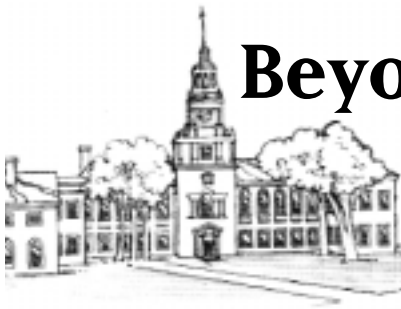


Beyond the Green



Newsletter of the Dartmouth Environmental Network

Green Buildings: Making Them a Reality

Green design is a way of thinking about and planning buildings that is substantially different from how most buildings are conceived and built today. It requires that a shared vision of the building be created, usually before the first set of plans is drawn up. This vision contains expectations about how the building will look, feel, and perform and must be commonly held by the client, architect, contractors, and the community, for the building to be truly green.

Through a DEN sponsored forum on October 13th, the Dartmouth Community had the opportunity to learn from other institutions who have gone through the process of creating this kind vision for their buildings. Titled *Green Residence Halls: Planning and Process*, the event was attended by several faculty members, students, alums and some of the college's top brass,

including Treasurer Win Johnson and Associate Provost Margaret Dyer-Chamberlain. Initial responses from the event have been decidedly positive and DEN plans to continue to facilitate this dialogue in any way it can.

Presenters from Middlebury College, Vermont Law School, and Proctor Academy highlighted the many benefits of the green buildings on their campuses and the barriers they faced in planning, design, and construction.

Marc Rosenbaum, P.E., an accomplished environmental building consultant to Dartmouth and other institutions in the region, also shared his experiences and his feelings on how Dartmouth might create green buildings on campus.

A roundtable discussion followed the presentations. Focused on the new residence halls called for by the Committee on the Student Life Initiative, the session dug beneath the surface of the process currently in place, illuminating the barriers to creating a common vision for green buildings at Dartmouth and the means for avoiding them.

The Forum: Planning and Process

The forum exposed several key barriers to creating green buildings at Dartmouth. The group identified a principal barrier to be the architect selection process. It was clear that past architects

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DEN Transition: Returning to Campus

by Dan LeBlanc '93

As you might gather from the reporting in this newsletter about DEN's increasing on-campus activities, DEN is making a transition from an organization that is a satellite of the college's sphere to becoming more a part of life on campus. Reasons for this are many and varied, but the most vital one is that members of DEN feel most inspired about the organization when its network and resources are directed towards the campus, where they can be used and their impact felt.

I once read a birthday card to an older friend of mine that said, "Another year older, another year wiser," and inside it said, "Unfortunately, it's a package deal." As recruitment of new alums has not been one of DEN's strong points in the past few years, many of our members can relate to that card. However, for DEN this is a fortunate situation; organizationally it gives us a strong foundation. One member, Tom Burack '82, DEN's founder, and former president, displayed this kind of sagely wisdom at DEN's February council meeting. His idea for this fall's forum on green residence halls provided DEN with a pathway to utilize its network and resources to impact life on campus that was manageable and achievable. We are thankful to have Tom's wisdom as well as the wisdom of many others that continue to make DEN an effective organization.

This fall's forum is a good example of DEN's migration back to campus in a role that the organization can feel comfortable with. We are looking forward to sustaining and nurturing the discussion stimulated by the Green Residence Halls Forum. This will certainly mean facilitating further dialogue and may lead to further DEN sponsored forums on other topics.

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Green-Mouth listserv launched

by Robert Mowbray, '57

The class of '57 recently initiated a listserv on which environmental issues are being discussed. The listserv, named "green-mouth" is open to all members of the Dartmouth community and others who share our concern for the earth's deteriorating environment. We intend the listserv to be a place where responsible study and testimony about our globe's long-range survival can be presented, challenged, debated and resolved into a plan for political advocacy and/or other forms of group and individual action.

As of October 1, the listserv had 31 members and topics of discussion have ranged from tropical deforestation in third world countries to the threat of climate change to New England ecosystems. In the coming weeks we are recruiting members from other classes, the faculty, the students, and DEN. To subscribe to "green-mouth" please send a message to Majordomo@Dartmouth.EDU with the following command in the body of your email message: subscribe green-mouth.

We look forward to welcoming a large contingent from DEN. You are welcome to lurk, but we hope you will sign up and get involved. If you would like to receive the postings which have been made to the listserv prior to your subscription, send a message to rmowbray@worldnet.att.net and request that green-mouth postings be forwarded to you.

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- Captain Climate

President's Column

As this issue of the Newsletter goes to print DEN is busily engaged in several initiatives to foster sustainability on campus.

In cooperation with the Office of the Provost and ENVIS, DEN organized a forum and roundtable discussion in Hanover on October 13 to explore the process of incorporating ecologically sound design concepts into new residential spaces resulting from the Student Life Initiative. Titled Green Residence Halls, Planning and Process the forum brought to campus representatives from institutions to share their experiences with successful green building design. Attended by a diverse group of participants, from students and faculty to the Dean's Office and Facilities Planning, the discussion highlighted issues and barriers to building green at Dartmouth and how to overcome them. Initial response has been positive, and we hope this forum was an effective first step in a process that will eventually create ecologically instructive living spaces while protecting the environment on campus.

Meanwhile, DEN's mentoring program is taking shape. Our Spring membership drive revealed that many of our members, old and new, would like to consult with and help mentor students and recent graduates as they consider or embark on environmental careers. Another result of our membership drive is the new version of the DEN Directory, coming out early next year, which will be useful tool for networking among our members, students and the faculty. We hope you will encourage your fellow alums to join with us to make our network more diverse and effective.

Also in the pipeline is a new DEN website. In the short-term, content for the site will include a summary of the organization's activities, membership information, and the newsletter. Further down the road we hope to include the directory, searchable by geographic location and profession, and our mentoring program.

Looking North of the campus, the Organic Farm has become a busy classroom for hands-on experience for students. Six courses in a variety of environmental endeavors – writing, soil science, sustainable technology, global food system, religion and gender—are in full swing with DEN encouragement.

Please join us!!!

Organic Food, Organic Buildings

by Katy Tooke '02

On a cold day in mid-April, stepping into the greenhouse at the Dartmouth Organic Farm puts a smile on your face. The air smells slightly of warm, damp earth, rows of new green seedlings line both benches, and you can dig your hands deep into boxes of compost and peat mixed up ready for potting. This captures the essence of organic: healthy and chemical-free agriculture.

Perhaps then, standing in the dappled sunlight and enjoying the sights and smells, one can easily miss the propane-powered heater chugging away in the corner, the electric fan on the southern wall and the layers of torn polyethylene glazing overhead. Aside from the soil itself, these elements are probably the most important building blocks that enable plants to grow here, yet they're not exactly in keeping with the goal of sustainability that lies at the heart of organic agriculture.

There's something quite striking and magical about the idea of a sustainable building supporting sustainable agriculture, a place where students and teachers alike could come to garden, learn and conduct research at all



A rendering of a passive solar greenhouse for the Dartmouth organic farm.

times of the year. With this vision, I began to explore the possibility of an ecological, passive solar greenhouse design at the Dartmouth Organic Farm through an independent study in engineering. In essence, a passive solar building uses non-mechanical means to collect and store heat from the sun in order to eliminate or substantially reduce energy use. In the New Hampshire climate, this means a well-insulated, south-facing structure containing a significant amount of thermal mass that holds excess daily heat for re-radiation at night. I built a computer model that enabled me to experiment with different parameters of the design, such as size, shape, area of glazing, insulation (R) value of the walls and glazing, amount and type of thermal mass, vent, etc. Using local weather data, the model allows the comparison of each design's performance over the past 4 years, helping me to find the 'optimum' design.

Yet many of the challenges in designing a green-

house for the Farm are not simply technical in nature. The model helped me figure out how the space would work, but I also wanted to explore how it would look and what it would be made of. Designing a greenhouse for use as an educational and experimental facility meant that one must account not only for all the necessary elements of solar design determined with the model and for growing

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... Green Buildings:

had been given freedom to design the type of space they envisioned and rarely, unless asked for specifically, were green elements included. Further discussion led to a strong urging by all involved to develop a set of green criteria for upcoming projects. Jack Wilson, Assistant Director of Facilities and Planning said it well, "Architects can't make us better educators, but they can help us become who we think we want to be, so it is incumbent on us to set our own goals and standards."

From the beginning of the roundtable discussion it was evident that the one factor on everyone's mind was time. This was mostly due to the ambitious SLI schedule set by President Wright and the SLI Committee. (See Nov/Dec. issue of DAM pg.26). As the discussion evolved however, it became clear that time was not the enemy everyone imagined. Win Johnson responded this way, "I see some talented people here. We should accept this time-pressure and use this opportunity to

bring together some of the people in FO&M and Facilities Planning and empower them to make decisions, and use some of this transformational energy to address the issue."

Ross Virginia, Professor and former Chair of Environmental Studies, then asked the question, "If we talk about the client creating the goals for the project, what part do students have?" The response among the participants was united; the role of the students in this process is a vital one and inviting students to participate is an excellent opportunity for academic as well as practical learning. As a result, several student roles in the design and construction process were outlined.

Underlying the whole forum was the recognition of the greatest benefit of a green residence hall; the students of Dartmouth will be the beneficiaries of a space that enhances their ecological education and their connection to themselves, each other, and the earth for a long time to come.

NOTES FROM THE FARM

by Scott Stokoe, Farm Manager

Short days and cool nights signal the end of another growing season at the Dartmouth Organic Farm. Although this season was cool with a very late spring, the crop was a success, sending salad fixings to the Collis salad bar, vegetables for the DOC trips dinners at the Ravine Lodge, and providing healthy food for student farmers.

This summer the Farm also provided support for courses and student projects. Several classes came to the farm and used the farm in deeper, more involved ways than ever before. One course used a lettuce/broccoli inter-planting as its laboratory and another took advantage of our "southern African garden" to study food and fiber crops important to farmers in Zimbabwe. A course in Biodiversity explored the great diversity of the overall plantings at the farm to teach students

about the myriad of adaptations and variations that are represented in Upper Valley soil. Also, a number of students used the farm as a focus for individual projects. Worthy of note was an independent study in solar heated greenhouse design completed by student farmer Katy Tooke '02, whose article appears on page 2.

The outlook for this coming year at the Farm is encouraging. A brand new group of upper class students have stepped forward this fall to support the Farm's activities and guide this year's group of first year students in their work. Both groups have brought many new faces into the program. This growth is evidence that students drawn to Dartmouth and the Farm are seeking new, alternative ways of living, and pathways to a greater understanding of sustainability in their studies and everyday lives.

Back To School with ECO

by Alice Hartley '00

By 10:30 on a Saturday morning, a crowd of bargain-hunters and passersby had swarmed the ECO rummage sale on Mass Row. They picked over a chaotic assortment of clothes, desk lamps, storage crates, ironing boards, and the miscellaneous "90210 Board Game," searching for dorm room necessities or the perfect outfit for Disco Inferno. Volunteers from ECO and three other Tucker Foundation student organizations collected the sale items at the end of last spring term, stemming the tide of waste to the landfill that normally accompanies the move-out every June. These student organizations then sorted the rummage over the summer and helped run the event in exchange for sharing in the profits. So rather than making unnecessary trips to K-Mart, some students got outfitted with dirt cheap furnishings this fall without ever leaving campus. Some took a minute after browsing participate in our collective art project, painting a large cardboard puzzle piece with their "Vision of a Greener World." Other shoppers stopped to get information about ECO, or sign up to be a "warrior against waste" for their floor or dorm. Bringing in \$600 and a ton of sign-ups for ECO, the day was a success for both students and the environment.

The Environmental Conservation Organization (ECO) was created in 1998, and runs Dartmouth's recycling, composting, and energy conservation programs, as well as student internships in purchasing/procurement, Kiewit, and facilities planning. ECO operates through a network of representatives in every dorm, plus student interns and staff advisors, and is sponsored by the Tucker Foundation.

DEN MEMBERSHIP

This year the spring DEN membership mailing invited members to submit a very brief bio which would appear in a separate part of the directory, serving as an invitation for undergraduates and DEN members to communicate about career ideas and opportunities. Nearly 100 responded to the invitation. This is the first step in developing a more complete membership directory and a DEN mentoring program.

Newsletter gets another new look...Website in the making...

Under the capable direction of graphic designer Chris Boland, husband of Laura Walters '92, the newsletter has taken on what is hoped to be a more appealing and readable format. The style was chosen in part because of the ease of integrating it into the new DEN website, which is expected to be up and running by early next year. First editions of the website will feature current news, events and eco-resources for students and alums, with the addition of a mentoring program and searchable on-line directory in the future.

Not-for-profit Career Fair a Success

On October 14, DEN was part of the first career fair for not-for-profit organizations at Dartmouth. Several hundred students filled Collis Common Ground on what was a sunny afternoon and more than 40 organizations participated. For DEN it was a great opportunity to tell graduating seniors about the connections to alums working in "outside of the box" careers that DEN offers and also a chance to sign on some soon-to-be alums.

Membership Application

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Home Phone: _____
Work Phone: _____
Email: _____
College Major: _____
Class/Affiliation: _____

Annual Membership Dues

Students	No Charge
Faculty, Staff	___ \$15. ⁰⁰
Alumni/ae: Classes '99-95	___ \$20. ⁰⁰
Classes '94 or earlier	___ \$30. ⁰⁰
Alumni/ae Couple:	___ \$35. ⁰⁰
Subscribing Member:	___ \$50. ⁰⁰
Contributing Member:	___ \$100. ⁰⁰
Sustaining Member:	___ \$250. ⁰⁰

Membership Info

The Dartmouth Environmental Network is an officially recognized "Friends Group" that was organized to provide support for the College's many environmental programs, including teaching, research, and conservation.

Membership in DEN is open to members of the Dartmouth family, which is defined as students (both undergraduate and graduate), alumni/ae, faculty, admin-

istrators, and staff of Dartmouth College, including its graduate programs and professional schools. Others may join upon approval of the DEN executive Committee. The membership year runs from July through June.

Members will receive a subscription to the DEN newsletter Beyond the Green, a copy of the DEN directory, and invitations to events throughout the year.

Please make your check payable to Dartmouth College and include "Gift to DEN" on the memo line. Dues are considered gifts to the college and as such are tax-deductible but not credited to the Alumni Fund. Please send this application with your check to the Dartmouth Environmental Network, 6182 Steele Hall, #112, Dartmouth College, Hanover, NH 03755.

Alumni Feature: Captain Climate

by Matthew Stembridge '99

Decked out in red tights, orange shirt, billowing red cape, yellow boots, bleached hair, and a big red shield that looked like a stop sign, and accompanied by two dozen brightly clothed Dartmouth students, Captain Climate was hard to miss. Senator McCain was 15 minutes late starting his town-hall meeting the night of the Iowa caucus. When McCain arrived, Captain Climate stood up from his front row chair to meet him. The Senator approached the Captain saying, "Captain, it's a pleasure to meet you. Have you met my wife Cindy? Why don't you come up on stage with us?"



Jennifer Kay/The Dartmouth

Matt Stembridge '99 with John McCain at Dartmouth College.

Captain Climate would meet Senator McCain and the other candidates for the presidency several times before the end of the New Hampshire primary. As the inventor and actor of Captain Climate, I got a first hand look at presidential campaigns, the candidates, the staff, their plans and strategies, their struggle to control each and every situation, and the staggering power that an American citizen has to influence these powerful people.

In August 2000, on a radio show, Senator McCain mentioned the young, costumed and passionate global warming activists he encountered in New Hampshire while campaigning there. At a town-hall meeting in January 2000, I asked the Senator his first question about global warming. At that time, I was dressed in khakis and a button down, and the Senator stated he needed more scientific information before taking a stance on the issue. The last time he fielded a global warming question, the Senator laid out a plan for developing solutions to the problem, complete with a timetable if he were elected president.

How did this all come about? During the presidential primaries, I was the team leader in New Hampshire and New York for Green Corps, a field school for environmental organizing. Green Corps trains college graduates how to be effective grassroots organizers. My team was responsible for making the presidential candidates lay out a plan for tackling global warming in the same manner they lay out platform planks on any other issue. We were trained to strategize, build coalitions, produce effective media work, develop and communicate a message, plan and execute anything imaginable, train citizen activists - in short, to organize.

Having finished Green Corps not long ago, I have begun working to help organize the sustainable agriculture movement. Recently hired to start and run a community model farm, I will continue working to protect our environment, our communities, and our health. Being a citizen of this country means a mantle of responsibility is placed upon your shoulders to utilize the democratic power in your hands. For me, organizing around the environment is one of the most fulfilling and effective ways to do just that.

Matthew Stembridge '99 can be reached at: matts13@theglobe.com

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... **Greenhouse**

space, but also for groups of volunteers, students and teachers working, learning and researching within the greenhouse. Finding the right balance between these different priorities lies at the heart of a successful design, yet it was perhaps one of the most difficult parts of the process.

Fortunately there are good, environmentally sound choices in pretty much all fields, which can be integrated into a low-impact, efficient structure. I hope to see my preliminary design as a foundation for future projects and, ultimately, a candidate for final design and implementation when a permanent greenhouse is built. Realizing this type of ecologically responsible, passive solar design at the Dartmouth Organic Farm would enable students to work and learn in a truly organic and sustainable greenhouse, both inside and out.

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... **DEN Transition**

As I once heard from a well-respected business consultant, "the more people I know, the more solutions I am in touch with." DEN needs its membership to grow to effectively initiate events like this fall's forum in other segments of the Dartmouth Community. So tell your friends about us, and let them know how they can play a part. With each conversation, you will be strengthening DEN's mission by broadening the reach and impact of our network.



Newsletter of the Dartmouth Environmental Network

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