Welcome to the Evening session



European Regional Development Fund

Sustainable Earth Buildings.

CobBauge Phase 2 Kick-off Event



3rd September, RICS





Evening agenda

Time	Subject	Speakers	
17:00	Introduction to the evening sessions and brief recap of phase 1	Steve Goodhew	
	New Cob	Barry Honeysett	
	Design and CobBauge	Gabriela Lavatelli & Anthony Hudson	
	The New Bilet Buildings	Evenesis Chusiff Matthew For	
	The New Pliot Buildings	François Streim, Matthew Fox	
	Further diard encourse laws at the school and	New Conference	
	regulations	Jim Carfrae	
	CobBauge, UK/French housing and the future	Anthony Hudson, Steve Goodhew & François Streiff	
	Feedback Q&A	Steve Goodhew, Karen Hood-Cree (MC)	
19:10	Wine, networking and nibbles		

Housekeeping

- Toilets
- Fire escapes (no test alarms are planned)
- Please be careful of any electrical wires that are used to power any displays
- Please only ask 'burning questions' at the end of each presentation, for questions that can wait please hold them for the Q&A and/or the networking slots.

CobBauge the 1st Phase;

Cob Mixes; thermal and structural

Project Partners

- Lead Partner University of Plymouth
- Ecole Superieure D'ingenieur des Travaux de la Construction de Caen (ESITC)
- Syndicat Mixte du Parc naturel régional des Marais du Cotentin et du Bessin (PnrMCB)
- Earth Building UK and Ireland (EBUKI)
- Université Caen-Normandie (UCn), and
- Hudson Architects, Norfolk, UK (HA)

The Material

Cob

Layer of subsoil mixed with straw, laid upon a plinth in layers of approx 700mm high. Allowed to dry before the next layer is laid and the windows and doors cut out afterwards. ALWAYS needs 'gud 'at and boots'



Traditional method of cob construction showing mixing, placing material on the wall, compaction by treading and paring back the wall face.



A typical 17th century cob house showing some constructional details. The wall is built off a stone plinth in several layers, or lifts, and lintels and roof timbers are supported on the cob, using timber pads or cross pieces where necessary.

New French Regulation RE2020



- Construction sector (FR):
 - 120 MtCO2 → 30 % Carbon Emission in France
 - 250 kWh/m²/an \rightarrow 45 % Energy Consumption in France

New French Regulation RE2020



The Project

The CobBauge project (a merging of the English and French words for the technique) will run until July 2023 and has received funding from the Interreg VA France (Channel) England Programme, cofinanced by the European Regional Development Fund (ERDF).

The CobBauge project aims to improve the thermal performance of Cob whilst still maintaining its structural and moisture related properties.

What happened next?

- 20 mixes of Cob that show 'promise'
- 4 mixes, 2 French and 2 UK that are optimal
- 2 mixes selected for a potential stage 2 project.

This led to a series of design calculations that established the most efficient method of producing a Cob wall to satisfy the thermal regulations. A **thermal and a structural mix in one single system**.









2-layer wall

Composit Cob + finishes	Density kg/m3	Thickness m	Cond. W/m.K	Resistance m2 K/W
Internal surface		n/a	n/a	0.12
Internal insulated plaster		0.03	0.60	0.05
Dense Cob UK6 2.5% Hemp straw	1423	0.250	0.42	0.60
Lightweight Cob UK3 50% Hemp shiv	340	0.250	0.10	2.50
Insulated render		0.03	0.60	0.05
External Surface		n/a	n/a	0.06
Total Resistance				3.38
U-Value W/m2K				0.30



The CobBauge Wall and Partners



CobBauge the 2nd Phase;

Building, monitoring, networks and training



- Why? The need to prove the new CobBauge technology
- Two buildings to be constructed, one in France and one in the UK.
- Both buildings need to be occupied to give valid comparisons with non-CobBauge buildings

Networks and training Réseaux et formation

- Why networks and training? For any innovation to succeed it needs to be accepted by industry and have people who understand how to use the product.
- The initial network will be extended, more professionals and practitioners included including SMEs and local and national authorities.
- The two newly completed CobBauge buildings will be the centre point of training activities, both on-site and online materials.

Monitoring of the buildings

Surveillance (des mesures) des bâtiments des mesures

- Why monitor/measure? To provide evidence that the buildings perform as expected.
- Monitoring/measurements to be undertaken over at least two heating seasons
- Measurements taken of Energy, internal air quality and thermal performance.

Thank you ...

Now for our evening presentations....

