



Building “Green” IN ROLLING HILLS

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Our Hemphouse – One Year Later Hemphouse update and net zero energy in your neighborhood

One year later – I am sitting in our hemp addition, our new living room, writing this follow up article. It is hot outside and cool inside without any air conditioning. It seems the hemp is working...

We love hanging out in our new addition not just because we like the design but it just feels very comfortable, due to the air quality the natural and breathable walls create. We finished the hemp walls with hydraulic lime. Inside we added a finishing layer of clay on top of the lime. I created a blog – <http://beatekirmse.com> – and I have received many inquiries about the hemp addition. In the meantime, I know of two build-ings in Northern California in the design process that will use hempcrete. We are very pleased that others follow suit.

This last year has been an incredible journey.

Our interest in industrial hemp as a natural raw material for healthy food, clothing and construction has led us to build with hemp masonry. The exceptional benefits of hemp to build an energy efficient and healthy living environment led my husband and I to learn more about energy efficient and healthy building designs and practices in general. It opened a whole new world to us. As a result we decided to become part of the green building industry. I have immersed myself in courses, conferences and networking activities and learned a lot about our building code, the core concepts of building energy efficient and healthy homes and technology to support the design and build process.

Throughout the year I have been talking to many architects and contractors, and the takeaway is that many do not understand how to use the natural environment to build energy efficient and healthy homes with a minimum of chemicals, artificial lightning and HVAC. Instead their designs typically depend on artificial lighting and heating/cooling to control light and temperature inside the house. HVAC's today are often oversized. That is why the operating costs of many homes are higher than necessary and the air and light quality inside is not optimized for human comfort.

In short, just because a house looks good or has been designed by an acclaimed architect or an architect who has built many homes in your neighborhood does not automatically mean these houses are energy efficient or provide optimal comfort for the occupants. The good news is – the building code is zooming in more and more on smarter functionality, occupant comfort and better use of natural resources such as sun and wind.

Today the California building code and the energy code in particular, variously known as CalGreen and Title 24, is the most progressive in the country. The California Energy Code is known worldwide as The Energy Model and representatives from countries all over the world have come to study it.

From 2020, the California building code will require new residential buildings to be zero net energy. That means that an

energy model has to be created that shows that a building is designed and built in such a way that it does not use more energy than the energy that is produced on site. Building healthier and more energy efficient homes is not a question of money but rather of an optimized design process now being widely adopted by architects and others interested in sustainable development.

That is why it is so important to choose a good architect. In today's world a good architect has to be able to provide you with the design technology and knowledge to build a home that requires as little energy as possible for your personal needs. Otherwise you end up with a roof and yard filled with solar panels to compensate for your architect's poor design and material choices.

The better your architect understands these new design principles, and is knowledgeable about new materials and sustainable technologies, the better your home will function and provide you a healthy and comfortable environment for a fraction of today's operating cost.

This, what amounts to a paradigm shift, is going to challenge our city planners, building departments and homeowner associations. Are they prepared to make way for sustainable solutions that leverage natural resources and minimize energy needs to maximize occupant health and comfort and simultaneously

get to net zero energy? Do our architectural committees recognize that they are going to have to compromise previously accepted aesthetics to incorporate sustainable design solutions? Local building regulations will have to be reviewed and revised; approved product and materials lists will need to be overhauled.

We're at the gates of major change as our whole built environment, over the next few years, gets first re-imagined and then re-worked, to incorporate the principles of sustainable development, lower our footprint, and minimize adverse effects on the health of our planet.

On a personal note, I would like to comment on the picture with the little window next to the door. It shows the interior of the wall, the hempcrete. The little window has been with me for about 30 years and I never knew what to do with it until we built our hempwalls. The window is from an old building in Germany where my grandmother started a business (pharmacy) after WWII, a divorced mother with two little girls. My grandmother moved on and built her own multi family building with her business on ground level and my mom rescued this and another window when the original building was torn down. I was very close to my grandmother and she would love that this window is now permanently in my living room. A great memory of her and what a strong and independent woman she was.



Our pug Twyla appreciates contemporary art



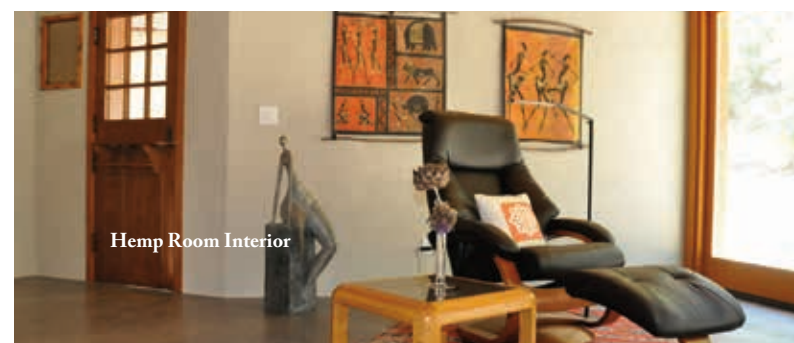
Orange seat cushions made with hemp fabric



My grandmothers window which I have been carrying around for 30 years waiting for an appropriate application. It shows the raw hemp in the wall.



Hemp Room Interior



Hemp Room Interior



Raw hempwall, same wall as the one with the big painting

ATTENTION – looking for likeminded neighbors

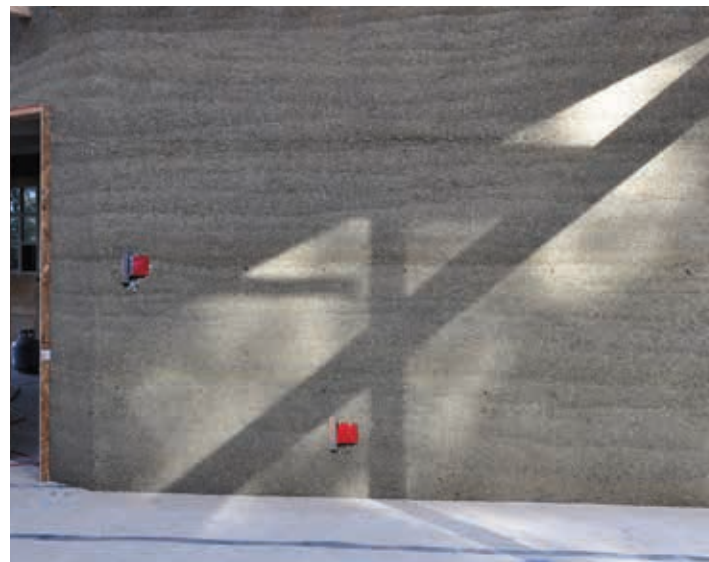
Are you interested in a more sustainable and healthy lifestyle, not just architecture? And would you like to share your curiosity, knowledge and/or ideas? Write me an email and perhaps we can assemble a like-minded group...Beate@BeateKirmse.com



Taking off forms and exposing hempwall



We had to incorporate a hardyframe into the hempwall for earthquake requirements (might not be necessary if material is properly tested in US)
Isn't it just beautiful?



Same wall as wall behind leather chair with African art



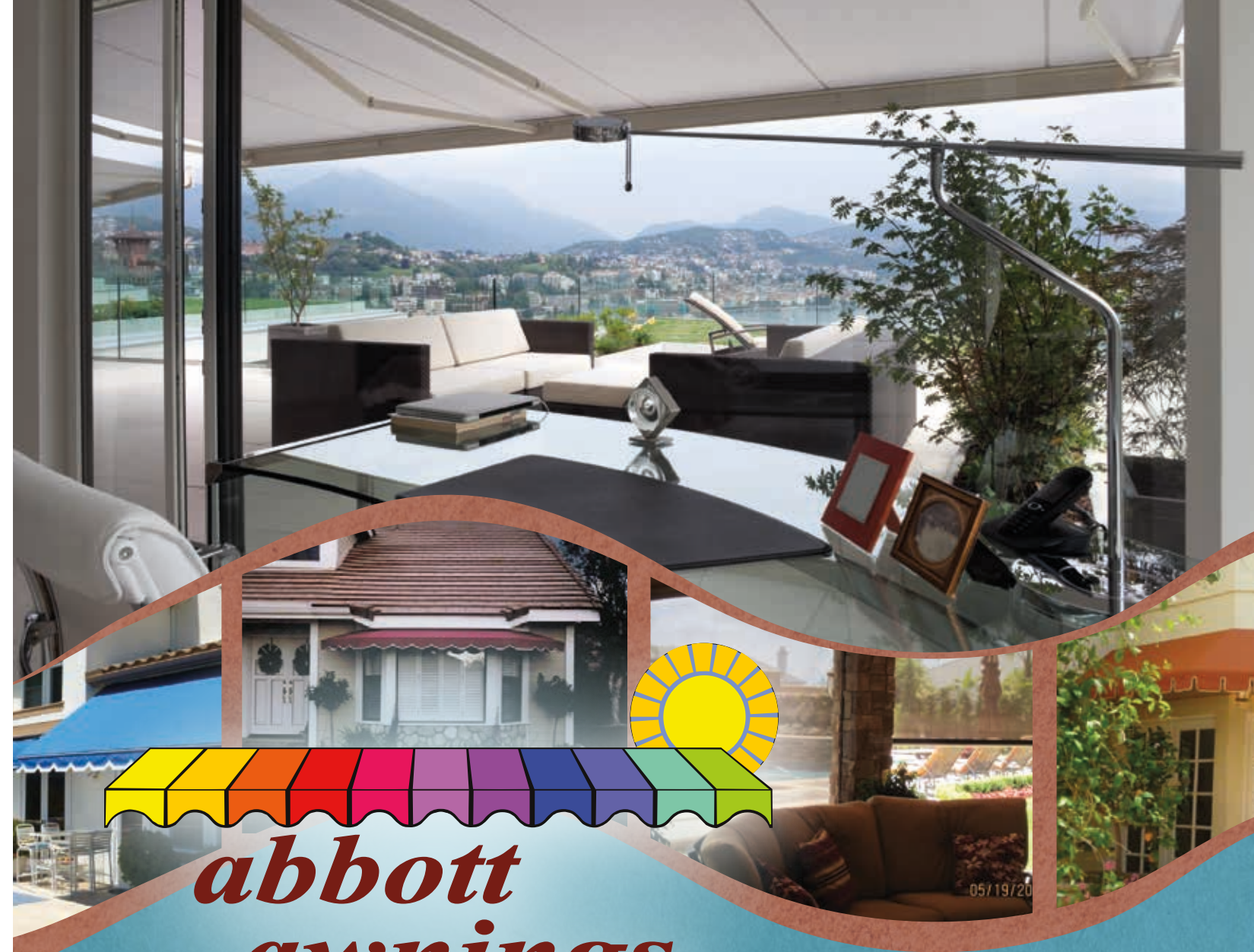
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