

R.W. Kern Center Opens April 2016, Brings Leading-Edge Sustainable Architecture to New England

HAMPSHIRE COLLEGE'S NEW LIVING BUILDING GENERATES ITS OWN POWER, CAPTURES ITS OWN WATER, PROCESSES ITS OWN WASTE, AVOIDS TOXIC MATERIALS

Designed by Cambridge-Based Architects Bruner/Cott & Associates

March 18, 2016

AMHERST, Massachusetts—Located at the heart of the Hampshire College campus, the R.W. Kern Center will open on April 29. The multipurpose facility meets the highest threshold of forward-thinking, sustainable design, incorporating systems that generate the building's energy, capture its water and manage its usage, and process and recycle waste. The facility, designed by the Cambridge-based firm Bruner/Cott & Associates, will serve as the point of entry to the campus. The Kern Center is the first of a series of major environmental initiatives at Hampshire, among them to become the first college or university in the country to generate all of its electricity from solar power and complete the construction of a second living building, this one by an educational partner on campus, later this year.

The 17,000-square-foot facility was built with the goal to be certified under the most advanced green-building standard in the world, the Living Building Challenge, which calls for procuring supplies from local and regional sources and avoiding the use of toxic red-list materials. The Kern Center features two wings joined at an angle to frame views of the nearby mountains from inside the building, and its roofline elegantly supports the solar energy- and rainwater-capture systems. Examples of the locally and sustainably sourced materials are Ashfield stone cladding, exposed laminated-wood beams, and a polished concrete floor in the interior.



“The opening of the Kern Center will transform people’s experience of the Hampshire campus as it embodies our environmental values,” said Jonathan Lash, president of the College. “Our students, faculty, and staff have been involved in conceptualizing and designing the building, and its sustainability systems have been a source of study. At the same time, as the gateway for new students and their families, it demonstrates our commitment to a sustainable future. All of this would not be possible without the Kern family and the other donors who support our vision.”

THE ARCHITECTURE

The Kern Center consists of two wings with a building-height atrium at the core. A gathering space for visitors, it will showcase the views at the same time that it captures light. The placement of the windows was calibrated to provide maximum access to natural light for those who work in the building and simultaneously to mitigate the challenges of insulating a building against the variable New England weather. The interior features laminated-wood beams made from sustainably forested wood, and on the first level, a polished concrete floor accented with aggregate quarried just two miles from campus. On the outside, the center is clad in Ashfield stone, a garnet-mica schist, taken from a quarry only 30 miles from campus, and accented with locally fabricated concrete bands.

When visitors enter the building through its main doors, they will find themselves in a two-story commons. The east wing will be the new home of the College’s admissions team, so students start their Hampshire experience from a central campus location. To the west, classrooms, a 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 as a place where current students will meet both for classes and to socialize. On the second floor, an information-session space—characterized in part by its large windows, which will draw the eye to views of hills, meadows, and woods—will serve as the orientation area for prospective students before campus tours begin.

“We agree with the authors of the Living Building Challenge that we have but a few decades to change the way we think about buildings,” said Jason Forney, a principal with Bruner/Cott. “The Kern Center reconsiders the way structures are designed, engineered, and constructed, while creating a building that is deeply connected to Hampshire’s mission.” Said Jason Jewhurst, senior associate and lead architect, “Good design begins with net-positive energy, net-positive water, materials that are safe for humans, designs that favor people, healthy indoor environments, human-scaled spaces, and innate connections to nature. Responding to Hampshire’s call to action through design is the kind of work that stirs passion. This is why we became architects.”

BUILDING SITE & LANDSCAPING

The center’s prominent placement prompted the reexamination 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 oval driveway has been converted to a wildflower meadow to bring nature—and pedestrian access—back to the center of campus. The area around the Kern Center has been landscaped and graded to create a sort of amphitheater where people can get together and contains the two rainwater gardens that will responsibly manage storm-water flows.

ENVIRONMENTAL SYSTEMS & THE LIVING BUILDING CHALLENGE

The Kern Center will be net-positive energy: it will actually return 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 airtight 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 overall water consumption, as they require 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 adjacent to the building.

The 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 International Living Future Institute creates and updates performance standards with the goal of finding new ways to reconcile the built environment with nature's ecosystems and breaking away from dependence on environmentally harmful building practices. Hampshire College and Bruner/Cott worked with Wright Builders, a local construction firm owned by a Hampshire graduate, to make sure the Kern Center meets or exceeds these benchmarks.

Materials for the building were selected to meet the intersecting imperatives to source locally, which specifies that items must be sourced within a certain radius of the site depending on their weight; to adhere to responsible industrial practices; and to avoid all of the 13 listed chemicals (e.g., cadmium, formaldehyde, mercury, PVC) on the Living Building Challenge's "red list." All wood used on the project is Forest Stewardship Council (FSC) certified, and a series of rain gardens treat and manage any storm water not captured by the roof to match the predevelopment condition of a New England forest.



To date, only eight buildings have been certified since the Living Building Challenge was launched, in 2009. To achieve Living Certification, the Kern Center will undergo 12 months of data verification to confirm that all systems and building functions achieve set parameters following completion. As part of the evaluation process and to uphold its educational standards, Hampshire College is creating a digital dashboard to track 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 also serve as platforms and educational tools to support practical and philosophical engagement with the science and the social needs behind sustainable living.

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 1,000 more acres of protected land to the range. The property comprises a variety of habitat types: 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.

OTHER ENVIRONMENTAL INITIATIVES

Later this year, Hampshire College plans to construct a series of solar arrays on campus, making it the first residential college or university in the United States to generate 100 percent of its electricity from solar sources. In collaboration with SolarCity Inc., Hampshire will install 19 acres of solar panels across its more than 800-acre campus, with new Tesla battery technology provided to store power for additional use during peak periods. In addition to being beneficial for the environment, this switch will save the College more than \$340,000 a year in utility costs. Hampshire will also be the site for a second "living" building, the new facility for the Hitchcock Center for the Environment, which will be designed by designLAB Architects, of Boston.

ABOUT HAMPSHIRE COLLEGE

Hampshire is among the most innovative colleges in the country. It requires students to pursue their passions by designing their own programs of study and recruits a faculty committee to guide them on a rigorous path of discovery. 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"; 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 PhD candidates than has any other school of its size. More than a quarter of Hampshire graduates have started their own venture or organization, which landed Hampshire on *Forbes's* 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 share classes, library systems, and other resources and facilities.

ABOUT BRUNER/COTT

Bruner/Cott & Associates (Cambridge, Massachusetts) 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 such as master planning, new construction, the adaptive reuse of mid-century modern buildings, and rehabilitation of historically significant structures. The firm's work with high-performance buildings and applications in the academic sector is consummate, combining a national perspective on campus and student life facility design with a rigorous commitment to sustainable building practices. Its many achievements include Harvard University's Blackstone Office renovations and Macalester College's Institute for Global Citizenship, both LEED Platinum. Other seminal projects are MASS MoCA (North Adams, Massachusetts); the reimaged Boston University School of Law complex (Boston); and the revival of the Waltham Watch Factory (Waltham, Massachusetts) for office, residential, and commercial use.

FOR MORE INFORMATION

Sascha Freudenheim or Alina Sumajin
PAVE Communications & Consulting
sascha@paveconsult.com | 917.544.6057
alina@paveconsult.com | 646.369.2050

John Courtmanche
Hampshire College
jcourtmanche@hampshire.edu | 413.559.6180

For Bruner/Cott & Associates
Debra Pickrel
Pickrel Communications
debra@pickrelcommunications.com | 212.753.3140