

New Living Building At Hampshire College Scheduled To Be Open In March 2016

TOTAL NET-ZERO FACILITY IS ON THE LEADING EDGE OF SUSTAINABLE ARCHITECTURE
AND IS DIRECTLY CONNECTED TO HAMPSHIRE'S LEADING EDGE EDUCATION

Amherst, MA—October 8, 2015—The R.W. Kern Center at Hampshire College, slated to open in March 2016, intends to achieve full Living Building Certification, which requires net-zero energy, waste, and water systems. To date, only eight buildings have been certified since the Living Building Challenge was launched in 2009. The new facility, designed by Cambridge-based firm Bruner/Cott, exemplifies Hampshire College's commitment to the highest level of environmental sustainability and to creating hands-on learning opportunities that engage students with the latest cross-disciplinary approaches and technologies. The Kern Center will serve as the first entry point to the campus, and house the admissions and financial aid offices, student gathering spaces, multifunctional classrooms, and a coffee bar. The creation of the Center has also inspired a new series of classes using the building as a teaching tool, with subjects ranging from software engineering to biological studies to investigations into social, economic, and political justice.



The 17,000 square-foot facility is part of the Living Building Challenge, the most rigorous performance standard for sustainable building design and construction, tested through seven overarching performance areas and 20 specific benchmark imperatives for achievement. The performance standards are created and updated by the International Living Future Institute, with the goal of finding new ways of reconciling the built environment with nature's ecosystems and breaking dependence on environmentally harmful building practices. The College and Bruner/Cott are working with Wright Builders, a local construction firm owned by a Hampshire graduate, to ensure that the Kern Center meets or exceeds these benchmarks. Once completed, the Kern Center will be completely self-sustaining, generating its own energy, capturing its own water, processing its own waste, and creating a space that is sensitive to both its context and ongoing use. To achieve Living Certification, the building will undergo 12 months of data verification to confirm that all systems and building functions achieve set parameters following completion.

"The Kern Center is a physical embodiment of Hampshire College's values and the philosophy that is at the root of our approach to education," said Jonathan Lash, President of Hampshire College. "We want this message of overarching sustainability to be understood by all of our current and future students, which is why we will be relocating our admissions team to the Kern Center. At the same time, being a part of the 'Living Building Challenge' is a recognition that what qualifies as sustainable is an evolving target—which is why the Center will also be studied by our students and faculty. We are very grateful to the Kern family for their leadership in supporting the development and construction of this building."

As part of the evaluation process and to uphold its educational standards, Hampshire College is creating a digital dashboard to track data on the Kern Center's energy production, water and energy usage, waste production, and other key elements. The dashboard will be publicly accessible online and visible in the building, and will remain active even following certification. The dashboard and the building itself will serve as platforms and educational tools to support practical and philosophical engagement with the science and the social needs behind sustainable living.

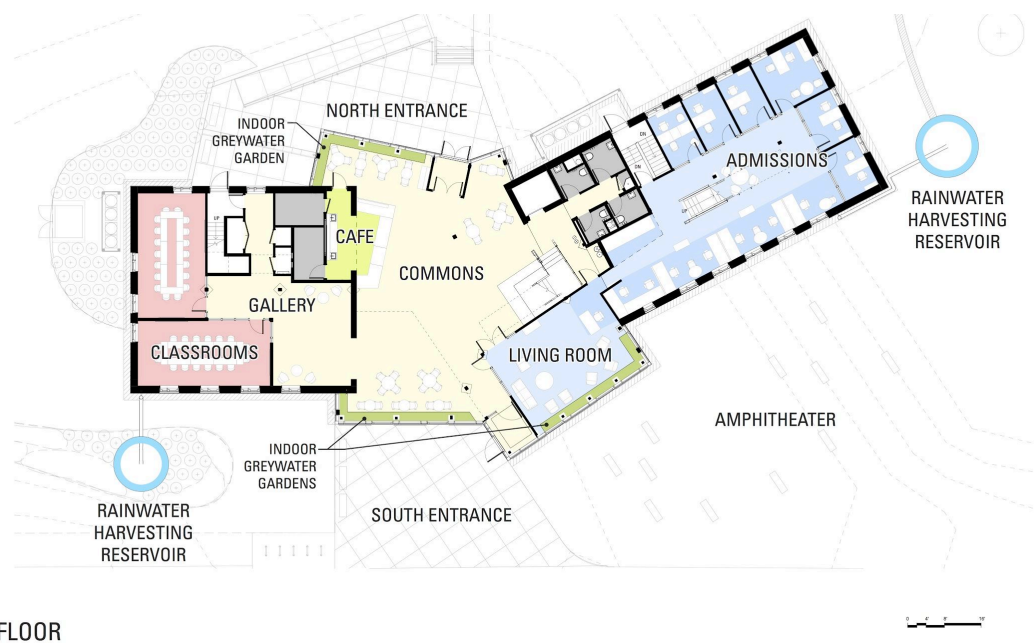
"It's rare that a single design is driven by such a volume of opportunities and such strong values," explains Jason Forney, Principal with Bruner/Cott. "The Kern Center re-considers the way structures are designed, engineered, and constructed. The building aligns with the College's mission, while creating a compelling experience for prospective students, transforming the center of campus, and adding community space. We had a lot to work with." Jason Jewhurst, Senior Associate and lead architect, added: "This building reinforces our firm's commitment to a sustainable future. Working with a robust team to design positive energy systems, net zero water, and comply with the Living Building Challenge's game-changing material requirements has been transformational."

BUILDING DESIGN & FUNCTION

Located at the heart of Hampshire's campus, the Kern Center consists of two wings joined on an angle, with a building-height atrium at the core. The angular design frames views of the surrounding mountains from inside the building, while creating a roofline that best supports the solar energy and rainwater capture systems. On the outside, the Center is clad in Ashfield stone, a mica garnet schist, taken from a quarry located only 30 miles from campus, and accented with a locally fabricated concrete composite. The interior of the building is defined by its composite wood beams, made from sustainably forested wood and, on the first level, a polished concrete floor accented with local aggregate quarried two miles away from campus. The placement of the windows is calibrated to provide maximum access to natural light for those working in the building, while also mitigating the challenges of insulating a building effectively against the variable New England weather.

Visitors will enter the building through the Center’s main doors and walk into the atrium, known as the Commons. To the east, will be the new home for the College’s Admissions team, ensuring that students start their Hampshire experience from a central campus location. To the west, new classrooms, coffee bar, and student gathering spaces will ensure that the Center serves both as the new “front door” for prospective students and their families, and also as a place where current students will meet formally and informally. The second floor will serve as new offices for the Financial Aid department, connecting it directly with the Admissions team and making access to both offices easier for interested or incoming students.

Two other core gathering spaces define the Kern Center: on the first floor, a “Living Room” area will be a gathering space for prospective students, current students, faculty, and staff, while a second floor information session space—defined in part by its large windows, offering views of the surrounding hills—will serve as the core orientation area for prospective students before campus tours begin.



GROUND FLOOR

The Kern Center will achieve a net-positive energy—actually returning power to the wider network—through a combination of efficiency and production. The design begins with strategies appropriate for a cold climate: passive solar orientation, robust insulation, an air-tight envelope, and triple glazed windows. A 100 kw solar array on the roof will meet the building’s reduced energy loads. Rainwater will be collected from the roof and stored in two 5,000 gallon reservoirs located underground, next to the building; from there it will be filtered and treated for drinking. Composting toilets further reduce the overall water consumption, requiring only about 150 gallons per day. Greywater—the used water from sinks—is funneled through an indoor planter system that lines the central common space, and then on to a wetland area constructed adjacent to the building.

Materials for the building were selected to meet the intersecting imperatives for: local sourcing, which specifies that items must be sourced within a certain radius of the site depending on their weight; responsible industrial practices; and to avoid all of the 13 listed chemicals (e.g., cadmium, formaldehyde, mercury, PVC) on the Living Building Challenge “red list.” All wood used on the project is Forest Stewardship Council (FSC) certified. Finally, a series of raingardens treat and manage any stormwater not captured by the roof, to match the pre-development condition of a New England forest.

BUILDING SITE, LANDSCAPING, & LAND CONSERVATION

The area around the Kern Center has been landscaped and re-graded, to create an amphitheater area for people to gather, and includes the two underground rainwater reservoirs necessary to responsibly manage stormwater flows. At the same time, because the Center is located along a central pathway between some academic buildings and student housing on the southern end of campus, and additional housing and an academic building on the northern side, the grading of the area will make it easy for students to walk through the building, particularly in winter.

The placement of the Kern Center on such a prominent site on the campus also prompted the re-examination of other aspects of the College's campus plan. As a result, Hampshire eliminated the long-standing oval driveway that brought car and bus traffic—rather than pedestrians—into the middle of its main quad. The bus stop was relocated to an adjacent area along the drive that circles the campus as a whole, while additional parking has been provided behind the Kern Center. The oval driveway has been converted to a native wildflower meadow, bringing nature—and pedestrian access—back to the center of campus.

To satisfy the land preservation requirement of the Living Building Challenge, Hampshire decided to permanently protect 46 acres of land it owns on the Mount Holyoke Range. To do this, the College partnered with the Kestrel Land Trust, Massachusetts Energy and Environmental Affairs, and the Town of Hadley, as part of an ongoing initiative to add an additional 1,000 acres of protected land to the Range. The property includes a variety of habitat types, including upland forest, early successional woodland and thicket, open field, forested wetland, wet meadow, pond, and perennial and intermittent streams. A six-acre hayfield at the east end is designated for agricultural activities.

LIVING BUILDING AS LIVING LABORATORY

As part of Hampshire's creation of the Kern Center, the College is adapting its "living laboratory" education model to fit the unique opportunity presented by the construction and long-term use of this new facility. Hampshire students have been engaged in the visioning and design process from the earliest days of the project. Through a series of new classes and research projects, Hampshire students will learn about the building from the architects and design engineers, and will work with faculty from across the campus to explore the underlying science. From a range of perspectives, each course will examine how facilities like these promote sustainability and ethical citizenship—ideas that are central to the Hampshire College mission. These classes and projects will include:

- A course examining the microbial components of drinking water and waste processing, including exploring waterborne diseases, microbial diversity, and metabolism throughout the Kern Center's treatment systems, as well as a comparison of these systems with other innovative approaches to water and wastewater treatment.
- A group of students working with faculty in the area of Computer Science and Game Design, in collaboration with the architects and contractors, to identify areas in the R.W. Kern Center where the College can embed secret puzzles related to the Living Building Challenge within the building itself. These hidden puzzles will be permanent installations.
- A course helping students explore and understand the design, implementation, testing, and maintenance of large-scale software projects, such as those necessary to manage and monitor the Kern Center's systems.
- A modeling systems class where students will learn how to build mathematical models to explore the cycling of water, carbon and nutrients, and the microbial processes involved in water and waste treatment.

- A course co-taught by faculty across disciplines along with guest lectures from experts of climate change and sustainability, exploring specific ideas around how innovation can drive change. Modules will include topics such as: how the arts can help educate and engage the public to support sustainable living; why humans are resistant to changing habits; whether excess greenhouse gases can be safely stored via carbon sequestration; and how to ameliorate losses to biodiversity due to climate change.

ABOUT HAMPSHIRE COLLEGE

Hampshire is among the most innovative colleges in the country, requiring students to pursue their passions by designing their own programs of study and recruiting a faculty committee to guide them on a rigorous path of intellectual discovery. Through active, engaged learning students become producers and creators of knowledge and are encouraged to make connections between their academic work and their participation in the wider world. The environment fosters intellectual engagement, exploration, and a willingness to experiment, supported by narrative evaluations from faculty, rather than grades. The model has been described as “graduate school for undergraduates,” with critical thinking the hallmark of Hampshire’s pedagogy. Since it opened in 1970, Hampshire’s success can be measured in the mainstreaming of many of its experimental ideas in education, and in its roster of alumni achievement: Academy Award winners, Emmy Award winners, best-selling authors, scientists, historians, Peabody winners, MacArthur Foundation “genius grant” awardees, and more Ph.D. candidates than any other school of its size. More than a quarter of Hampshire graduates have started their own organizations—including social ventures, investment firms, advocacy organizations, film companies, and art galleries—which landed Hampshire on Forbes 2015 short list of most-entrepreneurial colleges. Hampshire is also part of the Five College Consortium, through which students at Amherst College, Mount Holyoke College, Smith College, and the University of Massachusetts Amherst are able to share classes, library systems, and other resources and facilities.

ABOUT BRUNER/COTT

Bruner/Cott & Associates (Cambridge, MA) is an architecture and planning firm with a legacy of working in partnership with clients to shape ideas and create memorable spaces. Recipient of the AIA National Honor Award for Design, the practice is highly regarded for successful campus, cultural, and commercial initiatives including: master planning, new construction, the adaptive reuse of mid-century modern buildings, and rehabilitation of historically significant structures. A pioneer in sustainable design, Bruner Cott’s many achievements include Harvard University’s Blackstone Office Renovations, Macalester College’s Institute for Global Citizenship, both LEED Platinum. Other seminal projects include: MASS MoCA (North Adams, MA); the reimagined Boston University School of Law complex (Boston, MA); and the revival of the Waltham Watch Factory (Waltham, MA) for office, residential and commercial use.

FOR MORE INFORMATION

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