

Summer School
Building with Earth
3 – 7 July 2023, ULB
Brussels



© Thomas Nocero

PRESENTATION

To this day, raw earth appears in only a fraction of the projects built in Europe. As such, it is rarely included in the education of students in architecture. Yet, this material is integral to our vernacular architecture – even if this has been forgotten in (too) many regions. And more importantly, it presents a deeply ecological character: locally available, unfired, recyclable and reusable – not to mention its applicability in structures and its contribution to good physical properties for the building. As such, earth represents a crucial asset in construction and architecture, as we are looking to make them sustainable.

Hence this summer school's objective: to give the opportunity to learn to build with earth the only way it works – with your own hands. More precisely, this 1-week program aims to offer a good opportunity to dive into the basics of earth construction, , as well as to provide an introduction to various earth techniques that are commonplace in the present-day practice.

What is earth, as a material? What are its properties? How is it rooted into our vernacular architecture? What does contemporary architecture in raw earth look like? How do you assess the potential of a local earth? How do you use earth to build in rammed earth, cob, blocks, and to make plasters?

We will answer these questions through a combination of lectures, visits and hands-on workshops, led by experienced tutors and practitioners. You will be part of a mixed group of students and young professionals from all over Europe (and even beyond!).

Application deadline: ~~18 June~~, extended to 25 June, 2023

<https://forms.gle/asgkgVvrkJVFXXs5>

WHO CAN APPLY?

- Bachelor students in their 3rd year
- Master students
- PhD students
- young professionals (no age limit: just be young at heart! But keep in mind that the work during the 3 technical training days will be physical.)

TUTORS

techniques tutors

earth blocks BC Materials, an emanation of BC architects, is a Brussels-based pioneer cooperative producing raw earth building products, using mainly local excavation earth and recycled products. BC worked on earth projects located in Belgium, France, Morocco, Ethiopia, Burundi and Nigeria. Through BC studies, they organise workshops and teach at RWTH Aachen, UHasselt and KULeuven. The tutors will be Bregt Hoppenbrouwers & Jasper Van der Linden.
<https://bcmaterials.org>
<https://bc-as.org/studies>



rammed earth Arnaud Evrard is a Belgian civil engineer and architect. After working 6 years in Austria for the famed Martin Rauch's company, he is now coordinating the CAS in Regenerative Materials from ETHZ and teaching at the ArchitekturWerkstatt OST in St. Gallen.
<https://sc.ibi.ethz.ch/en/education/continuing-education.html>



earth plasters Arianna Fabrizi de' Biani is a graduate from our faculty, whose study project has led to a real project in Benin, the Xewa Sowé orphanage. Now she is running her own business in Brussels, focusing on earth plasters.



We will also host the following lecturers:

Arnaud Evrard (see above).

Mathieu Tamailon is a technical director at QUARTUS, a real estate company which is the leading private investor in Cycle Terre, a French national initiative that develops raw earth products from excavation grounds, at an industrial scale.

www.cycle-terre.eu



Gaëlle Faguet presently develops a PhD at both ÉNSA Paris La Villette and ULB, about the use of CEBs in Mayotte and particularly about the role of architects and architectural design in shaping the CEB sector in this French island.



PROGRAM

Monday 3 July - Introduction

General discovery of earth as a building material, through lectures, workshops (Carazas tests) and a presentation of BC Materials' premises. Field tests of a natural earth mix to recognize its type and assess its possible uses in construction, through lecture and hands-on exercises.

Tuesday 4 July - Visits

Visit, by bus, of an open-air museum of heritage buildings, Bokrijk¹, and of a contemporary realisation, Negenoord².



Wednesday 5 July to Friday 7 July - Parallel training workshops

In addition to the technical training itself, each workshop day starts with a 1-hour lecture, including a Q&A session, with renowned experts, covering the use of raw earth construction and architecture, in different places and times (see lecturers on page 4).

The rest of the day is dedicated to learning one specific earth technique:

- rammed earth
- cob and blocks: adobes + compressed earth blocks + vibro-compacted earth blocks + masonry
- earth plasters

1 <https://bokrijk.be>

2 <http://old.degoudenlinaal.be/index.php?/albums/uitkijktoren-negenoord-dilsen-stokkem>

Resources

The earth used during the summer school is provided by BC Materials and comes from excavation works in the Brussels Region; it is thus local and recycled. All other materials (gravel, sand, clay and straw) come from Belgium, most of them from the Brussels Region itself.

We will work exclusively with unstabilised earth, meaning that we will not add any cement (nor lime), to work with a fully recyclable material and to promote such an ecological use of earth.

After the summer school, the constituting materials of the built prototypes will be recovered and reinserted into the working cycle, for other future applications at BC Materials.

Overview of the past editions

Have a look at the picture albums on our [Facebook page!](#)

Learning outcomes

At the end of this summer course, participants will be able to:

- contextualise the use of earth in architecture and construction, over time and in contemporary architectural practice;
- test a natural earth mix to assess its possible uses in construction;
- implement 3 techniques at a basic level.

Week schedule

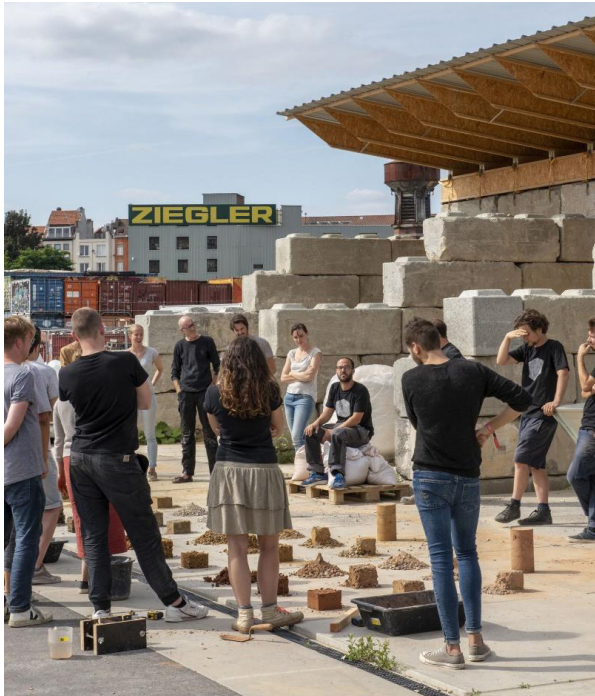
PROGRAM	Monday 3/7	Tuesday 4/7	Wednesday 5/7		Thursday 6/7		Friday 7/7	
			Rammed earth (Arnaud)	Plaster (Arianna)	Blocks + Cob (BC)	Rammed earth (Arnaud)	Plaster (Arianna)	Blocks + Cob (BC)
09h00-10h00	Lecture	Project visits	Lecture 1 (Arnaud Evrard)		Lecture 2 (Mathieu Tamallion)		Lecture 3 (Gaelle Faguét)	
10h00-13h30	WORKSHOP		A	B	C	A	B	C
13h30-14h30	LUNCH	PICNIC	LUNCH		LUNCH		LUNCH	
14h30-18h00	WORKSHOP	Project visits	A	B	C	A	B	C

PRACTICALITIES

Location

The summer school takes place at BC Materials' production hall, in the Tour & Taxis area in Brussels: avenue du Port 104
1000 Brussels, Belgium
(for the access details, check the video on <https://bcmaterials.org/contact-us>)

Lectures and lunches will also take place there or close by.



Accessibility

Some spaces are only accessible through stairs, including BC's offices, used for a few activities, the room for morning lectures and the places visited on the 2nd day. But we have already welcomed a participant in a wheelchair in the past, using help from the group. Contact us to evaluate the practicalities adapted to your specific situation.

Language

The summer school will be held entirely in English, but all tutors are also fluent in French and/or Dutch, if it can help non-native speakers.

Participants

Registration is limited to max. 48 participants.

Costs

The tuition fee includes:

- all pedagogical activities during the 5 days of training, including the entrance fee for Bokrijk;
- the 4 on-site lunches (sandwiches, including a vegetarian option); for the visit day, you will be asked to bring a picnic.

The fee does not include:

- your trip to Brussels;
- your accommodation (see suggestions further below).

The fee is adapted to your status:

- student: 435 €
- young professional: 485 €

Cancellation policy:

- cancellation until 25 June included: 100 % refund
- cancellation from 26 June: no refund

Participants who wish to cancel their registration must send an email to: thomas.vilquin@ulb.be.

Application process

- Applications are open until ~~18 June 2023~~, extended until 25 June 2023
- Applications will be reviewed on a rolling basis.
- Once your application is registered, you will be asked to pay your tuition fee within a few days.
- Your registration will be confirmed only upon receipt of your tuition fee.

Certificate of attendance

At the end of the summer school, a certificate of participation can be delivered upon request, based on a minimum attendance of 80 % of the summer school activities.

Accommodation: recommendations

You may want to check the following websites:

<https://lesaubergesdejeunesse.be/en/brussels-generation-europe-youth-hostel>

<https://lesaubergesdejeunesse.be/en/jacques-brel-youth-hostel>

www.hostelworld.com

www.meininger-hotels.com/fr/hotels/bruxelles/hotel-bruxelles-centre



You can also post a call on the Facebook page for a local (participant or not) to welcome you, or to share accommodation with (an)other participant(s). A Whatsapp group will also be created where you will be able to contact the other participants.

Free time

If you have some energy left in the evening, the Tour & Taxis site itself is a vibrant place to hang out; check the following links:

<https://tour-taxis.com/fr/meet-and-organise/tous-nos-lieux/gare-maritime>

www.garemaritime-foodmarket.be

<https://be-here.be>

www.brasserieedelasenne.be



Moreover, Brussels, as the capital city of Belgium, obviously offers a great range of places to go out for dinner and drinks. Why not stay here for a weekend in addition to the summer school, for a citytrip?

Find some inspiration on www.visit.brussels/en/visitors!



We are looking forward to welcoming you in Brussels,
giving you the opportunity to train yourself in earth construction,
and getting you dirty at it!



Web

<https://archi.ulb.be/version-francaise/agenda/summer-school-building-with-earth-3-7-july-2023>

www.facebook.com/workshopterrecrue

Registration

<https://forms.gle/asgkgVWrkJVFXXs5>

Contact

thomas.vilquin@ulb.be

Supported by the Austrian Cultural Forum Brussels and Brussels Environment.