, academics, researchers, architects, engineers, manufacturers and many more who are coming together to promote and support building with earth in the UK.

We are concerned with promoting the use of earth for conservation and new build projects, providing a network for earth builders and a lobbying voice for the use of earth in construction. If you would like to know more about our work, please sign up and become a member, or just take a look at some of the courses on offer this year at http://www.ebuk.uk.com/index.php/we-can-help/courses



estepa1@gmail.com

#### **Next partner's activities - P14 ESTEPA**

#### ESTEPA activities in 2013:

- Clay plaster workshop at Joan Miró School, Badalona Barcelona, Spain February 2013.
- Clay plaster workshop at the UNESCO 5th Youth Forum of World Heritage (5to ForojuvenildelPatrimonio Mundial). Spain June 2013 /Creation of a mural made of clay, where children will discover earth :hroughout experience, art and science.
- Adobe workshop with the association "This is a square" ("Estoesuna plaza") Madrid, Spain June 2013 Production of adobe and construction of a traditional oven.
- Rammed earth workshop at our VI JIAPEC JornadasInternacionales de Adobe Participativo y EquipamientoComunitario. Paredes de Nava, Palencia, Spain. July 2013Construction of the entrance to the "Casas del rev" with two rammed earth walls.





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#### Next partner's activities - P15 FCT UNL

3dearthworkshopiscteiul.wordpress.com

This international workshop aims to explore the capabilities of advanced digital processes on earth-based building elements.

P15 (FCT UNL) and Centro da Terra will contribute to:

3D EARTH Workshop - A Generative Process Lisbon - Portugal http://3dearthworkshopiscteiul.wordpress.com/

6 and 7th of April 2013 (Conferences and training) 12 to 14th of April 2013 (Design and Fabrication) 3 to 5th of May 2013 (Construction)

What are the capabilities of Digital Fabrication in Architecture of Earth?

How to combine the traditional construction techniques in earth with the CAD/CAM digital processes in the construction of full-scale architectural structures (1:1)?

The international workshop "3D EARTH. A GENERATIVE PROCESS" will attempt to respond to these two questions. The main purpose is to explore the capabilities of advanced digital processes on earth-based building elements, having as reference subjects of morphogenesis.

Digital fabrication (advanced processes of CAD/CAM) in architecture allows the passage of the drawing directly to its prototyping. This process – from file to the factory – allows architects, and other professionals, to perform projects with a wider range of possibilities, diversities and complexities – as in the case of complex geometries. With the increasing use of CAD/CAM systems as essential tools of representation, modeling and fabrication, has been sought, in architecture, the ability to design and develop forms based on shapes and patterns of nature, allowing an unambiguous link between digital design (CAD) and the production process (CAM).

Based on these aspects, a group of multidisciplinary researchers along with the participants it is proposed to implement solutions of structural, functional and aesthetic interest, through the realization of a 1:1 scale physical prototype.

The final product will result from a parametric design of an architectonic element/group of elements based on a piece/module of 200x200x200 mm.

The workshop will explore:

- (1) the use of Rhino and Grasshoper as creative tools for 3D modeling;
- (2) prototyping/manufacturing in CNC, with also the possibility of using light machinery, for full-scale construction of the final piece.

#### **Next partner's activities - P16 ARTUR**

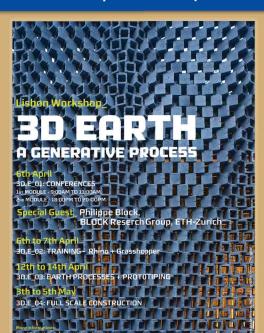
www.ozartur.sk

### 32 Slovak certificates accredited by Ministry of Education in 2012

As a result of LearnWithClay Partnership Project (2010-2012) NGO ArTUR (Slovakia) applied last year to the Ministry of Education for certification of the clay plaster courses as a further adult education courses (life long learning). The application was done for modular clay plaster courses corresponding to 6 ECVET units and its learning outcomes. The Ministry of Education accepted the course in May 2012, and since May ArTUR ran 4 courses (4 modules) and has given 32 ECVET Certificates (in levels 1,2 or 3) and at the same time 32 Slovak certificates accredited by Ministry of Education.







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#### Next partner's activities - P17 SHS

www.hlina.info

Program of activities 2013 (first half of the year) Sdružení hliněného stavitelství / The Earthen Architecture Association www.hlina.info; info@hlina.info

#### 1. LearnWithClay - Lifelong Learning Courses - ECVET Earthen Plasters

2. 3. Unit 6: The business of clay plastering (Brno)

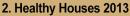
5. – 7. 4. Unit 1: Preparing of clay plaster (Hostim)

26. - 28. 4. Unit 2: Application of clay plaster (Hostim)

24. – 26. 5. Unit 3: Surface treatments, maintenance and repair of clay plaster (Hostim)

14. – 16. 6. Unit 4+5: Interior design of clay plasters, decorative elements with clay plaster (Hostim)

22. 6. Exams of ECVET courses (Hostim)



9. – 10. 5. International Conference (Brno)

THE 9TH INTERNATIONAL CONFERENCE is focused on the use of natural building materials in new energy-saving buildings, on the process of building founded on principles of sustainable development, design and assessment of optimal indoor climate.



Annotations and conference papers accepts secretary of the conference: Ing. Pavel Šuster, xasuster@stud.fa.vutbr.cz, + 420 739 088 302 Registers and payment accepts: Jitka Juránková, +420 541 146 622

#### 3. Workshop "Rammed Earth Wall"

15. – 18. 5. Workshop under the leading of Jörg Depta from LehmBauWerk Berlin (Hostim)





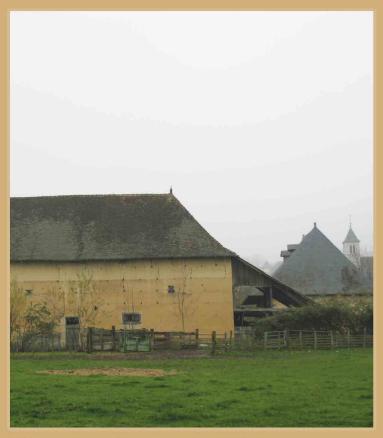




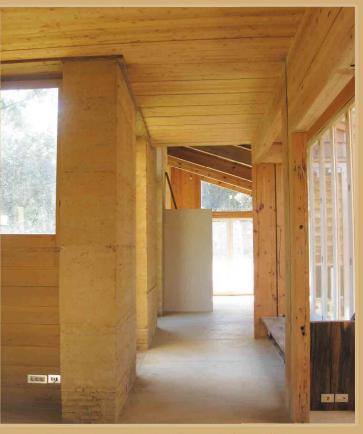
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Old farm house in a village close to Grenoble, France.



New family house by architect Luis Auquer in Rupia, Spain.

