



Collaborative Energy in Action

That's the theme of this issue of the Ecobuilding Times. It springs from the 2003 Northwest Ecobuilding Guild annual retreat. As we help move our region toward sustainability, it's imperative we join forces with other groups, organizations, and individuals that share similar objectives. The "energy" and "action" elements in the theme are as important as collaboration, and it's the synergy between the three elements that give rise to the possibility of positive change. So read on for stories of collaborative energy in action, and aspire to do the same. To paraphrase a central figure of global peace and justice: be the change you want to see in the world.

Eva's Retreat Experience

Innovation, expertise, love and community sent my senses whirling during the first year of my participation at the annual Northwest Eco-building Guild Retreat. The sound of passionate chattering flowed in endless circles around the people, the projects, the pioneering of new markets, a new ethic of cooperative spirit and the building a strong grass roots movement. It was an intellectual journey and a delightful time getting to know the guild artisans and their trades. I felt an innate satisfaction to find kinship with creative people who are changing and building the world we live in. I am inspired to do the same.

I attended several excellent seminars during the weekend. The first was a talk given by Bruce King titled "Relax. Everything is going according to plan." At first I thought it would be a talk focused on straw bale, but was delighted and intrigued to find that instead, world history, ancient art and building were the focus. Bruce's story telling brought forth a feeling of hope and remembrance about the larger picture of the human experience on this planet. I felt inspired that our inherent interconnectedness with the Earth could be expressed in the art form of building.

Another seminar that I enjoyed was given by Andre De-Bar and David Heslam on, "Reclaiming Urban Sustainability." Their slides took us through the building of a well designed *Rastra built home in Portland, Oregon. It was exciting to watch the building unfold in an urban setting. I learned different methods of incorporating recycled material into the building that enhanced the feel and look of the home. It was great to see sustainability in action in the city!

Perhaps the most fascinating seminar for me was the

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Serendipity Farm

Creating sustainability in the local economy and community is a main theme for Serendipity Farm, a 46-acre farm in Quilcene, Washington, and a new member of the Northwest EcoBuilding Guild. Owner Chris Llewellyn and her crew are excited to network and connect with the resources and talents available in the Guild. Plans to engage the local community are also in the works.

Chris's vision for the farm and land creates ample opportunity for collective energy in action. She began by starting an organic produce operation with farm interns and her son and daughter, Jeff and Arianne. Her produce is delivered and sold within a 35-mile radius. Horse boarding, training, and riding lessons are also provided on the farm, which has good access to trails into the Olympic Forest and Foothills.

A large percentage of the family farm is dedicated to a salmon stream, pond, and wetlands restoration project. This includes re-routing the stream back to a natural meandering course, digging out a natural pond, replanting native vegetation, and providing passage for the plentiful salmon found in the stream so they can continue their journey upstream. Specific grants and organizations are being targeted to fund this project. Partnerships with local entities and organizations with the same goals are forming.

The farm will begin hosting a number of classes, workshops, and retreats this year. The workshops will reflect the vision for the farm. Already scheduled are workshops on: ecosystem restoration, salmon & wildlife habitat enhancement and permaculture design for small properties; cob oven and bench construction; and two cob and natural building workshops to construct the first of the natural/alternative energy outbuildings on the property. Other

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Eva's Experience (continued from page 1)

presentation given by Mark Lakeman entitled, "The Village Lives." Mark brought up important points about "places" and how man has evolved away from village living (in many



places) to living on the grid system. Learning the history of the grid (that it was designed for slave quarters in ancient Greece) helped me in the present to better understand why people and communities find themselves isolated or separated in present day cities. The loss of community space in cities is something I could associate with as a child growing up in Philadelphia. What I found most exciting about the talk was that we were shown examples in Portland of how people were reclaiming community spaces and recreating the village.



As a first time attendee at the retreat I feel like I found a new "home" and a community in which to grow and to build a new world together. See you next year!

Guild Membership Benefits News

The NWEBG is happy to announce a new membership benefit for current and new members!

Guild member, BuildingGreen Inc, is offering a one-time \$30 discount on BuildingGreen's annual subscription to Environmental Building News (print), or their new electronic resource, the BuildingGreen Suite. EBN is the leading newsletter on environmentally responsible design and construction. The BuildingGreen Suite provides access to three linked green resource databases: the full archives of EBN articles, the GreenSpec directory, and over 65 green building case studies. GreenSpec has over 1750 green building product listings, with descriptions written by EBN editors, and links to manufactures. For more information on these green resources go to the BuildingGreen web site at www.buildinggreen.com or phone 800 861 0954. To obtain this \$30 Guild member discount on BuildingGreen subscriptions, contact Nancy at membership@ecobuilding.org for the discount code. Join or renew your Guild membership now, to benefit from this offer.

Serendipity Farm (continued from page 1)

workshop topics will include bio-diesel, dowsing, whole foods preparation, cob oven baking, medicinal herbs, greywater systems and natural building design.

Serendipity Farm is true to its name as it rapidly becomes a place for learning, sharing and working together to bring our collective energy and vision into action. Leaving a healthy, viable world as the legacy for our children, grandchildren and all living things is our destiny.

Article written by Mary Ann Dow and Bruce Carter, Serendipity Farm Event Coordinators

Partnering for Green Building

The Spokane Tribe, headquartered in Wellpinit, Washington, is working with an interagency partnership formed by Department of Ecology staff, including Jim Wavada of the Guild's Inland Chapter, to develop a green building training program for Native Americans in Eastern Washington.

To get the necessary technical expertise, Wavada recruited fellow members of the Inland Chapter. This created a four-way partnership: the Spokane Tribe, Ecology, Community Colleges of Spokane, and the Guild.

The partners have met twice already and have now agreed to move forward with the development of potential funding sources, including \$1 million the TANF program has set aside for training aimed at producing living-wage job skills. The Guild will also begin development of a proposed curriculum and negotiate with CCS for how best to integrate this new training with existing construction apprentice programs.



The partnership hopes to develop trainings that could begin as early as March of 2004 and be integrated into the CCS apprenticeship training programs as early as fall 2004.

For more information on this partnership project, contact Jim Wavada, ERO-SWFAP, (509) 329-3545, jwav461@ecy.wa.gov.

Chapter Updates

Central Washington Chapter

Cecil Smith drove from his home in Gresham, Oregon (in winter weather) to Ellensburg to present an informative slide show on techniques for new construction and remodeling that improve indoor health. He also touched on some ideas for improving the health of a home without full-fledged remodeling. Cecil has designed and built homes for highly chemically sensitive clients with positive results.

Little known fact: Formaldehyde (HCOH) is in products that account for 6% of our gross national product - that's 6% of \$10 trillion or \$600 billion (\$600,000,000,000.00) in material flow!

Southwest Oregon Chapter

Another exciting year lies ahead in Eugene. During the past year we've more than doubled our membership and placed a renewed emphasis on attracting building professionals. We hope to continue to build on this momentum, as well as create strong connections with other groups in Eugene, including more shared events with the City of Eugene and the University of Oregon's Ecological Design Center, sponsors of the annual H.O.P.E.S. conference each spring.

Our primary public activity continues to be a monthly series of lectures. The lectures attract at least 25 people and we often see the room packed with 70 eager green building enthusiasts. An additional element to our monthly meetings has been a "members only" pre-meeting gathering. We invite the evening's speaker to come an hour early and mix informally with members. The chapter provides "artistic" pizza crafted by local artisans. These "salons" have been very popular with members.

Central Puget Sound Chapter

In addition to holiday-related activities, Central Puget Sound Guild members kept active with events as the NW Flower Show and a Built Green Workshop. The all-day workshop was an opportunity to learn about Seattle's residential green building certification program.

Several members were also involved in the production of a 30-minute video about sustainable home remodeling. The video is intended to be part of a resource kit available for homeowners at the local library. Guild members would like to see the video expanded into a monthly TV feature.

We will start the year with a roundtable discussion in January. This year's monthly meeting theme will draw inspiration from the idea of collaboration. The ever-popular Phinney Home Remodel Fair is also on the schedule for the early year.

Inland Chapter

Grant awarded to fund green building training

Foundation Northwest has granted the Inland Chapter, Northwest EcoBuilding Guild \$10,000 to develop a training program in green building technologies for local construction trades apprenticeship programs.

Foundation Northwest was founded in 1974 to provide a permanent source of philanthropic capital for the community. The Foundation now holds over 200 charitable funds established by numerous donors for the benefit of the Inland Northwest region. Sustainable Community Development is one of those areas of special interest, working towards the creation of sustainable living wage jobs.

Jim Wavada from Department of Ecology's Eastern Regional Office is a member of the Guild's Inland Chapter. He worked with Steve George of the Spokane Alliance to prepare the successful application. Wavada and George will also supervise development of the training in cooperation with Chuck Danner, Chairman of the Inland Northwest Apprenticeship Coordinators Council and Katherine Proff of Community Colleges of Spokane.

Like the Foundation, Spokane Alliance places a high priority on the creation of sustainable living wage jobs. This Alliance consists of diverse institutions including churches, labor organizations, faith-based communities, civic and education organizations, and small businesses. The Alliance has identified the creation of living wage jobs through the enhancement of skills as contemplated in the green building training proposal as a high priority for their broad-based community organization. Their enthusiastic endorsement of the application is considered a major contribution to its success.

The objective of the recipients is to integrate training in specific green building technologies into existing building trades apprentice training programs. For example, the proper techniques and assembly skills for installation of radiant floor heating system will be integrated with the more basic training of local electricians and cement foundation workers.

Wavada and George are assembling an interagency team to design the trainings and identify and recruit topical experts (*some from the Inland Chapter of the Guild*) to do the actual training. They expect to have the trainings ready to offer by March or April of this year.

For more information, contact Jim Wavada, (509) 329-3545 or e-mail him at jwav461@ecy.wa.gov.

Green Roofs Sprouting Up

By Robin Rogers, Built Green™ Director

For starters, a green roof is sometimes green in name only. The color depends entirely upon the type or species of plants that grow on it. So, then, what is a green roof and why are major cities across the country, including Seattle, installing, testing and funding them? Why would this year's first-ever national green roofs conference, "Green Roofs for Healthy Cities," draw more than 500 attendees, including several representatives from King County? How is a green roof an appropriate technology for residential development?

The answers to these questions lie partly in a local project known as the Green Roof Project, partially funded and supported by King County, and spearheaded by local architectural designer Patrick Carey and The Northwest Ecobuilding Guild, a Built Green™ member organization. Jon Alexander of Sunshine Construction, one of Built Green™'s most active members, also has been involved with building two green roofs as part of the Green Roof Project, along with Carey.

Carey stresses that one of the goals of the project is to adapt technologies that have been used on larger, commercial projects to smaller residential ones. Basically, a green roof is designed to facilitate the growing of vegetation to take the place of bare membrane, gravel ballast, shingles or tiles. It is installed with extra consideration of the loads based on soil thickness — typically between two and one-half inches and 12 inches — and the weight when saturated with water. All green roofs include a single- to multi-ply waterproofing layer, drainage, growing media and plants, covering the entire roof deck surface in either an extensive (shallow) or intensive (deeper) design.

Green roof possibilities

Alexander became involved with green roofs mainly because he wanted to address surface runoff issues that could adversely affect salmon habitat. He saw green roofs as a high-end option, with significant environmental benefits that compare in price to tile or top-of-the-line metal roof systems.

Alexander also recognized an opportunity to provide green roofs to clients as an aesthetically pleasing upgrade as compared with most existing roof systems. He believes their higher aesthetic value arises out of their ability to change throughout the seasons, attracting butterflies and birds, while growing flowers and reducing the environmental impact. He adds that green roofs can blend into the landscape without altering the function of the structure. "It's a challenge to take a usually 'dead' space and create a living, dynamic system that also minimizes the effects of rainwater runoff," he says.

Carey notes that green roofs have some additional bene-

fits, including significant acoustic and energy saving qualities. Acoustically, they absorb neighborhood sound rather than reflect it, and they act as a sound barrier, shielding the house from ambient neighborhood noise. They also contribute to both cooling in the summer and heating during the winter.

Alexander's first green roof project is growing in Juanita atop a Built Green™ workshop garage built by his company and designed by architect Rob Harrison. Owners Susan Radke and Jim Sproull wanted to spare their higher-sitting neighbors from having an unattractive view of a typical garage rooftop. This has been accomplished by setting the floor level low, digging the building partly into the site, sloping the roof up and away from the neighbors' yards, and planting the roof with a variety of vegetation.



Guild member Jon Alexander's sedum planted green roof, one month after planting. Jon's roof also contains raised beds for vegetable gardening.

Alexander's second green roof is his own workshop garage. What was formerly a view from his house above to a conventional flat-roof system below now blends almost seamlessly with the backyard landscape as the plants have taken root. Other Built Green™ members also have materials or technologies that can be used on green roofs. For example, Cedar Grove Composting mixes specialized soils for green roofs and has provided blends according to Carey's specifications. Glacier Northwest manufactures waterproof concrete and has installed it on a Redmond project to cover an underground parking garage that is now both drivable and vegetated.

County and city support

Both King County and the city of Seattle are sponsoring

such projects in an effort to study and develop cost-effective and reproducible models of green roof technologies appropriate for wide-scale residential application. Green roofs have the ability to reduce storm water runoff, and many believe they are a superior alternative to other storm water management options that require scarce and expensive land. They retain 60 to 75 percent — sometimes as much as 90 percent — of the total annual runoff volume of a roof, they slow water velocity, help return water to the hydrological cycle through evapotranspiration and naturally filter water to improve water quality.

According to Katie Spataro of the King County's Solid Waste Division and Built Green™ executive committee co-chair, the county's support of green roofs is consistent with its overall goals of promoting sustainable and low-impact development, limiting negative environmental impacts, managing storm water runoff, increasing wildlife habitat and creating markets for recycled materials.



Photo: Jon Alexander

Lucia Athens, Sustainable Design and Construction Specialist with Seattle Public Utilities and chair of Seattle's Green Building Team, says the city of Seattle also supports the Green Roof Project, and is interested in green roofs as applied at different scales — residential to commercial. Most green roof technology is currently applied on the larger, commercial scale. For example, Seattle's new Justice Center and City Hall both have green roofs. The Justice Center roof is part of an accessible rooftop deck and provides an aesthetically appealing social space. Adjacent to courtrooms, it provides a place for jurors to take breaks during trials. The green roof on City Hall is not accessible, but overflow from it is also used to collect rainwater for irrigation and toilet flushing. Both buildings are undergoing post-occupancy analyses to determine the effectiveness of the vegetated roofs.

Athens says the city is especially interested in "how green roofs might contribute to storm water functions for

both peak flow and water quality, as well as reducing heat island effects." A shift to a higher percentage of green, or pervious, rooftops could have a significant impact on the area's storm water runoff as recent estimates suggest that Seattle-area rooftops could cover as much as fifteen square miles.

Maintenance

Alexander believes one of the great features of the smaller-scale residential roofs is they require virtually no maintenance after they are established. Many of the extensive systems, up to about four inches of soil, are planted with drought-tolerant, hardy, low-growing sedums that do not need watering or mowing, are easy to plant, provide a variety of colors and pose little risk of becoming invasive. In fact, they like to grow in sunny, hot, dry places. The pilot projects have purchased plant cuttings from Squaw Mountain Gardens near Portland, Ore., specialists in sedums. Alexander jokes that he's thought of putting a goat on his roof, but it's not even necessary. Instead, he will consider adding some organic fertilizer in a couple of years to keep the plants and soil healthy, and that's about it.

Green building methods take root at Idea Home

As part of a Built Green™ Idea Home — a demonstration project at Issaquah Highlands sponsored by Port Blakely, the MBA and the city of Issaquah — a small green roof or green deck, will be installed. The Idea Home will be open to the public for nine weeks beginning in February 2004, and will show how building green can be mainstreamed with little added cost above conventional construction methods.

For more green roof information...

www.greenroofs.com

Patrick Carey's website: www.hadj.net

Ecobuilding Guild Green Roof Project:

www.ecobuilding.org/proj/ecorooft/index.html

Greening Rooftops for Sustainable Communities

Conference (Portland, Ore., May 2004):

www.cardinalgroup.ca/grhcc/about_conference.htm

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About the Guild

The Northwest EcoBuilding Guild is the Pacific Northwest's leading association of residential builders, architects, designers, consultants, and suppliers concerned with ecological building. The Guild's mission is to function as an educational forum to facilitate building practices that protect human health, encourage sustainable resource usage and foster long term economic vitality. To learn more about the Guild and its activities, check out our Web site at www.ecobuilding.org.

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