“bauMax: Affordable Green”
The Straw Bale Demonstration Project

A beautiful straw bale home constructed by Chris Magwood.
A DIY Straw Bale Demonstration Building

Project Description

The Romania Green Building Council will work with bauMax to organize the construction of a low cost, high performance green housing unit. The house will be built at the Bucharest Green Store location and will serve a dual purpose of creating a workshop in which people can learn this new and innovative construction technique, while showcasing both current and future bauMax products.

Straw bale construction is a building style that has been gaining momentum around the world steadily for the past 20 years. It is not far from finding its way into markets in a big way. Romania, because of its specific needs and availability of resources is in an ideal position for a rapid development of a straw bale industry. In numerous conversations and, in particular, during the RoGBC’s participation in the annual Street Delivery in Bucharest we were inundated with inquiries about creating buildings using ecological materials. The interest we received in part motivated our desire to propose this project.

With a growth seen of 100% in the last year in the affordable housing market (homes <50,000 €) it is an excellent time to cater to this market while the rest of the construction industry has seen significant decreases in volume. Straw bale promises affordable, incredibly well insulated (U=0.114) and easy to construct DIY designs that are seismically resistant and ascetically pleasing. Additionally, the vacation home market would also benefit from this technology as its affordability and rapid construction are well suited to that market as well.

There are number of bauMax products that are required to support an emerging straw bale construction economy that will be quite popular when the method gains popularity. Straw bale also decreases the cost of construction materials like BCA and cement which provides more budget for constructors for items with higher mark-ups like windows, doors and hardware.

Anticipated bauMax benefits
- Developing the top market position associated with ecological building materials securing a rapidly expanding opportunity
- International recognition for project
• Unique display and promotional item on bauMax premise, will dray straw bale enthusiasts to the store
• To prospect the public interest and the market potential of natural materials construction in Romania
• To introduce new products to the Romania
• Partnerships with NGOs working in low income housing to supply materials and expertise to their projects
• Positive visibility for supporting a truly sustainable DIY housing solution – a first in the Central East European region.
• Demonstrate that the project was completed with bauMax products and customer assistance.
• Add to the bauMax portfolio of green building solutions
• Receive customized “Sustainable Construction Materials” workshop for bauMax buyers and other employees (3 to 6 hour workshop), and customers (1-2 hour in store workshop) and other relevant persons as indicated. bauMax personnel can assist in delivering the presentation to ensure a connection with the brand.

Anticipated RoGBC benefits
• Build awareness of natural building and energy efficiency as a desirable and available solution to a wide range of income levels within society.
• Demonstrate the benefits of a straw bale home and of the specific materials, equipment, technologies and techniques used in the construction.
• Create a successful business opportunity for a RoGBC member company which will, in turn, encourage more green initiatives.
• Encourage the DIY customer to consider natural products and technology in accordance with our organization’s mission.

bauMax’s proposed participation
• Contribute store credit for construction materials of the home or assist in motivating bauMax suppliers to provide materials.
• Provide two bauMax specialists to assist in construction, answer customer questions about the project, organize logistics, assist in delivering workshop training.
• Import from bauMax in other countries products that are unavailable currently in Romania
• Provide use of truck for collection of additional materials
• Other internal costs associated with logistics, event planning, and workshop setup
• Develop a “Green Corner” around the project that will offer green products or solutions to consumers in one location in the store
RoGBC’s proposed participation
- The RoGBC will provide construction expert for leading and advising on construction of the house
- The RoGBC would develop the “Sustainable Construction Materials” workshop curriculum customized for bauMax.
- The RoGBC would help to organize and promote the event to its data base and to general media

The timeline and milestones of the project are:
- Delivery of finalized plans and materials list by July 1st, 2010
- Construction over the weekend of July 30th, 2010
- Maintain as long as desired by bauMax

Products Used
Structure will consist of one room house approximately 30 m², with possible display washroom and kitchen to display energy efficient appliances and composting toilets.

Required
- FSC lumber
- FSC wood windows and doors
- Polypropylene foundation bags
- natural or “eco” paints
- Lime Plasters
- Slip straw and natural clay plasters
- Steel roofing
- Nylon strapping

Optional
- Rammed earth
- solar heating (panels and storage) and cooling (solar chiller)
- photovoltaic panels, with long-life no-maintenance batteries
- low-voltage DC lighting and appliances
- LED lighting
- low water consumption toilets with macerating and grey water pumping systems (or composting toilets)
Straw bale walls before plastering.

Break down of a straw bale wall section.