

The National Trust for Historic Preservation is a nonprofit membership organization bringing people together to protect, enhance and enjoy the places that matter to them. By saving the places where great moments from history — and the important moments of everyday life — took place, the National Trust for Historic Preservation helps revitalize neighborhoods and communities, spark economic development and promote environmental sustainability. With headquarters in Washington, DC, 9 regional and field offices, 29 historic sites, and partner organizations in all 50 states, the National Trust for Historic Preservation provides leadership, education, advocacy and resources to a national network of people, organizations and local communities committed to saving places, connecting us to our history and collectively shaping the future of America's stories. For more information visit www.PreservationNation.org.

Cover photo: The rehabilitation of the Montgomery Ward Catalog House (c. 1925) qualified for historic rehabilitation tax credits as well as LEED certification. This thriving business center in south-west Baltimore incorporates many environmentally sustainable systems that conserve resources and cut operational costs. Photo by Patrick Ross, courtesy of Himmelrich Associates, Inc.

ForumJournal

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The National Trust's Sustainability Initiative will help share best practices for advocacy and education, such as this idea from Baltimore Heritage, Inc.: a "Green Tour" of an older home that incorporates energy-efficient features. Photo courtesy National Trust for Historic Preservation.

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INTRODUCTION

By Emily Wadhams

This is an exciting time to be involved in historic preservation. The convergence of a focus on climate change, the economic crisis, and a new administration and Congress in Washington, D.C., has made the work we do as preservationists more important and relevant than ever. The Sustainability Initiative at the National Trust for Historic Preservation has been up and running for nearly two years and is now poised to seize the great opportunities that come with this period of tremendous change. And we are also prepared to tackle the significant challenges that will accompany efforts to simultaneously address climate change and revive the economy.

Chief among these challenges is that the “green” community does not always recognize the critical role that older and historic buildings can play in addressing both the global warming and economic crises. If fact, there is a danger that the mass of federal incentives headed our way—whether as stimulus funding or climate related legislation—will fail to encourage reuse of buildings, reinvestment in our communities, and effective retrofits.

The articles in this issue express a level of frustration on the part of the historic preservation community at the lack of recognition of preservation’s value among the green and environmental communities—and understandably so. It is obvious to those

of us who are involved in historic preservation that we have valuable knowledge and expertise to bring to the table concerning the current environmental and economic situations. We know that existing buildings are responsible for more than 43 percent of carbon emissions in this country and account for about 75 percent of our electricity use. Clearly, if we are going to have an impact on global warming, we need to immediately begin to make it a priority to reuse existing buildings, invest in energy efficiency, and create incentives to make that happen. Increasing energy conservation in existing buildings is a relatively quick and easy way to begin to have an impact at a scale that can make a difference in carbon emissions in this country.

Older buildings and communities are our business. Preservationists know how to appropriately rehabilitate and retrofit buildings in ways that can conserve energy, and we have experience in reinvesting in older towns and cities as a community revitalization tool and as a means for supporting the local economy. What could be greener than recycling existing buildings and reinvesting in existing infrastructure, both from the greenhouse gas emissions and land-use perspectives?

This is our issue, and it’s our time to be at the table as solutions to global warming are discussed at all levels of government.

Right now in Washington and in communities across the country, however, that table seems less like a place for constructive dialogue and more like a feeding frenzy, as hundreds of billions of federal dollars are being handed out. All kinds of interest groups are battling to get their issues in front of decision makers. And frankly, preservationists are at a bit of a disadvantage. We often tend to think small—much of our work is building-by-building (or dare I say window-by-window) and even when we deal with communitywide issues, it tends to be place specific. Also, we are relatively new to the energy/climate change world. And we are perceived by others as caring more about saving old buildings than saving the planet.

It is more important now than ever that preservationists all over the country pull up our chairs and take a seat at those tables where climate change, economic redevelopment, and job creation funding, programs, and policies are being developed.

But things are beginning to change, and we are making progress in getting our voices heard. National Trust President Richard Moe, rightly, has challenged our organization to think big, to go beyond the world of historic buildings and to include older buildings and communities. His vision focuses on policy change at the local, state, and federal levels to create the incentives and tools needed to rehabilitate and retrofit older buildings and reinvest in older communities, while protecting the historic integrity of these places.

The value of this broader vision is beginning to pay off—literally. Foundations that have traditionally funded environmental efforts are now beginning to see how essential our work is in a comprehensive approach to addressing climate change. And policy makers are beginning to listen.

Here, very briefly, is a summary of the current policy work we are doing at the National Trust and with our partners around the country.

FEDERAL POLICY

Climate change and energy legislation is taking shape in the 111th Congress. Our sustainability priorities are focused in the following areas:

- **Incentives for owners of homes and commercial buildings** to conserve energy through energy-efficiency retrofits, with a 120 percent bonus for owners of properties listed in or eligible for the National Register of Historic Places.
- **Rehabilitation tax credit amendments** that increase incentives to support certified, substantial rehabilitation projects, including a “green supplement” for buildings that achieve a high level of energy performance.
- **Older and historic buildings experts** within the federal agency structure to act as liaisons between the Department of Energy, the Environmental Protection Agency, the Advisory Council on Historic Preservation, and the Department of the Interior to conduct research, develop demonstration projects, and address standards for energy conservation and historic preservation.

- **Transportation reauthorization** not only to protect the enhancements program and Section 4(f) but to redirect federal dollars away from road construction that promotes sprawl and toward programs that support reinvestment in older communities.
- **Federal funding for the Historic Preservation Fund** to support the state and tribal public infrastructure that is the foundation of preservation work across the country, including Save America's Treasures and Preserve America grants.

STATE AND LOCAL POLICY

The National Trust hopes to both directly influence state and local policy and to be an information and best practices resource for our Statewide and Local Partners, Main Street communities, state historic preservation officers, and others interested in sustainable development policy across the country.

PRESERVATION GREEN LAB

In March the National Trust launched the Preservation Green Lab (PGL) in Seattle. This is our first regional office with a programmatic focus. The PGL will work with selected cities and states on policies that can serve as models for other communities and states. Initially we will work with the cities of Seattle, San Francisco, and Dubuque, Iowa. The goal is to tackle issues such as energy efficiency and building codes, zoning and climate action plans, or legislation that encourage reuse and retrofitting of buildings and reinvestment in older communities.

CENTER FOR STATE AND LOCAL POLICY

Housed within our Public Policy Department in Washington, D.C., the Center for State

and Local Policy will provide support to the Preservation Green Lab, be an information clearinghouse, provide technical assistance, and disseminate information to our network of partners.

It is more important now than ever that preservationists all over the country pull up our chairs and take a seat at those tables where climate change, economic redevelopment, and job creation funding, programs, and policies are being developed. That means remaining in frequent contact with your congressional representative and senator and encouraging them to include policies favorable for older and historic buildings in upcoming climate change, energy, and transportation legislation. It means attending meetings in your city or county to make sure that preservation has a prominent place in your community's climate action plan. Also log on to PreservationNation.org/sustainability to keep in touch, and learn how you can help spread the word that preservation is sustainable development.

Emily Wadhams, the vice president for public policy, directs the National Trust for Historic Preservation's Sustainability Program.

HISTORIC PRESERVATION AND GREEN BUILDING: FINDING COMMON GROUND

By Richard Moe

This speech was presented at the U.S. Green Building Council (USGBC) Greenbuild Conference in Boston, Mass., on November 20, 2008.

The National Trust’s overall mission can be summed up in a single sentence: to encourage people to appreciate the importance of the historic buildings, neighborhoods, and landscapes that tell America’s story, and to give them the tools they need to keep our heritage intact and playing a meaningful role in our lives. To put it even more succinctly, the National Trust helps people protect, enhance, and enjoy the places that matter to them.

You’ll note that the terms “sustainability” and “green building” don’t appear in that brief description—but that doesn’t mean the concepts are new and unfamiliar to us. Back in 1980, long before the word “sustainability” came into widespread use, the National Trust issued a Preservation Week poster that depicted an old building in the shape of a gas can—a reminder that reusing an existing building, instead of demolishing it and replacing it with a new one, is a good way to conserve energy.

The fact is, preservationists are not gate-crashers at the green-building party. There is a strong relationship between sound old buildings and new green ones, so there is—or ought to be—a strong relationship between preservationists and green-building

advocates. We share a determination to find effective ways to address the defining issue of our time: climate change. We have a lot in common, and there is much we can learn from one another.

I’d like to tell you about the perspective that preservationists bring to the table in discussions of green building and sustainable development. I’d also like to share with you the ways in which the preservation community is reexamining its own practices and embracing change, especially in the area of improving energy efficiency in older and historic buildings.

Let’s begin with some facts.

The United States, which has only 5 percent of the world’s population, is responsible for 22 percent of the world’s greenhouse gas emissions. Discussions on this topic usually focus on the need to reduce auto emissions. It’s true that transportation—cars, trucks, trains, airplanes—accounts for 32 percent of America’s carbon emissions. But here’s a fact that’s getting more and more attention, thanks in part to the hard work of USGBC and others in the field: According to The Pew Center on Climate Change, 43 percent of America’s carbon emissions come from the operation of buildings—and this doesn’t include the carbon that is generated by extracting, manufacturing, and transporting building materials.

If nearly half of the carbon we send into the atmosphere comes from our buildings, it's clear that any solution to climate change must include being wiser about how we design and use our buildings.

I'm talking about stewardship—and that's what preservation is all about.

At the risk of sounding smug, I believe that preservationists know how to take good care of buildings. It's our job, and we've been doing it in this country for more than 150 years. The tradition of stewardship that we've always embraced, the knowledge that we've gained from decades of experience—these can be of enormous help in efforts to transform our built environment to one that is more sustainable.

Preservationists are sometimes accused of being sentimentally fixated on the past—but, in fact, preservation is strongly future-oriented. Our goal is to ensure that our historic built environment—our legacy from the past—survives so that future generations can experience it, learn from it, and be inspired by it. This kind of focus on the future is at the very core of sustainable development.

Preservationists are also sometimes accused of wanting to freeze buildings in time—but, in fact, our goal is to keep old buildings viable so that they can play meaningful roles in community life. Anthropologist Ashley Montague has said that the secret to staying young is to die young—but the trick is to do it as late as possible. All over the United States, preservationists are showing that old buildings put to new uses can stay young to a ripe old age. They're demonstrating that buildings are renewable—not disposable—resources. If that's not sustainability, I don't know what else to call it.

In early November, the nexus between historic preservation and sustainable development was the focus of a conference involving preservationists, architects, green builders, and energy experts. Meeting at the historic Rockefeller estate at Pocantico Hills, N.Y., this group developed what we're calling the Pocantico Proclamation on Sustainability and Preservation.

This proclamation, the text of which is still being word-smithed and vetted among the preservation community, outlines six preservation-based guiding principles to sustain our built environment. We believe these principles can inform and strengthen efforts to reduce the environmental impacts—especially carbon emissions—that are associated with buildings.

PRINCIPLE #1: PROMOTE A CULTURE OF REUSE

We know that the way we use our buildings causes big problems—but incredibly, we keep trying to solve the problem by constructing more and more new buildings while largely ignoring the ones we already have. That makes no sense. In addition to building green, we have to make wiser use of what we've already built.

One of the basic truths we acknowledge about climate change is that it is fundamentally the result of overconsumption of natural resources—namely carbon-intensive resources such as oil and coal. We often think of this in terms of the oil needed to power our cars, and the coal that powers many of our buildings—but constructing buildings is also an energy- and carbon-intensive activity. The retention and reuse of older buildings is an effective tool for the responsible, sustainable stewardship of our environmental resources—including those

that have already been expended. I'm talking about "embodied energy."

Buildings are vast repositories of energy. It takes energy to manufacture or extract building materials, more energy to transport them to a construction site, still more energy to assemble them into a building. All of that energy is embodied in the finished structure—and if the structure is demolished and landfilled, the energy locked up in it is totally wasted. What's more, the process of demolition itself uses more energy—and, of course, the construction of a new building in place of the demolished one uses more yet.

Let me offer an example. Boston City Hall has about 500,000 square feet of space. The amount of energy embodied in that building is about 800 billion BTUs. That's the equivalent of about 6.5 million gallons of oil—and if the building were to be demolished, all of that embodied energy would be wasted. What's more, demolishing City Hall would create about 40,000 tons of debris. That's enough to fill more than 250 railroad boxcars—a train nearly 2½ miles long, headed for a landfill that's probably almost full already. Finally, constructing a new 500,000-square-foot building on the City Hall site would release about as much carbon into the atmosphere as driving a car 30 million miles—or 1,200 times around the world.

One final point: Don't assume that the energy expended in manufacturing a building is offset by the efficient operation of new green buildings. In fact, a recent study from the United Kingdom found that it takes 35 to 50 years for an energy-efficient new home to recover the carbon expended in constructing it.

It all comes down to this: We can't build our way out of the climate-change crisis. We have to conserve our way out. No matter how much green technology is employed in its design and construction, any new building represents a new impact on the environment. The greenest building is one that already exists.

PRINCIPLE #2: REINVEST AT A COMMUNITY SCALE

In its early years, preservation in America was primarily concerned with saving individual buildings, especially the grand architectural landmarks that some people call "the homes of dead rich white guys."

We've come a long way since then. Today we recognize that buildings are important—but context matters too.

For example, the most energy-efficient building doesn't help our cause much if it sits in a remote location accessible only by car. USGBC has recognized the importance of context in LEED 2009 by increasing the number of points available for buildings in "smart" locations—that is, those that are transit-accessible. This commendable action acknowledges that the way our communities are laid out is just as important as the quality of our buildings—and plays an equally important role in our efforts to address global warming.

Instead of building more and more highways and strip malls and subdivisions, we ought to be reinvesting in the communities we already have. LEED Neighborhood Development has an entire section—*Green Infrastructure & Buildings*—that focuses on this. LEED-ND, which just came out for public comment in November, includes very important language that encourages

preservation and reuse of older buildings instead of demolition.

I believe you can't have smart growth without preservation. In fact, preservation *is* smart growth. Here's why:

- Smart growth emphasizes density of development, mixed uses, and a pedestrian orientation. These are major characteristics of older neighborhoods. Saving them is smart growth.
- Communities have a major investment in the infrastructure of older neighborhoods—the streets, schools, water and sewer lines, and so on. Making good use of this investment, instead of leaving it underused and duplicating it elsewhere, is smart growth.
- Reuse of older buildings allows for growth without consumption of land. Revitalizing Main Street means less demand for a new strip mall. Converting a warehouse into 40 dwelling units reduces the demand for new houses on 10 acres of farmland. That's smart growth at its best.

This is an area in which preservationists have lots of experience. We've been fighting sprawl and encouraging smart growth for years—and our message has been heard. More and more cities are using preservation as an effective tool for improving the quality of life in older neighborhoods and allowing older buildings to shelter people instead of pigeons. Creating viable alternatives to sprawl by turning urban backwaters into lively, attractive places to live and work—that's what sustainable development is all about.

PRINCIPLE #3: VALUE THE LESSONS OF HERITAGE BUILDINGS AND COMMUNITIES

It's often alleged that historic buildings are energy hogs—but, in fact, some older buildings are as energy efficient as many recently built ones. When the General Services Administration examined its nationwide building inventory in 1999, it found that utility costs for historic buildings were 27 percent less than for more modern buildings. In fact, data from the U.S. Energy Information Agency suggest that buildings constructed before 1920 are actually more energy efficient than those put up between 1920 and 2000.

It's not hard to figure out why. Many older buildings have thick, solid walls, resulting in greater thermal mass (i.e., the capacity to store heat) and reducing the amount of energy needed for heating and cooling. Buildings designed before the widespread use of electricity feature transoms, high ceilings, and big, operable windows for natural light and ventilation, as well as shaded porches, overhanging eaves, and other features to reduce solar gain. Architects and builders used careful siting and landscaping as tools for maximizing sun exposure during the winter months and minimizing it during warmer months.

Most older buildings were constructed so that their individual components—such as windows, for example—can be easily repaired or replaced when necessary. Even more important, unlike their more recent counterparts that celebrate the concept of planned obsolescence, older buildings were generally built to last. Because of their durability and “repairability,” they have almost unlimited “renewability.”

There's also much to be learned from traditional communities that were constructed

before the automobile took over our lives. These places offer a vision for how our cities and towns should function in a post-auto-dependent world. No wonder smart-growth advocates and New Urbanists embrace the principles these communities embody.

In short, we can learn a lot from our heritage buildings and communities, which were constructed with respect for traditional practices that allow man-made places to exist in harmony with the natural environment. In recent decades, with the advent of new materials and technologies, we've lost touch with the building lessons of the past—and that worries me. I'm concerned, for example, that many new buildings employ tech-heavy systems for heating and cooling, when lower-tech, passive systems might work fine. I'm concerned, too, that many new materials and systems may prove to be much less durable than their earlier counterparts.

Don't get me wrong. I'm enormously heartened by the spirit of innovation and enthusiasm that is so evident within the green building community, and I know that what we can learn from history—however useful—won't be enough to solve all of today's problems. But I'm convinced that innovation in the green-building arena must be grounded in the hard-learned design lessons of the past.

PRINCIPLE #4: MAKE USE OF THE ECONOMIC ADVANTAGES OF REUSE, REINVESTMENT, AND RETROFITS

The current economic downturn has everyone scrambling to identify ways to stimulate local economies and create jobs. The situation reminds me of what a British statesman told his colleagues during the darkest days of World War II: "Gentlemen, we are out of money; therefore, we shall have to think."

This is another area in which preservationists can make a meaningful contribution. Over the years, we've discovered some important things related to the economics of reusing buildings and reinvesting in existing communities.

Here's the basic message: Dollar for dollar, rehabilitation creates more jobs than new construction. Several studies and an economic input-output model developed by Carnegie Mellon University demonstrate that preservation activities create more jobs than new construction. For example, one study found that \$1 million invested in the rehabilitation of an existing building creates 9 to 13 more jobs than the same \$1 million invested in new construction. Why? Quite simply, rehabilitation activities are more labor-intensive than new construction—that is, they require more man-hours and fewer materials. This has other implications for our conversation about sustainable development as well. An economy that is more labor-intensive and less materials-intensive is a greener economy.

Here's another point to consider: Much of the work involved in building rehab requires skilled craftsmanship—which means that historic rehab, combined with job training programs, can build a corps of workers with bankable skills that will serve them well for a lifetime.

It's highly likely that the creation of more "green" jobs will be a cornerstone of economic stimulus packages that come down the line in the next few months. Most of these "green" jobs will probably focus on developing things such as solar panels, wind turbines, and other highly technical solutions—but we shouldn't overlook the wisdom of a statement in Van Jones's new



As the first project in United States to receive both LEED Platinum certification and federal historic rehab tax credits, the rehabilitation of the Portland Armory, in Oregon, completed in 2006, showed that preservation and sustainability goals can go hand-in-hand. Photo by Ralph DiNola, Green Building Services, Inc.

book, *The Green Collar Economy*. He suggests that “the main piece of technology in the green economy is a caulk gun.”

In almost every way imaginable, the rehab and retrofit of existing buildings is essential—not only in fighting climate change but also in addressing the economic crisis and bringing good, skilled jobs back to American communities. We need to make sure that Congress and our new president connect these dots. Any meaningful economic stimulus package must include provisions to reinvest in our failing infrastructure and retrofit our buildings.

PRINCIPLE #5: RE-IMAGINE HISTORIC PRESERVATION POLICIES AND PRACTICES AS THEY RELATE TO SUSTAINABILITY

Obviously, this portion of my message is directed primarily at preservation practition-

ers. I mention it to you as evidence that we understand the gravity of the threat of climate change—and we take seriously our responsibility to do whatever we can to reduce the impact of buildings on the environment. In its early years, preservation focused on keeping buildings from being torn down. Now we understand that just saving them isn’t enough—we also have to do our best to improve their energy efficiency and ensure that their impact on the environment isn’t harmful.

Happily, there is a growing number of projects that show how historic buildings can go green. There’s a great example in Portland, Ore., where an armory built in 1892 was turned into a state-of-the-art performance space—and in the process became the first historic building to receive both LEED Platinum certification and federal historic rehab tax credits. I’m especially proud of another

example in Washington, D.C.: Last spring, the National Trust opened President Lincoln's Cottage to the public—and just a few yards away from the Cottage, the Visitors Education Center is housed in a renovated historic building that will be LEED Gold certified.

Examples such as these—and there are many others—show that we're making progress, but this is an area in which preservationists can't pretend to have all the answers. We know that we have much to learn from the green building community about how to be smarter about preserving and reusing historic buildings. We will learn—and we'll put what we learn into action.

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That brings me to my final point:

PRINCIPLE #6: TAKE IMMEDIATE AND DECISIVE ACTION

It's not enough to talk about how historic preservation can inform green building, or how green building practices can be integrated with preservation practices. We must roll up our sleeves and put these principles into practice. Education and outreach will be key to our success—but action, especially in the public policy arena, is critically important.

I'd like to commend the work of the USGBC, which has done a great job of focusing attention, especially in the building community, on the issue of green building.

LEED standards are being adopted by more and more state and local governments—and many of us expect that these standards will eventually be incorporated into municipal and state codes throughout the country.

Over the years, preservationists have expressed some concerns about LEED—specifically, that it is biased toward new construction and doesn't offer enough credit for reuse, and that there is too much focus on individual buildings and not enough on the context—or location—of buildings. To address this concern, the National Trust formed a Sustainable Preservation Coalition which includes the American Institute of Architects, the Association for Preservation Technology, the Environmental Protection Agency, the National Park Service, the General Services Administration, and the National Conference of State Historic Preservation Officers. This group has been working with the USGBC to ensure that the benefits of reusing existing buildings are better recognized in future versions of LEED—and some great progress has been made. Initially, green building standards grew out of some loose ideas about what would make for a more sustainable built environment; with LEED 2009, USGBC is shifting to a rating system that is based on the science of building and the quantifiable impact of buildings on the environment.

As many of you know, LEED 2009 will incorporate a system in which credits are weighted according to Life Cycle Assessment indicators that are based on environmental impacts and take into consideration the durability of materials. The new rating system is also more context-sensitive than the previous version, awarding many more points for constructing or reusing buildings in environmentally responsible locations.

Finally—and this is very important—the new rating system will incorporate what USGBC calls an “alternative compliance path” that we anticipate will award more points for the reuse of existing buildings than was the case with previous versions of LEED.

Once LEED 2009 is finalized, the National Trust and USGBC will begin working on the next version of LEED—which will incorporate even more changes. For one thing, in addition to the durability metric that will already be in place, we’ll apply a new overlay of cultural, social, and preservation metrics that will provide direct recognition of the importance of things such as preserving sites of historic and cultural significance, reinvesting in existing neighborhoods, and providing affordable housing.

These are great steps forward, but there’s more work to be done. The science that informs the USGBC’s standards—and, indeed, all green rating systems—is still evolving. We must ensure that this science is accurate, especially when it comes to understanding the embodied energy and embodied carbon in buildings, and the life cycles of buildings and materials.

On the federal level, we are at a critical juncture for new policies related to climate change and the built environment. President Obama has made it clear that he wants to address the threat of global warming and will make reducing carbon emissions a priority in his new administration. I’m very encouraged by this.

Many of you are familiar with the Lieberman-Warner Cap & Trade bill that Congress failed to pass last summer. In addition to mandating a cap on carbon emissions in the United States, this bill included many other

provisions related to carbon mitigation and the environment—but it would have done little to provide incentives for retrofits to reduce carbon emissions by buildings. That’s a serious oversight that must be corrected in any climate change legislation that comes up during the next session of Congress.

USGBC, the American Institute of Architects, the National Resources Defense Council, and others have begun to develop proposals to address this issue. We need a bill that recognizes that reducing carbon emissions means being smarter about how we construct, use, and re-use our buildings. All of us—green builders, preservationists, architects, smart-growth advocates, and others—all of us must work together to support measures that will make this happen.

WORKING TOWARD OUR SHARED GOAL

I believe there is a powerful synergy between green building and historic preservation. But I also know there have been tensions between our two fields. Some of you may see preservation as a roadblock to going green—and there’s no denying that occasionally there are very real conflicts between preservation and sustainable development goals. Here are some examples:

- We know that part of the solution to global warming is the development of renewable energy such as wind power—but sometimes the development of wind-mill farms threatens viewsheds and sites of cultural significance.
- In many cases, solar technologies can be accommodated in historic rehab projects—but there are other instances in which aesthetics or concerns about historic fabric make their use undesirable.

- Higher density is a key element of sustainable development—but efforts to increase density, especially in urban locations accessible to mass transit, sometimes put historic buildings and neighborhoods at risk.

Situations such as these pit “good guys against good guys”—but we can’t let them cripple our efforts. Be assured that preservationists are committed to reexamining our practices, committed to thinking critically and creatively about how they can be improved to reflect the realities of the climate change crisis.

As an indication of our commitment, we will soon open the National Trust for Historic Preservation Green Lab on the West Coast. The Preservation Green Lab will undertake demonstration projects to retrofit historic buildings to achieve high levels of energy efficiency and reduce other environmental impacts. The Clinton Climate Initiative, which recently announced an Energy Efficiency Building Retrofit Program, is a partner in this effort, having committed to provide technical assistance, materials at cost, and favorable financing through participating lenders.

The Preservation Green Lab will also work with state and local governments to make sure that municipal plans, building and zoning codes, and “climate action plans” incorporate principles that support reuse, reinvestment, and green retrofits. Here’s a specific example: In Seattle, many landmarked buildings are exempt from high-performance energy requirements that are imposed on new construction or major rehabilitation projects. To address this concern, the Green Lab will work in partnership with the City of Seattle to develop code language that encourages energy efficiency in historic

buildings while providing the flexibility needed to deal with historic fabric and other complexities associated with older buildings. This is just one way in which we intend to make our Green Lab a true laboratory for generating creative policy and technical solutions to help integrate preservation and green building practices.

The preservation and green building communities share a common goal: securing a viable, sustainable, meaningful future for our children and the generations that will follow them. We stand on common ground—but to ensure that we don’t lose our footing, two things are needed:

First, a recognition of the importance of balance between the need to preserve our heritage and the need to address global warming and the degradation of our environment;

And second, a commitment to honest, open, and ongoing dialogue to identify points of difference and find ways to overcome them.

In the face of an unprecedented global challenge, we have an opportunity to forge an unprecedented partnership. Working together, we can make a real difference.

[Richard Moe is the president of the National Trust for Historic Preservation.](#)

POSITIONING PRESERVATION IN THE CENTER OF THE GREEN ARENA

By Steve Tilly

Climate change has put us all on the defensive. Preservationists, in particular, are defending their sites and their value system. On the one hand, they are devising physical defenses for historic resources threatened by flooding and other effects of global warming, and on the other, they are contending with green “assaults” on historic windows, roofs, finishes, or entire buildings.

It does not appear that the green movement is about to unilaterally celebrate preservation as a key strategy against climate change. It’s time, then, for preservationists—or better, in this context, “heritage conservationists”—to move from the defensive to the offensive and inject ourselves and our insights aggressively into the green arena. We need to bolster our intuitive grasp—our “Blink” in writer Malcolm Gladwell’s term—of the environmental importance of existing infrastructure, community networks, and landmarks and resources of memorable built and open space. We belong in the center of that arena, for reasons I will try to spell out.

First, the crisis. There is powerful motivation to support preservation in the shortened time frame imposed by our climate crisis. While sustainable thinking should play a key role in sensible planning for several generations hence, our window of opportunity to avoid dire consequences is *one* generation or less. Ongoing climate change is a given

because of the long-term carbon load already in the atmosphere; to avoid catastrophe in the longer term we need to take actions to reduce greenhouse gas emissions dramatically in the next 10 to 15 years. Green preservation, unlike new construction, can be the light-touch process that delivers necessary reductions within that short time frame.

THEM AND US

The seriousness of the crisis overshadows the realms of contention. The conflict between green and preservation thinking fuels debates on topics ranging from the construction details of windows to the demolition of a hospital in New Orleans to locally fabricated solar collectors proposed for roofs in a historic district in Cairo, Egypt. The friction is exacerbated by an increasing reliance on checklists and rating systems on the green side, and by the inflexibility of historic guidelines, or at least of their interpreters, on the heritage conservation side.

Both movements share a related origin, reflected even in the terminology—that is, “conservation”—and a related and overlapping demographic. So what is the conflict about? The two working definitions of “conservation” and “conservative” (in the nonpolitical sense) seem to be at odds with each other. Green advocates are convinced that climate change trumps all and often

define preservation as fussy, out-of-date obstructionism. Preservationists, on the defensive, push solar panels away from the street side and muster what limited data they can in skirmishes over replacement windows, recladding of exteriors, and the dismantling of buildings for their parts (the architectural equivalent of “organ harvesting”).

Preservationists should also be pressing the green community to recognize heritage, the irreplaceable “embodied history” historic properties possess, as a fundamental value in their discourse as well as their rating systems.

That’s where we are right now in the debate about preservation and green, and the rightful relocation of heritage conservation to the center of the green arena depends on advocates mastering the tools and terms of that arena and pressing the green preservation case vigorously. If we are right, we will be correcting serious deficiencies in the international discourse on sustainability and prodding the green world to take a more holistic view. If we are right, we should demand and welcome better ways of measuring the comprehensive carbon (especially) consequences of our actions.

We should use our insights into the technics and behavior of structures over time to forge robust but sympathetic measures for greening historic buildings. Though old buildings have many virtues, they still guzzle fossil fuels. The equipment part of the solution is relatively easy: new condensing boilers, for example, are smaller, quieter, and much

more efficient than their predecessors and can usually be inserted without jeopardizing historic fabric. For the building shell, the knowledge bases of preservation technologists and green building scientists are converging. Conservators can help preservation architects fashion innovative techniques for introducing insulation, air sealing measures, and heating and cooling distribution systems into historic structures without harming their integrity. They can also alert property owners to the often passive climate-controls built into historic buildings. We should take pains to demonstrate the value of new and old heritage-conserving techniques for the building stock in general. Preservationists should also be pressing the green community to recognize heritage, the irreplaceable “embodied history” historic properties possess, as a fundamental value in their discourse as well as their rating systems.

The green community has (understandably but unfortunately) seemed myopically focused on building operation and performance, as though those occur in isolation from a political economy and larger carbon cycle. On the one hand, this is understandable, because addressing the single building problem is a lot easier and building operation is a simpler, cleaner subject than the full life cycle of a project in its context. Yet it is unfortunate, because many decisions are being made using insufficient or inaccurate data, and mistaken impulses and habits have built up a lot of momentum.

GO BEYOND CHECKLISTS FOR DEEPER UNDERSTANDING

Buildings are the products of swirling processes of decision-making concerning the development of infrastructure, and the movement of people, goods, and capital. It is vastly more difficult to understand

and quantify this whole ecosystem than a single building or project. Our current quantitative tools and data are as yet not up to that challenge.

Almost without exception, green rating systems do not account for cultural, architectural, historical, social, political, and economic significance. I'm not suggesting we abandon those tools, but rather that we use them cautiously and not abandon our common sense. We need to take checklists, point systems, and quantitative tools as far as they go and then use our own well-developed intuitions to make educated guesses about the course that best addresses all of our concerns: climate, culture, community, and economics among them. (See sidebar on page 20.)

The data used in Life Cycle Assessment tools and some rating systems—for example, the total energy involved in getting a two-by-four into a wall on a job site—are largely gauged by expert estimates, since actual field measurement is so difficult. It takes significant energy inputs to restore order to sites and communities after the disorder or entropy introduced by large projects. Preservationists should press for research to identify the full environmental costs of the demolition and new construction cycle, and for those costs to be included in impact assessments.

ESTABLISH THE TRUE ENERGY LIFE CYCLE OF BUILDINGS

The construction of new buildings has a significant greenhouse gas footprint resulting from the energy required to extract, process, manufacture, transport, and assemble the materials. This is often referred to as “embodied energy.” “Energy history” is a more descriptive term for *spent* energy since

“embodied” suggests a potential for conversion into new energy where there is none.

Life cycle studies assume the lifetime of a building or its components to be 50 or 75 years or more. Since most construction energy is expended at the outset, a longer stipulated lifetime will make construction energy look smaller in relation to the total of the energy consumed running the building. (By contrast, the shorter the time frame, the smaller the total operating energy consumed as compared to the embodied energy that was expended for construction).

If you look at the life cycle of buildings, you can measure the time it takes to balance the construction energy spent at the outset with the energy subsequently saved in its operation. In other words, you can identify the time it takes to break even, from an energy or greenhouse gas point of view, and start going into positive territory.

A small scale example of this principle is the manufacture of a compact fluorescent light bulb, which Danish scientists estimate starts saving energy and reducing emissions after the 50-hour mark, if one takes into account its energy history to that point. At that point the savings of using it versus the less efficient bulb it replaced equals the energy required to make the bulb. Clearly the bulb replacement is a good decision. It delivers a carbon reduction early, when we need it.

But what about building replacements? International studies, notably in Scandinavia, Europe, and Australia, suggest that the greenhouse gas break-even point for new building construction is generally in the 15- to 25-year time frame. In other words, it is only after that period that the project results in a *reduction* in emissions; prior to that

MORE ON GREEN RATING SYSTEMS

Checklists sprang up as guides to green living. They evolved into point systems and then into more subtle and sophisticated weighted point systems. The U.S. Green Building Council's LEED rating systems are preeminent in the U.S. In the U.K. the dominant system is BREEAM, which predates LEED. Green Globes started in Canada and has moved into the U.S. market. There are many, many others. SB Tool, for one, is a comprehensive international toolkit for fashioning your own regional green metric; it is the only system to even list cultural heritage and historic preservation as a variable to be considered.

Like all systems that attempt to codify a messy, dynamic reality, green rating systems miss some things badly and get others wrong. Some within the green community believe LEED is too close to the marketplace and not rigorous enough. Other critics, who believe that curbing energy use and greenhouse gas emissions is paramount, point to studies showing that in these areas LEED buildings perform no better than average.

Rating systems including LEED are not yet reliable guides to climate change impacts, life cycle footprint issues, or the complete accounting of energy flows and consumption of a project. With support from manufacturers, suppliers, and other entities tied to the real estate and construction industries, rating systems have historically been geared toward shifting the new construction market to more sustainable practices. Researchers and consultants to the green building community are beginning to develop Life Cycle Assessment tools, which are also currently most easily used out of the box for new construction.

LEED 2009 rewards smart growth policies more heavily, a plus for older neighborhoods and infrastructure. However, it reduces the percentage of points allotted to the retention of existing buildings, though alternative pathways are said to be under consideration for historic structures.

The LEED system has so successfully captured the marketplace in the U.S. that like Kleenex and Formica it has started to become synonymous with its product type, and like them, it faces losing control of its brand and becoming generic as it gets mirrored and referenced endlessly in new guidelines and codes. Previous reforms such as the public health movement in the early 20th century resulted in a spate of new laws and codes, including contemporary building and sanitation codes. It is likely rating systems will give way to more fully fleshed-out descendants of new "green" codes the rating systems are now spawning.

At some point LEED and other systems will disappear into advocacy and educational enterprises as 21st-century building codes take over and carry on the evolution of the rating systems' DNA. It is important to act now to make these systems more responsive to green preservation concerns, to lobby for a more inclusive LEED while it is still a dominant force, so that both present guidelines and future codes promote the retention rather than the disposal of historic places.

break-even point the energy used in building the project creates an *increase* in emissions.

These figures do not include the emissions resulting from demolition of existing facilities, which would move the break-even point out further. Full demolition impact accounting would include the energy required to deconstruct or demolish the structure, mitigate its impacts, move the debris and salvageable elements elsewhere, and maintain the disposal site—not to mention accounting for the disruption of the surrounding context caused by demolition and construction activities.

We must scrutinize new construction projects to evaluate their short-term climate change impacts and raise questions when a Life Cycle Assessment shows a positive impact only well out into the century. Perhaps new construction projects should only be permitted if they are paired up with other projects that more than eliminate the initial project's short-term carbon debit. Then the major new green project would be just the most visible of several resource-conservative interventions, including some small-scale ones that otherwise would not have happened.

My own preference would be for a specific pairing of immediately available projects, not a more elusive green credits marketplace analogous to “cap and trade” programs in which polluters buy permission for “ungreen” practices by funding compensating green projects. For example, permission to build a new sports complex which would be a net CO₂ emitter for 20 years might hinge on weatherizing a nearby block of old buildings that would be a net CO₂ saver over that same period and more than compensate for the losses.

WORK ON IMPROVING THE EXISTING INVENTORY

At best, new green buildings will only make things worse more slowly, even if they actually perform as planned. They may house new uses better and have a smaller environmental footprint, but they do not cut down on the current energy usage of existing occupied buildings, which is producing a large share of greenhouse gas emissions. In the United States, the building sector is responsible for 43 percent of our total energy consumption and greenhouse gas emissions (GHG) and 75 percent of our electricity use.

The United Nation's 2007 Intergovernmental Panel on Climate Change (IPCC) Report identifies buildings as the sector offering the greatest opportunity for cost-effective mitigation of greenhouse gas emissions:

To sum up, while buildings offer the largest share of cost effective opportunities for GHG mitigation among the sectors examined in this report, achieving a lower carbon future will require very significant efforts to enhance programmes and policies for energy efficiency in buildings and low-carbon energy sources well beyond what is happening today...Over the whole building stock the largest portion of carbon savings by 2030 is in retrofitting existing buildings and replacing energy using equipment due to the slow turnover of the stock. [emphasis mine]

This argument leads to the conclusion that the most productive thing we can do in the principal sector—North American buildings—is a program of careful preservation and greening that delivers its benefits within a relatively short time frame. We can't

simply sit on our preservation laurels and extol the virtues of saving old buildings; the preservation technicians in our community need to pioneer sympathetic techniques for reducing the energy use of existing buildings, whether they are landmarks or background buildings.

And so, we need to put on hold some bold, massive projects that would otherwise be desirable, because of their climate change impacts within the next 10 to 15 years. We do need to grow our building stock, and we should be looking first to accommodate that growth within the existing building inventory, being as thrifty and clever as possible. We should pair up symbiotic uses in structures so they are fully utilized through the day and week (such as, apartments over the store), and we should scrutinize the need for and efficiency of every square foot we plan to build. These are very hard lessons for most of us in the building sector: developers, investors, architects, contractors, unions, and politicians. They are easier lessons for heritage conservationists, who have to lead the way, not obstruct or retreat.

Conservation, as opposed to consumption (albeit green consumption), has fewer powerful friends and well-heeled natural allies in our recent (past) economy. The current financial crisis now may foster more receptiveness to the green preservation approach I am describing. Small-scale improvements to existing buildings (such as air sealing of enclosures, weather-stripping doors and windows, insulation, and equipment calibration) require a relatively low expenditure of energy and a relatively high amount of human labor. They require little lead time. The break-even point for smaller scale interventions is within the critical climate change window of opportunity; and a widespread

program could create many jobs per dollar of investment.

Preservation regulators at federal, state, and local levels need to become familiar with green strategies, technologies, and terminologies. They should be able to defuse apparent conflicts and draw on the conservation heritage common to the green and preservation worlds in making and explaining their thinking as they interpret design guidelines.

ACTION STEPS FOR PROMOTING A GREENER PRESERVATION AGENDA

All of this leads to a green/preservation/jobs agenda to be promoted by the preservation community. Specifically, we should:

1. Commission a major research effort to identify clearly the current carbon footprint of all activities related to construction and building operations. I am confident that our commonsense assertions are valid: Improving the energy efficiency of existing buildings is the first way to slow climate change and will produce jobs for communities. However, when I look beyond common sense, there is an information vacuum.

Long term, we will *forever* need to consult and refresh data on energy sources and conservation measures in the developed and developing world. As with all dynamic life cycles, we cannot afford to be stuck on “safe” formulas concocted to explain a previous crisis.

Some data exist in various government agencies (e.g., the National Renewable Energy Laboratory), private companies, and nonprofit consulting entities in the United States and Canada. Significant

work on embodied energy is underway in the United Kingdom (e.g., University of Bath) and Australia. The data from abroad are not necessarily easily transferrable to our economy, though with globalization, an understanding of those data is essential.

The most comprehensive embodied energy data, or energy history data, of building materials in the public domain in this country date back to 1967. A 1980 Department of Energy (DOE) report is still our most recent resource for the U.S., and it relies on the 1967 data. Updating this information and making it widely available should be an urgent agenda item for the incoming Department of Energy.

2. Develop more Life Cycle Assessment systems for building products. The Energy Star labeling system for appliances, equipment and buildings is one successful example. While the first need is good data for building professionals and the construction industry, the ultimate goal should be a labeling system that indicates to everyone, including the general public, the life cycle data for a particular product. Ideally, products would carry a greenhouse gas label covering their manufacturing as well as their operational footprint. The DOE could promote this in the same way that the FDA promotes nutritional labeling. The theoretical difficulties this goal presents are formidable, but we should attempt to solve them.

We all need help deciding on what we can do that will truly lessen the climate crisis—rather than vaguely and uncertainly groping around, buying bamboo towels, and hoping we're doing some good.

3. Train preservation students in the array of gentle greening approaches needed to

improve our old and historic building stock.

4. Have trade schools, utilities, unions, government agencies, and nonprofit organizations train many people in the techniques required to weatherize existing buildings. Preservationists should contribute to those training programs to ensure they cover low-impact strategies that will preserve the integrity of historic properties.

Preservationists need to stay abreast of the green cutting edge, and we need to press for technologies that can help make existing buildings more green quietly and gently. Advances in the construction of new windows, as one example, will put more pressure on preservation advocates urging the retention of existing ones; it will soon no longer be sufficient to argue that a storm window over a solid old window will suffice, particularly in projects where energy loads are dominated by windows (there are many). We need advanced, low-embodied-energy weather-stripping, and an industry that will help us continue to improve the performance of our retrofits to keep pace.

More and more voices, at higher and higher levels of power, are sounding the green building theme. Preservationists can help call for the data and tools needed to focus this energy and put it to work where it can have the most positive environmental impact. They can also provide the knowledge and skill to show that not only is heritage conservation consistent with a sustainable future, it is essential to getting there.

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THE SECRETARY'S STANDARDS AND LEED: WHERE THEY WORK TOGETHER AND WHERE THEY DIVERGE

By Audrey T. Tepper

“Cultural resource preservation is intrinsically a form of sustainable conservation. The built environment represents the embodied energy of past civilizations... historic preservation is conservation in every sense of the word.”¹

Preserving a building is often called the ultimate recycling project, yet preservationists commonly fight the stigma that historic buildings are inefficient and require daunting corrective measures to retrofit with energy-saving devices and systems. Green and sustainable design has become an increasingly popular issue in both the preservation and new construction industries. This article will identify the basic principles behind sound preservation practice and green design—when they work well together and when they do not. Preservation and “green” goals overlap, and reconciling their differences is possible, provided both sides strive to be as creative and flexible as possible.

Two different sets of guiding principles are the focus of this discussion: The Secretary of the Interior’s Standards for the Treatment of Historic Properties, and Leadership in Energy and Environmental Design, more familiarly known as LEED.

THE SECRETARY’S STANDARDS

The Secretary’s Standards lay the groundwork for sensitive preservation practice in the United States and were implemented to

ensure that historic resources are protected. They are used by nearly everyone in the preservation field on local, state, and federal levels.

Two terms commonly used in the Standards—and in historic preservation in general—are important for this discussion: the “historic character” and the “integrity” of a property. “Historic character” is, in essence, the things that make a building special—its “visually distinctive materials, features and spaces,” for example, or the architectural styling of a structure or its unique methods of construction or craftsmanship.² Historic character may include the features that distinguish one building from another—a dome, smokestack, steeple, grand staircase, stained-glass windows, or mosaic tile floor. The character of a historic building may also be defined by its simplicity, as in a more industrial or modern structure, where a stripped-down appearance is part of its inherent character. “Integrity” refers to whether or not a building retains these important “character-defining” features and has not been inappropriately changed over time. These two concepts are central to the preservation of historic buildings. Therefore, modifications undertaken to make historic structures more sustainable must be sensitively done to retain the buildings’ character and integrity.

There are four standards for treatment:



The conversion of this former manufacturing building in Richmond, Va., into law offices makes striking use of the 1905 structure's original, character-defining features—notably the heavy-timber trusses. Photos courtesy of the National Park Service.

Preservation, Rehabilitation, Restoration, and Reconstruction. The Rehabilitation Standards are the most flexible and the most commonly used. The Rehabilitation Standards take into account changes buildings encounter over time and provide the opportunity for reuse, provided character-defining features are not destroyed.

When historic buildings are rehabilitated according to these standards, including any changes undertaken to make them more environmentally friendly, it is important to preserve historic materials. If original materials are intact—whether inside or outside the building—they should be retained and repaired whenever possible rather than replaced. This includes, but is not limited to, masonry, siding, roofing, porches, doors, windows, stairs, fireplaces, flooring, trim

(and associated millwork) and wall finishes, as well as the historic layout of the building (floor plan, patterns of circulation). The requirement to retain or recycle materials also supports sustainability.

The historic character of a building should also be preserved, even if its use changes. If, in the attempt to make a property more energy efficient or sustainable, the integrity of a building (or its surroundings) is dramatically changed by removing or unsympathetically modifying character-defining features, the Secretary's Standards are violated. The Standards are not prescriptive; treatments, in general, are not specifically allowed or disallowed. There are always ways to improve energy efficiency, but they must be undertaken with care to protect the integrity of the historic resource.

LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

Established by the U.S. Green Building Council in 1998, Leadership in Energy and Environmental Design (LEED) is the “nationally accepted benchmark for the design, construction and operation of high performance green buildings.”³ LEED rating systems promote the production of buildings that are sustainable and economically feasible and that will not harm the health of their occupants. The LEED rating system awards points when sustainable practices are incorporated into construction projects. The higher the point total, the higher the certification level achieved (Platinum, Gold, Silver, etc.). Similar rating systems exist, but LEED is the most widely known and the most popular nationally.

To be considered sustainable design, a project should try to meet the following six general principles. If flexibility is afforded and work is undertaken sensitively, the majority of these may successfully be included in preservation projects that also meet the Secretary’s Standards.

1. Site potential must be optimized.
2. Energy consumption must be minimized.
3. Water must be protected and preserved.
4. Environmentally preferable products should be used.
5. Indoor environmental qualities should be enhanced.
6. Operational and maintenance practices must be optimized.⁴

WHERE THE SECRETARY’S STANDARDS AND LEED DIVERGE AND WHERE THEY WORK TOGETHER

Few points are given by LEED for saving historic building materials. Although retaining cultural resources is the intent of some

LEED credits, the current system does not take into account the full value of preserving our cultural heritage through saving historic buildings. LEED was initially conceived as a program to rate sustainable new construction. As a result, it grants few points for saving materials already in place. Far more points are available for the use of *new* materials. This makes little sense if you consider the energy it takes to produce new materials meant to replace architectural fabric that already exists. This discrepancy fails to meet the goals of either preservation or sustainability.

Credits are not given when historic buildings are inherently efficient. Because a building is “old” does not automatically mean it is inefficient. Yet LEED does not generally recognize this fact and requires changes that may irreparably damage a historic building’s character. Older buildings were commonly designed to take advantage of their sites and to maximize energy efficiency. Built before modern technology took hold, they were often sited to exploit solar gain so interiors could be illuminated and warmed. Operable windows, monitors (raised roof inserts with ventilation), and clerestories were incorporated not only to prevent moisture entrapment but also to cool structures in warm weather. Simple features were also added to shade interiors, such as overhangs, eaves, and cloth awnings. These add character to the exterior and make indoor spaces more habitable.

Durable building materials such as thick masonry have insulating properties as well, for which LEED offers no credits. Demolishing a historic interior to get the maximum amount of insulation in place may produce a more energy-efficient building, but will destroy a piece of history in the process. A historic building may certainly be upgraded



The highly visible solar panel installed on the roof of this modest one-story commercial structure has an adverse impact on both the building and the surrounding historic district. Photo courtesy of the National Park Service.

with insulation, provided the insulation is placed in easily accessible locations that will not compromise the building's architectural integrity. In fact, most air escapes vertically, so it should be a top priority to insulate attics, followed closely by basements and crawl spaces. Conveniently, these areas are generally secondary spaces where insulation can be installed with minimal impact.

Few points are given for the durability and long life cycle of traditional building materials. Traditional building materials, if properly maintained, may last for generations. LEED does not adequately recognize the long life-spans of these materials, nor the fact that retaining them keeps debris out of landfills. Energy is also saved if it is not necessary to manufacture and transport new materials.

The success of today's lumber industry depends on how quickly a tree can grow

before it is harvested and milled for the construction market. The young timber used today is significantly less durable than its historic counterpart and deteriorates at a far more rapid rate. So even if "certified wood" (wood that is grown with environmental concerns in mind)⁵ is used to satisfy LEED credit requirements, the building is still receiving a product inferior to the old-growth lumber that may already be in place. Moreover, historic wood will last longer if properly maintained. This is just one example of the numerous benefits of reusing what is already there and what was built to last.

New energy-efficient components may compromise a historic building's integrity. LEED encourages the use of features that conserve and capture energy passively.⁶ Examples of these include solar panels, photovoltaic cells, and roof gardens. Although there is much to gain through their installation, if they are

too prominently placed on a historic building, if they require the removal of significant amounts of architectural fabric for their installation, or if they alter important spaces or the surrounding landscape, these treatments will fail to meet preservation goals. Care should be taken to locate equipment in the least physically and visually intrusive locations to diminish its presence.

As the research into and marketing of green building products increases, new, innovative materials are likely to become available. For example, roofing shingles that absorb and store solar energy might be appropriate in certain applications. Another alternative is placing a series of smaller solar panels hidden behind a parapet, as opposed to a single, large solar panel insensitively placed in the middle of a roof.

The public benefits of both preservation and sustainability are very clear and there is no reason why these goals cannot work together.

LEED points are granted for recycling demolished materials, as well as salvaging materials. The Secretary's Standards discourage the demolition of historic materials, so removal of original fabric should be avoided. There are instances when removing incompatible, modern changes made to a historic building is merited, and when historic rehabs can benefit from the LEED points available for recycling a percentage of construction debris. LEED, however, gives more points for repurposing salvaged

materials within a project than actually saving the materials in place, which is problematic. Recycling significant architectural fabric should never be undertaken merely to achieve a higher point rating.⁷

LEED fails to acknowledge that historic windows are important features and that their energy efficiency can be upgraded. LEED encourages the use of highly energy-efficient windows, which often requires the removal of historic windows that are potentially reusable. Moreover, original windows are character-defining features of historic buildings and their removal can significantly alter a structure's integrity, thus conflicting with preservation goals and the Secretary's Standards.

With proper maintenance, windows built from old-growth wood can function indefinitely and their performance can be substantially bolstered by using storm windows, caulk, and weather-stripping. Studies have shown that these simple improvements can result in efficiency similar to that of new insulated glass windows. Modern windows also have a relatively short lifespan and can be difficult, if not impossible, to repair. Once modern windows fail, there are few ways they can be recycled, and they will likely end up in landfills. This begins an environmentally insensitive cycle of removal and replacement.

Therefore, the most responsible approach is to retain historic windows that last and retrofit them for increased effectiveness rather than install new windows that, without exception, will fail and cannot be repaired. Regrettably, the replacement window industry is strong, and old windows are touted as poor performers, so the common

practice of replacing windows is not likely to change much in the immediate future. To combat this, LEED should consider awarding points for the repair and continued use of old windows where significant improvements in energy efficiency are demonstrated, as well as where significant amounts of historic fabric are being retained and reused.

Restricting water usage can harm historic landscapes. “Cultural landscapes”⁸ often play central roles in the overall makeup or character of historic properties. They also need water to survive. Therefore, like historic structures, they must be cared for and respected, even historic plantings that may not be native species.⁹ Efficient irrigation systems may be used to save water, and recycled “grey” or rainwater may be captured for use in gardens and surrounding landscapes. But restricting water for irrigation to achieve the percentage savings required by LEED may irreparably change the important relationship between a building and its surrounding landscape. Unfortunately, there are no provisions within LEED for exempting cultural heritage areas from these calculations.¹⁰

Few credits are given for reusing existing infrastructure in non-urban areas. Historic buildings seeking LEED certification located in urban settings may benefit from several “Urban Redevelopment”¹¹ credits, but structures in more rural settings cannot. Rural locations may also have infrastructure in place such as roads, public transportation systems, and utilities. This infrastructure can easily be reused or updated, even if it is used less frequently and remotely sited. Existing features may require repair; however, reusing what is already in place will greatly reduce energy expenditures and save on the high costs of excavation, re-grading,



From the time it was built in the 1920s, the Hotel Duluth in Minnesota had storm windows over the original sashes. The storm windows did an excellent job of protecting the historic windows below and only they were replaced as part of the building’s rehabilitation. This saved historic architectural fabric and prevented hundreds of serviceable windows from ending up in a landfill. Photo courtesy of the National Park Service.

producing and transporting new materials, and installation.

Some points are easily awarded by LEED without adversely affecting the integrity of a historic building. Purchasing greenpower from renewable energy technologies is one of the easiest points to obtain in the LEED rating system and one that will have no impact on the character of a historic building.¹² Other noninvasive ways to boost LEED points are to sensitively install energy-efficient lighting, heating and cooling systems, and low-flow plumbing fixtures.



Restricting water usage too greatly could irreparably damage the surrounding landscaping of this Virginia country estate (portions of which date from the late 18th century). This cultural landscape is an integral part of the historic setting, which must be respected. Photo courtesy of the National Park Service.

Carpeting and cabinetry made from recycled materials can be purchased from green building product suppliers. Counters and floors can be wiped down with environmentally friendly cleaning products. These changes tend to be reversible treatments, although care must always be taken to respect the historic nature of properties during their installation.

REVISIONS TO LEED

Revisions to the current version of LEED are underway. The following changes should increase the number of historic preservation projects meeting the Secretary's Standards and LEED:

1. Points will eventually be awarded according to "Life Cycle Analysis Indica-

tors." This will benefit historic buildings constructed with durable materials that do not require replacement.

2. The LEED rating system will increase from a total of 69 to 100 points.
3. Points relating to historic buildings may eventually be higher and allocated more efficiently.
4. To address many of the concerns raised in this article, the organizations administering LEED are working closely with and seeking comment from historic preservation advocates and the general public.¹³

CONCLUSION

The Secretary's Standards for Rehabilitation and LEED sometimes diverge in specific

applications, but the objectives of the two entities are compatible.

Preservation keeps our nation's history and culture alive and we learn much from the methods and practices of those who came before us. With our threatened environment, it is imperative that we make sustainable living a part of our lives. The public benefits of both preservation and sustainability are very clear and there is no reason why these goals cannot work together. Revising the current version of LEED to better account for the social values and environmental benefits of preserving historic structures is a good start. The discussion, however, must continue to engage the preservation, sustainability, and construction communities to assure the best possible outcome.

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NOTES

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10 "Water Efficiency," LEED for New Construction & Major Renovations, pp. 24–28.

11 "Sustainable Sites," LEED for New Construction & Major Renovations, pp. 8–22.

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13 Information from Barbara Campagna, AIA, LEED AP, National Trust for Historic Preservation. The version of LEED currently under review is LEED Version 3.0—2009. A more developed version will be LEED Version 3.0 —2010.

AN INTERVIEW WITH DIRECTOR SOPHIE CANTELL LAMBERT

HISTORIC PRESERVATION AND LEED FOR NEIGHBORHOOD DEVELOPMENT

By Matthew Nowakowski

Last year I moderated a session at the 2008 National Preservation Conference in Tulsa, Okla., titled “How Green Is Your Historic Neighborhood?” The session description stated that “Most green building efforts have focused on commercial construction, but this is about to change with the recent introduction of rating systems for green neighborhoods.”

The session featured a panel of experts who discussed how best to incorporate sustainable and green neighborhood values into new and established community-based preservation plans. One of the panelists at the Tulsa session was Sophie Cantell Lambert, director of the LEED for Neighborhood Development rating system at the U.S. Green Building Council (USGBC) in Washington, D.C. (LEED is the acronym for the USGBC’s Leadership in Energy and Environmental Design rating systems.)

The LEED for Neighborhood Development Rating System (LEED-ND) integrates the principles of smart growth, new urbanism, and green building into the first national system for smart, green, and healthy neighborhood design. Among the many expected benefits of LEED-ND projects will be the preservation of natural habitat and farmland, improved public health (since inhabitants and workers will have safe options for walking and biking), and the protection of

natural resources, with reduced air pollution, water protection, and reduced energy use. LEED certification provides independent, third-party verification that a development’s location and design meet accepted high levels of environmentally responsible, sustainable development. LEED-ND is a collaboration among USGBC, the Congress for the New Urbanism (CNU), and the Natural Resources Defense Council (NRDC).

The pilot program has been underway since the summer of 2007 and includes nearly 240 projects, with most located in the United States and Canada. The pilot experience and further discussion about the rating system led to the creation of a *1st Public Comment Period Draft*. The period to comment on this draft ran from November 17, 2008, through January 5, 2009, and garnered more than 5,000 comments. A second public comment period will be held this spring. The post-pilot version of the rating system, which will be available to the public, is expected to launch in late 2009.

I recently met with Sophie Lambert at USGBC’s Platinum LEED-certified headquarters to discuss how the new LEED for Neighborhood Development rating system will affect future historic preservation efforts in urban and suburban areas.

How would you define LEED-ND to a preservationist with no background in sustainable development?

LEED-ND is a rating system that combines the principles of smart growth, new urbanism, and green building into a rating system for green neighborhood development. While primarily geared toward new construction and infill development, the rating system does provide incentives for the adaptive use of existing historic buildings.

The latest version of the LEED-ND rating system is based on points awarded in five categories: *Smart Location & Linkage*, *Neighborhood Pattern & Design*, *Green Infrastructure & Buildings*, *Innovation & Design Process*, and *Regional Priority Credits*. “Existing Building Reuse” and “Historic Building Preservation & Adaptive Use” are credits 5 and 6, respectively, in *Green Infrastructure & Buildings*. The total number of points possible under LEED-ND is 100, with 10 additional points available for innovation and exemplary performance. Projects can be rated as Certified (40-49 points), Silver (50-59 points), Gold (60-79 points), or Platinum (80+ points).

How is LEED-ND beneficial to historic preservation?

LEED-ND has several prerequisites related to project location, including smart location, proximity to water and wastewater infrastructure, floodplain avoidance, etc. These location prerequisites encourage LEED-ND projects in previously developed areas, such as infill locations and brownfields. While access to transit is not a prerequisite, it is also incentivized through a few credits. These close-in, transit-served locations are often the parts of a region where historic resources traditionally have been located.

In addition, 2 points are available through credits, and additional points available through the *Innovation & Design Process* (IDP) category. The IDP category recognizes exceptional and innovative performance above and beyond the requirements set by LEED-ND. Projects that incorporate historic structures can choose to submit either “Innovation in Design” points or “Exemplary Performance” points or both within the 5 points available in this category. We hope that LEED-ND will encourage teams to retain and rehabilitate historic resources, both buildings and cultural landscapes, in their projects.

How did the three founding organizations (USGBC, CNU, and NRDC) come to work together on LEED-ND?

About six years ago, CNU and NRDC had a conversation about the need for a rating system for neighborhood development because there was no third-party system that quantified the claims of sustainable neighborhood developers. Both organizations recognized USGBC for its leadership in developing the LEED rating system.

USGBC recognized early on that the context and location of a green building was important—sustainability cannot happen in a void, but must occur across differing levels of construction and development. Rick Fedrizzi, president, CEO, and founding chair of USGBC, stated that “The LEED for Neighborhood Development program goes beyond individual green buildings and focuses on communitywide design and development.” It was a natural fit for the USGBC to incorporate aspects of smart growth into the LEED-ND rating system.

How is LEED-ND similar to new urbanism?

New urbanist design tenets informed and shaped LEED-ND through attributes such as walkable streets, building facades that front sidewalks, and the emphasis on the public realm and its importance to community development. LEED-ND is really a program that draws from the principles of all three organizations (USGBC, CNU, and NRDC).

What types of projects are eligible for LEED-ND certification?

There is no limit to the type of project that can be certified: Residential, commercial, and mixed-use projects are all eligible. Projects can range from one building to large multi-block urban areas. In the pilot, we had projects that were smaller than 1.4 acres all the way up to larger than 1,500 acres. For example, the New Songdo City International Business District in South Korea is one of the pilot projects; it is unusual in that it is seeking LEED-ND certification for an entire city. Based upon experiences with the pilot projects, the LEED-ND Core Committee is currently evaluating if the rating system should have a maximum project size. Ultimately, the market will determine the minimum size of projects submitted for certification.

What is the benefit in certifying one building in LEED-ND?

It's a generally accepted planning principle that one building can be the catalyst in positively changing a neighborhood or even completing it. Also, there are some mixed-use buildings of a certain scale that act in many ways as vertical, rather than horizontal, neighborhoods. These buildings contain a variety of residential and commercial facilities and are often self-contained or economically self-sufficient. In the post-pilot version of the LEED-ND rating system, at least one

building within the project boundary must be LEED-certified.

What is the process for finalizing the LEED-ND rating system and when will it become effective?

As with all LEED rating systems, LEED-ND will go through a rigorous, consensus-based development cycle before it is officially launched. USGBC recently received more than 5,000 public comments for the current version of LEED-ND. All of the comments will be addressed within the context of the LEED-ND corresponding committee. Final changes to LEED-ND will be made during mid-2009, and the final rating system will go before USGBC's diverse membership for a vote. Our two partner organizations will also vote on the rating system at this point. After LEED-ND passes that ballot, a roll-out of the final LEED-ND rating system is expected to occur in late 2009. At that point, registration for LEED-ND certification will be opened to new projects (other than those already under consideration in the ongoing pilot program).

Some preservationists think that green building proponents have been slow to recognize the inherent sustainable qualities in historic buildings, and this has resulted in preservation being overlooked in the discussions on sustainable development and green building. Do you think that this is true? Do you think that historic preservation is becoming more of a consideration in the movement to make the nation's building stock more energy efficient and sustainable?

I believe that those in the green building world are recognizing the social and cultural benefits of preservation, more and more.



Plans by Canada Lands Company (CLC) to create a mixed-use development at the Currie Barracks in Calgary, Alberta, Canada, achieved Stage 2 Gold certification under LEED-ND and earned the pilot historic preservation credit. The 195-acre decommissioned military base, opened in 1934, features 10 historic buildings and 2 cultural landscapes (the Officer's Mess and Formal Garden and the Parade Square) which will be preserved by CLC. Rendering courtesy of Canada Lands Company.

In the past, there may have been a lack of education or understanding about the benefits of reusing existing buildings as part of an overall sustainability plan. Also, green building professionals need to consider the value of embodied energy—the energy used to create and transport building materials and assemblies, as well as the energy used to construct buildings. This energy is lost when a building is demolished. USGBC is currently working with the National Trust for Historic Preservation on a Life Cycle Analysis (LCA) credit calculator that will quantify the life cycle impact of historic building fabric and will ultimately serve as an Alternative Compliance Path in the design and construction of LEED rating systems. LCA is a good way for preservationists to help make the case for

saving the embodied energy associated with building construction by determining the overall lifespan of materials.

LEED-ND has a prerequisite for walkable streets in the section called *Neighborhood Pattern & Design*. Is it possible that this credit might someday have a quantifiable aspect that deals with many of the attributes associated with historic districts: ornamentation, enclosure, sense of place, etc.?

The current version of LEED-ND does not include design guidelines, but the walkable streets prerequisite and credit do give prescriptive form-based guidelines for the public

realm. Although not impossible, it is very difficult to quantify aesthetics in a rating system. It is certainly possible that public spaces and thoroughfares could be evaluated using criteria that are evocative of some of the attributes associated with historic preservation. Governing jurisdictions also have to play a role in shaping and encouraging the positive development of public spaces and streets in LEED-certified neighborhoods.

Overall, is LEED-ND better for new and/or infill development versus older historic urban areas?

That's hard to answer—a lot of infill construction can be introduced into historic urban areas. Infill construction can achieve high scores in LEED-ND. It's difficult to put entire existing historic neighborhoods through the LEED-ND rating process. LEED-ND was designed to work best when a development project includes some new construction. In the new version of LEED-ND, you cannot tear down historic buildings if you are pursuing the two building reuse credits (“Existing Building Reuse” and “Historic Building Preservation & Adaptive Use” in the *Green Infrastructure & Buildings* category), but it is not a prerequisite of the entire rating system. This may change in future versions of LEED-ND.

Are there any tax and/or other incentives associated with LEED-ND?

In conjunction with the pilot launch, some jurisdictions offered expedited review periods for LEED-ND plans, as well as reduced permitting fees. Increasingly, municipalities are considering reductions in fees and/or waiting periods associated with the approval process for community projects that can demonstrate a commitment to sustainabil-

ity. For example, LEED-ND pilot projects in Illinois were eligible for a state tax return of 1.5 percent of the development cost of the project. The Cleveland Foundation is working with Neighborhood Progress, Inc., and the City of Cleveland's sustainability director to underwrite sustainability training and LEED Accredited Professional exam fees for the program managers and city staff working on three pilot projects in that city. The City of Sarasota offers expedited review of sustainable neighborhood revitalization projects.

Additionally, LEED-ND is starting to have some effect on zoning regulations around the country. We are beginning to see the incorporation of some aspects of LEED-ND, for example *Smart Location & Linkage*, into local planning processes or as an evaluative tool to see how well existing zoning encourages LEED-ND-eligible projects. We hope that LEED-ND will be seen as one of many tools, by both developers and local planning agencies, to encourage smart, walkable communities.

Currently, there are two points available in LEED-ND for historic preservation: the credits for “Existing Building Reuse” and “Historic Building Preservation & Adaptive Use.” Wouldn't more points in these categories encourage preservation?

In addition to the two points for preserving and reusing buildings, it is also possible to get additional points for exemplary features of a LEED-ND project under the *Innovation & Design Process* category. The Currie Barracks project was awarded an additional point for exemplary performance. Would additional points encourage preservation? It's hard to say—points are obviously good carrots. It's important to remember that

there are a number of worthy credits that have been allocated one point. The point system may change down the road as the rating system is re-weighted against important environmental impact categories every two years.

As you know, the president of the National Trust, Richard Moe, has committed the National Trust to promoting sustainable preservation as an important part of the nation's push toward a greener future. Do you think that LEED-ND will be a part of this effort?

I certainly hope so—we are cognizant of historic preservation and have been mindful of this constituency as we work through changes to the rating system. Importantly, LEED-ND is the first LEED rating system to specifically reference historic buildings.

Will LEED-ND foster and promote preservation?

Insofar as it will encourage development in historic areas, we certainly hope that LEED-ND will encourage developers to retain historic buildings. Local jurisdictions must work with residents to identify potential historic districts and individual landmarks eligible for protection, as well. *Green Infrastructure & Buildings* credit 5, “Historic Building Preservation & Adaptive Use,” applies specifically to locally or nationally listed buildings. An interesting statistic is that four of the 22 certified pilot projects for LEED-ND earned credit 5, which was then named “Reuse of Historic Building.” So 18 percent of the certified pilot projects included historic buildings.

One of the goals of LEED-ND is to encourage development in existing areas rather

than in rural and ecologically sensitive areas, and I believe this will bode well for historic resources. We hope to continue reaching out to the historic preservation community to help us make changes to LEED-ND in the future and possibly develop an alternate compliance path or different rating system for existing neighborhoods.

Matthew Nowakowski has worked for many years in cultural resource and association management. He currently manages cultural and environmental projects for the Air National Guard Asset Management Division in Washington, D.C., through BB&E, LLC. Mr. Nowakowski holds master of science degrees in historic preservation (Columbia University) and nonprofit management (New School University).

Sophie Cantell Lambert directs LEED for Neighborhood Development at the U.S. Green Building Council (USGBC), including technical development, advocacy, and outreach for the rating system. Prior to joining USGBC, Ms. Lambert worked at the Urban Land Institute (ULI) in Washington, D.C., as its director of community outreach. She is a graduate of the Columbia University master of science program in historic preservation and also holds a master's degree in urban and regional planning from Virginia Tech's Alexandria Center.

GOING GREEN: APPLYING A SUSTAINABILITY LENS TO HISTORIC DISTRICT GUIDELINES

By Jo Ramsay Leimenstoll

When it comes to historic neighborhoods, initiatives to promote sustainability and historic preservation can go hand in hand. The recent development of design guidelines for a proposed local historic district in Davidson, N.C., provided the town with an opportunity to weave sustainability principles into the document from its inception. The result offers a model for other communities eager to add a sustainability component to their historic district guidelines.

Davidson is a small southern college town (home of Davidson College) as well as a growing bedroom community for nearby Charlotte. Its progressive planning department and civic-minded residents are proactive in protecting the small-town character of Davidson from insensitive new construction and teardowns. The designation of Davidson's National Register Historic District and the proposed expansion of a local historic district are just two of the strategies they have pursued to preserve the small-town charm the community cherishes.

A parallel intent was to reinforce green design and sustainability principles central to the town's development philosophy in the new district guidelines. As a consultant to the town, I worked with an engaged, dedicated committee of planning staff and local citizens to develop illustrated design guidelines for the historic district that embody these intentions.

Current best practices for historic district design guidelines emphasize the need to put the Secretary of the Interior's Standards for Rehabilitation in local context by creating user-friendly documents that tailor educational information, specific guidelines, and illustrations to the local community. The guidelines document is usually organized with an introduction that describes the district and explains local procedures, followed by sections addressing changes to building exteriors, new construction and additions, landscaping and site features, and demolition or relocation of historic buildings. Preservation commissions use these design guidelines in reviewing the compatibility of proposed changes in local historic districts or landmark properties, but they also become a reference and educational tool for the community.

In North Carolina, as in many states, the role of historic preservation commissions is defined by statewide enabling legislation. Their role is to "safeguard the heritage of the city or county by preserving any district or landmark therein that embodies important elements of its culture, history, architectural history, or prehistory" and to "promote the use and conservation of such district or landmark for the education, pleasure, and enrichment of the residents of the city or county and the State as a whole." (See *General Statutes of North Carolina*, c. 160A, ss. 160A-400.1-160A -

400.14.) While the legislation was crafted to promote preservation, the overarching themes of good stewardship, revitalization of neighborhoods, and ongoing use of the built environment clearly provide common ground for linking historic preservation and sustainability in meaningful ways.

STRUCTURING THE GUIDELINES

Building from a platform of shared values, the guidelines committee chose to explicitly connect sustainability principles to historic preservation in the Davidson guidelines by: 1) adopting an accepting and encouraging tone toward sustainability, and 2) including examples of and references to sustainable practices in the text and illustrations. As the project unfolded we found more and more ways to link the principles of both, moving beyond the familiar debates about replacement windows or embodied energy to also raise issues such as proactive maintenance, lifespan of traditional building materials, merits of traditional and new energy-conserving technology, selective use of new materials, and ecologically friendly landscaping considerations. Design guidelines often address these sorts of issues in an inferred way, but in the Davidson design guidelines the overlap with sustainability values is more explicit and specific.

In the document introduction, the sustainability emphasis in the guidelines begins with an explanation of the mutual values of historic preservation and sustainability. The hierarchical three R's of the Secretary's Standards—Retain, Repair, Replace—are compared to the four R's of Green Design—Reduce, Reuse, Recycle, and Repair. After identifying the mutual principles of good stewardship, neighborhood revitalization, and ongoing use of the built environment, these concepts are then applied through



This Davidson infill project retained and protected mature trees on the site and also incorporated a deep, wide front porch—a traditional way to shade homes in this southern climate. Photo by Jo Ramsay Leimenstoll.

specific, pertinent strategies throughout the heart of the document in the topical guidelines sections.

CHANGES TO BUILDING EXTERIORS

Although the preservation focus always remains front and center in the Davidson guidelines, the “Changes to Building Exteriors” section includes specific commentary that translates green principles into pragmatic pointers—pointers that reinforce the value of proactive maintenance of traditional building materials and features. For example, when espousing the merits of historic slate, tile, and metal roofs, the guidelines offer the following argument: “If well maintained, these roofs can last up to a century—much longer than the thirty-year lifespan of a good quality composition shingle roof.”

Energy Retrofit and Utilities



Wooden storm doors with interchangeable screen panels come in a variety of configurations that are compatible with different architectural styles.



This satellite dish is discreetly located on the side rear wall of a detached garage instead of the primary building.



The traditional energy conserving features of historic buildings and their sites continue to benefit residents in Davidson's historic district today. Mature trees shade many residences and institutional buildings buffering them from solar gain on hot summer days. Likewise, projecting front porches create shady outdoor living areas and mitigate the temperature differential from outside to indoors. Double hung windows allow occupants to capitalize on cool breezes and control the intake of fresh air. Operable transoms, ventilated foundation walls, gable vents, high ceilings, retractable awnings, and operable shutters are all traditional features of historic buildings that reflect an understanding of Davidson's southern climate.

New communication systems, upgraded mechanical systems, and contemporary energy efficient measures are all important features to accommodate in Davidson's district in ways that do not compromise its historic character.

Practical Considerations

Before introducing new energy conserving features, property owners will want to make sure they are maximizing existing energy efficient features of their buildings. They may also want to consider replacing lost shade trees or adding new shade trees in appropriate locations. Typical next steps might include installing additional weatherstripping at openings, insulation in the attic and crawl space, storm windows and doors, and an upgraded mechanical system.

Narrow profile wood or metal storm windows sized to the existing openings, carefully installed, and finished in a color compatible with the sash color will significantly enhance the energy efficiency of well maintained, weathertight windows. By choosing operable storm windows with meeting rails that align with the existing windows, owners can minimize the visual

The left page of each guidelines topic includes a section on local context as well as practical considerations and advice. Illustrations reinforce the informational text. The right page of each guidelines topic includes the actual numbered guidelines which move hierarchically from retain and preserve to repair, to replace. They also provide specifics for new or inappropriate treatments.

Likewise, the discussion of wood points out that “fortunately, wood is a renewable resource; however, new fast-growth wood is not as resistant to decay as the denser slow-growth wood it is often replacing.”

Similarly, guidance offered for brickwork touches on several principles of sustainability by explaining that the preservation of historic masonry walls “represents a sustainable approach given their extended lifespan, high-insulating value, and the embodied energy they represent.”

In a similar vein, the guidelines advocate for window repair versus replacement: “Routinely maintaining and repairing historic wood windows to keep them operable and weathertight is generally more sustainable and cost effective over time than replacing them with new units with a shorter lifespan.” Taking the window issue a step further, the caption beneath a photo of a storm window asserts that compatibly finished storm windows “protect historic windows with minimal visual impact and can improve their overall energy efficiency

Guidelines: Energy Retrofit and Utilities

1. Retain and preserve the inherent energy-conserving features of historic buildings and sites.
2. Improve the energy efficiency of historic buildings by following appropriate maintenance practices such as weatherstripping openings, recaulking exterior joints, and reglazing loose window panes.
3. Install storm windows, if desired, so they do not damage or obscure the historic window sash and frame. Minimize their visual impact by aligning the meeting rails of operable storm sash with the existing sash division of double hung windows and select color finishes compatible with the existing sash color. It is not appropriate to install storm windows with a bare aluminum finish in the historic district.
4. Install full-light wooden or metal screen/storm doors, if desired, so they do not obscure or damage the historic door and frame. Minimize their visual impact by selecting a paint color or stain that is compatible with the color of the existing door. Bare aluminum storm doors on district properties that predate 1945.
5. Install fabric awnings, if desired, in historically appropriate locations such as over storefronts, windows, doors, or porch openings. Install awnings with care to ensure that historic features and details are not damaged or obscured.
6. Replace missing or deteriorated wood shutters with new wood shutters that match the originals in design, are sized to fit the openings, and mounted so they can be operated. It is not appropriate to install shutters in locations where they were not used historically.



Compatibly finished storm windows protect historic windows with minimal visual impact and can capture their overall energy efficiency as much as installing double-glazed replacements.

as much as double-glazed replacements.”

Beyond making the preservation case for retaining significant historic materials and only replacing deteriorated or missing materials in kind, the guidelines offer additional commentary on contemporary exterior wall materials such as vinyl siding, a petroleum-based material. Stepping beyond the issue of compatibility of such materials in a historic district, the guidelines go on to suggest property owners weigh the prorated costs of the new material over its anticipated lifespan as well as the environmental-friendliness of the material.

UTILITIES AND ENERGY RETROFIT

The text on “Utilities and Energy Retrofit” urges optimizing the efficiency of traditional features such as double-hung windows (that can capitalize on breezes and control fresh air input), ventilated foundation walls, gable vents, high ceilings, operable shutters, and retractable awnings as a first step in improving energy efficiency before adding weather-stripping, insulation (in the attics and crawl spaces), storm windows, or an upgraded mechanical system.

The text goes on to offer the low-tech

suggestion that property owners may “also want to consider replacing lost shade trees or adding new shade trees in appropriate locations,” and pushes the tree planting idea further for the southern climate with the point that “well-placed deciduous shade trees can provide welcome relief in the summer and are a sustainable way to reduce cooling costs associated with solar gain on south-facing walls.” To assist property owners in landscaping decisions, a list of ecologically friendly trees for Davidson is included as an appendix to the document.

The guidelines also address strategies for introducing and sensitively siting new energy-saving features such as solar panels, new HVAC units, rain barrels, and compost piles. A photo of a corner downspout leading to a rain barrel with a caption discussing screening from the street reinforces the concept of appropriate locations for such elements.

Although there is nothing truly radical about the Davidson guidelines, they do provide an expanded model for historic districts advocating good stewardship, neighborhood revitalization, and ongoing use of the built environment.

In the discussion of exterior lighting, the guidelines introduce concerns about light pollution and energy conservation and offer suggestions for property owners: “The use of motion sensors and timers can also limit the impact of exterior lighting and conserve energy at the same time. The selection of energy efficient bulbs and fixtures is encouraged.”

NEW CONSTRUCTION

The guidelines clearly advocate for a green mindset when designing infill buildings and related site development. This section promotes the idea that contemporary buildings reflecting an understanding of Davidson’s visual and spatial character “add to its continued vitality and viability without diminishing its small-town character.” The section also clearly encourages “incorporation of contemporary sustainability principles in new construction and related landscaping.” Images of new buildings in the district commend the successful retention of mature trees on the site—a principle of both preservation and sustainability—and the guidelines elaborate on the need during construction to limit ground disturbance, protect areas within the dripline of significant trees, and avoid the use of bulldozers and heavy construction equipment within the district. Parallel commentary is provided in the related sections on new secondary buildings and additions.

LANDSCAPING AND SITE FEATURES

In the “Landscaping and Site Features” section of the guidelines, green principles are woven into discussions on restricting and softening the impact of new off-street parking. The guidelines reinforce the need to limit “new parking areas so that the overall ratio of paved area to green area is not dramatically changed” for a site. For large off-street parking areas they explain the need to “incorporate existing trees and introduce planting medians or islands to minimize both the visual impact of the paved area as well as the environmental impact of the noise, glare, and heat from the automobiles.”

To further minimize the impact of hard paving surfaces, the guidelines recommend brick pavers and other permeable paving materials that “are environmentally friendly choices appropriate for new residential driveways and parking areas.”

The intent to preserve and enhance the pedestrian-friendliness of Davidson’s historic district obviously aligns with sustainability’s push for walkability. Concerned that short-term strategies for slowing vehicular traffic might be thwarted or delayed by the design review process, we decided to explicitly encourage the introduction of “temporary and reversible traffic calming features” in the public right-of-way. Though a logical extension of both camps’ values, this specific recommendation is one of the more unusual results of incorporating sustainability principles into the guidelines document.

DEMOLITIONS AND RELOCATIONS

The guidelines on demolition and relocation of historic buildings deal explicitly with the effect of wasted energy and wasted resources: “Beyond the loss to Davidson of a historic building, the loss of the embodied energy inherent in the existing building as well as the tremendous amount of materials added to the local landfill from a demolition make it an inherently environmentally unfriendly act.” From the same perspective, the guidelines advocate for the salvage of reusable building materials if demolition is imminent and also encourage relocation of historic buildings as a desirable alternative to demolition.

CONCLUSION

In the proposed Davidson design guidelines, the compelling case for preserving, revitalizing, and respecting a historic district as a



Designing around mature trees and introducing shrubs in large parking lots can lessen the environmental impact of glare, heat, and noise from cars. Photo by Jo Ramsay Leimenstoll.

valuable multidimensional community resource is enhanced by also incorporating concerns for sustainability of the built and natural environment. The intentional adoption of an accepting and friendly tone toward sustainability in these guidelines offers more opportunity for broader support of shared goals. Although there is nothing truly radical about the Davidson guidelines, they do provide an expanded model for historic districts advocating good stewardship, neighborhood revitalization, and ongoing use of the built environment.

Jo Ramsay Leimenstoll, AIA, is professor and director of graduate study in the Department of Interior Architecture at the University of North Carolina—Greensboro.

The Davidson guidelines are under review this spring. After adoption by the Town of Davidson, they will be available on its website at www.ci.davidson.nc.us/index.asp?NID=343.

A PRESERVATION PERSPECTIVE ON GREEN HOME RATING SYSTEMS

By Mike Jackson

Homes constitute the largest number of historic properties in the United States. The actual number of older residential properties listed in or eligible for listing in the National Register of Historic Places is in the millions. A 1997 study by the U.S. Energy Administration estimated that 18.1 million residential units were constructed in the country before 1939. Retaining and reinvesting in these properties would provide a significant environmental savings over demolishing and replacing them. And over the next decades, a much greater impact can be made on reducing greenhouse gas emissions through renovation rather than new construction.

Yet virtually all green rating systems, and particularly those for housing, were developed for new construction, and green rating systems typically undervalue the reuse of buildings versus other actions. For anyone pursuing only selective improvements over the course of time, which is the typical approach to historic preservation, the green rating system will not produce a meaningful score.

This analysis looks at current green rating systems for houses, and identifies some of the strategies owners of older homes can use to pursue energy efficiency and sustainability goals. To inform preservation advocates and those developing green rating systems, it also notes how rating systems could be changed to better recognize the benefits of preservation-based decisions.

GREEN DESIGN VERSUS SUSTAINABILITY

The popular marketplace has gone green. Individual consumers are presented with choices about what products and services to consume based upon some environmental benefit that may or may not be obvious to them. Green certification organizations now exist for many different products and services, to give consumers a factual basis for weighing the relative merits of competing claims of environmental benefit. The U.S. Green Building Council (USGBC) has emerged as the American system to authenticate green building practices, primarily for the commercial and institutional markets.

While the marketplace is green, the broader scientific term that quantifies the whole approach to human development is “sustainability.” In theory, a sustainable society only uses up resources at a rate that is equal to their regeneration. The most obvious and important area of concern in sustainability debates involves nonrenewable fossil fuels, primarily oil, gas, and coal. The fact that these are finite resources isn’t in debate. The amount of these resources needed to fuel the world economy *is* in debate, but there is pretty much a consensus that fossil fuels are going to be largely depleted during the 21st century. The push for renewable fuels has already begun. Fossil fuel depletion and the need to make buildings energy efficient have emerged as the primary concern in virtually

all green rating systems. Energy efficiency is also part of the urban planning agenda, as higher density is seen as a factor that will lead to a more walkable community, where the car is less needed for daily life. The creation of green building rating tools is collectively moving us toward more sustainable practices, but even the best of these are interim tools that will continue to evolve during this century.

GREEN HOME RATING SYSTEMS

There are now more than 25 different green home rating systems in North America and England. Some of these have been around for almost three decades. (Energy efficiency rating systems in Austin, Tex., and Boulder, Colo., appear to be the oldest.) These rating systems were written to guide new construction, but are slowly morphing to include renovation.

Of note, the Build It Green “Green Point Rated” system is one of the few that has developed a system specifically for residential renovation. While it is not a residential rating system, the Green Globes “guidelines for the continual improvement of existing buildings” is probably the most logical green policy for owners of historic properties because it (unlike most other green rating systems) encourages ongoing maintenance. The U.S. Green Building Council has developed its ReGreen system for residential properties not as a rating tool (with the usual checklists) but rather as a guideline for green building practices as applied to a variety of common renovation projects.

Green rating systems have now evolved to the point that a consensus is emerging on the categories of environmental benefits that should be measured. Virtually all of the green rating systems break down into five categories: site/location, energy, water,

resources, indoor air quality, and other (house size, management practices, innovation, and the use of green certified services). While there is a general consensus on which environmental impacts need to be measured, there is no agreement on the relative weights of the various categories.

Owners of historic homes may not be able to apply for a green rating score, but they can use the green rating systems to evaluate their dwellings and to guide efforts to maintain and improve them.

Site/Location

Historic homes often occupy sites that have many desirable “green” characteristics in terms of urban planning and site development. Most of America’s residential historic districts are in 19th- and early 20th-century subdivisions that already meet the desirable density measures. These early subdivisions are close to public transit, major services, and important institutions such as schools. Green



The City of Boulder, Colo., provides a variety of online information and downloadable publications advising owners of historic homes on how to improve energy efficiency. Go to www.bouldercolorado.gov/index.php?option=com_content&task=view&id=8217&Itemid=22.

rating systems use proximity to these features to measure the “greenness” of a location. The new planning tool in www.walkscore.com is an excellent measure of the site location characteristics that are typical of those used in green rating systems. Property owners can use Walkscore to get a sense of the “greenness” of their home’s location.

Missing from virtually all green rating systems is any effort to identify proximity to cultural resources. Of the major green home rating systems examined, only Boulder’s Green Points Guideline acknowledges the historic status of a neighborhood. While these rating systems identify flood plains and prime farmland as two categories that need to be avoided for green development, they fail to identify the benefits of proximity to historic and cultural resources. This would be appropriate to add to green rating systems.

One other rating tool is worth noting. The Build It Green rating system awards higher points for sites that have an older platting. This gives preference to homes located in older neighborhoods rather than ones requiring all new infrastructure, which are more likely to be “sprawl” sites. From a preservation and urban development perspective, it would be good to expand this idea, with the most points given for development in long-established areas and the fewest (or even negative) points for locations that are all-new “edge” sites. This kind of weighting would encourage more urban redevelopment and would complement the proximity-based measures in the current criteria.

Energy

In most green rating systems, the greatest number of points can be earned for improving energy efficiency. For owners

of historic homes, this is a critical task, but also one that can be accomplished in incremental steps.

The process begins with evaluating the current operating energy performance of a residence. This is fairly simple to do, but does require some record keeping and coordination with utility companies. Most homeowners should be able to do it themselves. It is as simple as adding up the total amount of “metered” energy you used in any give year and dividing it by the gross habitable space. (Older basements are generally not included, as they don’t count as habitable space in modern real estate calculations.) The use of professional energy raters is another option for homeowners. Your local preservation commission should be able to identify energy raters who are familiar with historic properties.

Once the energy baseline is established, the best practices for increasing energy efficiency can be examined. There are a variety of benchmark standards, but the nationally applicable one is that of the Home Energy Yardstick which is a part of the Energy Star system (www.energystar.gov).

Energy efficiency gains can made in several categories: operational changes (which can often be accomplished at no and low cost), building envelope improvements (adding insulation and sealing), and upgrades of equipment and appliances (which can be expensive and so are usually undertaken when equipment needs to be replaced, not just to improve energy efficiency). Any major improvement in total energy efficiency will require a combination of operation, envelope, and equipment changes to achieve significant results. Because air infiltration in older buildings is a huge

source of energy loss, one should invest first in sealing the building from leaks.

Only after maximum efficiency has been achieved in these three areas (operation, envelope, and equipment changes) should the homeowner consider investing in expensive on-site energy systems, such as solar electric cells or small-scale wind generators.

“Invest in ‘negawatts’ first” should be the mantra of all home efficiency projects. One common complaint about green rating systems is their emphasis on using new energy equipment over the more tried-and-true solutions of efficiency. “Gizmo green” appeals to our love of technology and marketplace solutions, but misses the most important environmental principle of “reduce.”

The best way to measure an energy saving investment is that of payback, i.e., how many years does it take to pay for an energy improvement with the savings. For example, replacement windows typically have a very long payback period, whereas caulking and storm windows have a much shorter payback period. Numerous websites provide statistical averages for improvement paybacks, but they are based upon assumptions about the current performance. One useful website is the energy efficient rehab advisor at <http://rehabadvisor.pathnet.org/index.asp>.

Homeowners undertaking major renovations, particularly those that involve insulation and moisture control, face a particular challenge. The jury is still out on the best preservation practices for achieving ultra-high building envelope energy savings for walls. Adding extra insulation in the attic has one of the best energy paybacks and little potential for negative impacts on the building. When adding insulation into walls,

Payback Period for Energy Efficiency Investments

Energy Efficiency Investment	Typical Payback
Motion Sensors	0.5 yr
Tune Up	1 yr
Programmable Thermostat	1 yr
Lighting	1-5 yrs
Sealing	2 yrs
Window Films/Film Windows	3 yrs
Insulation	7 yrs
HVAC Replacement	12 yrs
Renewable Energy	20 yrs
Windows	25 yrs

Source: Smart Energy Design Assistance Center

there is also a need to manage the moisture transfer, which is generally not possible without some removal of historic materials. Whether it is better to locate the moisture barrier on the inside or the outside depends upon the region of the country and its cold or warm climate. It is the combination of insulation, surface materials, and moisture barriers that will achieve the desired energy performance and durability that represent best green practices.

Water

Water efficiency is a growing environmental concern, particularly in western states. The use of more-efficient plumbing fixtures and appliances is a common green strategy. Site water management is particularly important in older neighborhoods, which frequently have combined sanitary and storm sewers. By installing an exterior water collection system the homeowner can use the collected water for irrigation and car cleaning, for example, and avoid the use of potable water. The irony is that the typical turn-of-the-20th-century house had an outdoor water-

Green Rating Systems for Homes

Provides links to many different kinds of green rating systems for products as well as buildings. www.allgreenratings.com

BREEAM Ecohomes (England)

A version of BREEAM for homes. It provides an authoritative rating system for new, converted, or renovated homes, and covers houses, flats, and apartments.

www.breeam.org/page.jsp?id=21

Build It Green (Northern California)

www.builditgreen.org

Green-Point Rated for Existing Buildings Checklist

www.builditgreen.org/files/uploads/GreenPoint%20Rated/Guidelines_checklists/Existing%20Home%20Checklist%20version%201.0.xls

Built Green (Seattle)

www.builtgreen.net

Remodeler Checklist

www.builtgreen.net/documents/Remodeler%20Checklist.pdf

City of Chicago: Green Homes

Programs and checklists for new and renovated single-family homes and apartment buildings

<http://tinyurl.com/chicagogreenhomes>

Green Building and Green Points Guideline (Boulder, Colo.)

Guidelines for new buildings and major renovation.

Boulder Green Building Program

www.BoulderGreenPoints.com

Green Points Guideline

www.bouldercolorado.gov/files/PDS/green_points/GreenPointsWeb.pdf

U.S. Green Building Council

LEED for Homes (New and Major Renovation)

www.usgbc.org/DisplayPage.aspx?CMSPageID=147

REGREEN—Home Renovation Guidelines

www.regreenprogram.org/documents/regreen_guidelines.pdf

collection system, known as the cistern, but building codes in the latter 20th century frequently required these to be filled in. Now we recommend that this idea be revived, with the use of a surface-mounted rain barrel. The use of native plantings and ground covers that do not require much irrigation (and reduce lawn mowing) are also preferable green treatments for the site.

Resources

This is one category where owners of historic homes have an under-recognized advantage over those doing new construction. By starting with an existing building and maintaining most of what you have, you may make virtually no new demands for major resources. If the overall goal of green behavior is to keep us from collectively over-consuming the world's resources and leaving too little for future generations, rewarding this seems like a no brainer. Unfortunately, you wouldn't come to that conclusion if you looked at a typical green rating system. Only a few points are given for building reuse. Far more points are awarded for using materials deemed "environmentally preferable" because of how they are made, where they come from, or based upon complicated secondary rating systems that measure embodied energy, emissions produced, or recycled content.

For all of the collective wisdom applied to being green, this is one of the most frustrating aspects of the rating systems. They are simply based on the "assumption of consumption" rather than directing anyone to consider whole building reuse. The only residential green rating system that speaks directly to this is the English BREEAM Ecohomes system, which states, "any existing element in the building that is reused in-situ will automatically get an A rating, as the environmental

impact of replacing that element is far greater than reusing the element already in place.” I like to call this “common sense green.”

Green building rating systems promote efficient use of new materials and are highly prescriptive about minimizing construction waste. Unfortunately, the rating systems generally treat teardowns as a waste management issue rather than a waste avoidance issue. As long as a certain percentage of the existing demolition waste is managed so that sending it to the landfill is avoided, the rating system pretty much ignores the idea that the existing building had a viable future. The practice of tearing down viable housing to replace it with green certified housing is alive and well, and commonly reported in green building news. The underlying message is that we can somehow or other consume our way to sustainability. More advanced Life Cycle Analysis (LCA) systems are needed to combat this notion, as well as more examples of historic renovations that achieve high green ratings.

There is another possibility for green building rating systems within the category of Resources. What if the entire point value for Resources was awarded to building reuse, with negative points calculated on the amount of the building that was demolished? Instead of a system that rewarded the purchase of new, albeit “green,” materials, this system would automatically give a positive rating to total material reuse. If part of the building was demolished, a proportionate number of points would be subtracted under the Resources category. There is even the possibility that new points could be added for new green material choices, just as would be done for any other new building. All the other categories of green building rating systems would remain the same. This

revision would basically give building reuse a much higher proportion of the total rating system points, which would put reuse in its proper place as the first green strategy.

Indoor Air Quality

All homes should provide a healthy and comfortable living environment. For owners of historic homes, addressing issues of indoor air quality presents several challenges, some more easy to mitigate than others. Lead paint and asbestos are present in many historic homes. Radon is another environmental air quality concern. While older homes tend to leak air more, which hurts their energy efficiency, this can also help dissipate indoor contaminants.

The fireplace—that ubiquitous symbol of domesticity—has now come under attack in green building practices. Typically an old fireplace wastes far more energy than it produces, as well as adversely affecting indoor air quality. Some rating systems actually prohibit them, while others require them to be constructed with elaborate venting and combustion air standards. Needless to say, the historic ideal of a welcoming blaze in the fireplace and the modern energy concern about its wastefulness is a real collision of values. Our ancestors were aware of this. Open fireplaces were rarely used for heat in most homes once the metal stove came into widespread use. The “parlor stove,” as it was called, was the preferred method of heating homes, even when it sat in front of the fireplace with the flue connected to the wall above.

Other

The catch-all category of “other” covers lots of different items, including the rather self-serving one of rewarding the use of green-rated professionals, and the wide open one

Energy Efficient Rehab Websites

Home Energy Saver

("The First Web-Based Do-It-Yourself Energy Audit Tool")

<http://hes.lbl.gov/>

Energy Star (guide to energy efficient appliance and equipment)

www.energystar.gov

Target Finder (Energy Star tool for assessing efficiency)

www.energystar.gov/index.cfm?fuseaction=target_finder

Smart Energy Design Assistance Center

<http://smartenergy.arch.uiuc.edu/index.html>

<http://smartenergy.arch.uiuc.edu/pdf/ECRMHandout.pdf>

Do It Yourself Energy Assistance Analyzer

www.energyguide.com/audit/baintro.asp

Energy Efficient Rehab Advisor (home owner tool)

<http://rehabadvisor.pathnet.org/index.asp>

Green Building Rating Systems

www.usgbc.org

www.architecture2030.org

Boulder, Colo. Historic Building Energy Efficiency Guide

www.bouldercolorado.gov/index.php?option=com_content&task=view&id=8217&Itemid=22

of "innovation." One significant item in this category is house size. This factor fits in several different categories, but I want to single it out because it is so critical and reflects an inherent philosophical debate in the whole metric of green. One school of thought is that size doesn't matter as long as everything used in a building follows a green protocol and sustainability goals. Others disagree with this, and see size as critical to the equation of measuring best green practices. A compromise of sorts has been reached in the various systems that basically penalize increased building size by requiring more stringent measures for other items such as energy efficiency or renewable energy. In the

opinion of this author, the compromises are rather weak, based upon the recent certification of the 7,000-square-foot "eco home" on a large suburban lot.

CONCLUSION

The development and use of green building rating systems is going to be a part of the future, and we in the historic preservation community need to find our common ground with green building proponents. As the principal advocates for cultural continuity, preservationists have a unique perspective and important role to play in developing the best green building practices. Because renovations to existing buildings will offer far more opportunities for reducing greenhouse gas emissions than new construction will, the common missions of historic preservation and green building need to evolve quickly—which will be no easy task.

Just to put some perspective to this, it took a hundred years to go from the first building codes to having rehab-based building codes. The first green building rating systems are just one generation old, and we have to get it right in the next generation if we are going to have meaningful impact on a global scale.

But even as green building rating systems continue to improve, with our help and input, we have an opportunity right now to show homeowners how to take wisdom from them to guide them in the stewardship and enjoyment of their historic buildings.

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“SLOW FOOD,” “SLOW CITIES,” AND THEIR LESSONS FOR RURAL PRESERVATION

By Anthony Veerkamp

Last summer, an improbable garden took root in the heart of San Francisco’s National Historic Landmark Civic Center Plaza. Corn grew high—perhaps not as high as an elephant’s eye, but a respectable six or seven feet anyway. Ranks of sunflowers bloomed and nodded under the weight of their ripening seeds, while below them lettuce, chard, spinach, radicchio, endive, kale, and even the much-maligned arugula unfurled in a kaleidoscope of colors that the term “leafy greens” can’t begin to cover.

But the Civic Center victory garden was no run-of-the-mill garden. Planted and nurtured by a coalition of community-based urban gardening organizations, it served as a living, growing, carbon-absorbing billboard for Slow Food Nation ’08. For four days, participants discussed everything from horse manure to the Farm Bill (no big conceptual leap required, many attendees would argue). While a sense of urgency permeated the event, the overall atmosphere was celebratory, embracing the simple pleasures of growing, preparing, and, most of all, eating good food in the company of 85,000 of your closest friends and family.

Where did all these people come from, and what did they have against speedier food? Didn’t they make it through college on Ramen Noodles like I had? The answers, not surprisingly, are both local and global. It was no accident that Slow Food Nation

took place in the Bay Area, as one of the driving forces behind the gathering was Alice Waters. Waters is best known as the founder of Berkeley’s Chez Panisse restaurant and is widely credited as the founder of “California cuisine,” a term now quite meaningless but which once signified a radical change in the way we think about food.

Waters arrived at U.C. Berkeley in the 1960s just as the Free Speech movement was taking off and got it into her head that she too could change the world—not through sit-ins or Molotov cocktails, but a really great raspberry tart. That’s reducing a philosophy to a sound bite, of course; Waters and the movement she’s been a part of has never been about the latest culinary trend. Instead, the focus has always been on education and the importance of fresh, locally grown ingredients. In a 1995 essay entitled “The Ethics of Eating,” Alice Waters wrote:

If you choose to eat mass-produced fast food, you are supporting a network of supply and demand that is destroying local communities and traditional ways of life all over the world—a system that replaces self-sufficiency with dependence... But if you decide to eat fresh food in season—and only in season—that is locally grown by farmers who take care of the earth, then you are contributing to the health and stability of local agriculture and local communities.¹

While Waters' influence should not be underestimated, she has tended to work quietly, concentrating on her own backyard. If the modern Slow Food movement is to be traced to a single wellspring, that source would surely be Italy, or more specifically, the Piazza di Spagna in Rome. Italy is blessed with unusually resilient cultural traditions, but rapid post-war industrialization and urbanization and the rise of "modern" agriculture resulted in enormous economic, social, and cultural dislocations, especially in the countryside. By the 1980s, many Italians were questioning the wisdom of a headlong rush to modernity whatever the cost. If the country was growing as wealthy as all the standard economic indicators suggested, why weren't Italians happier?

Against this background, the McDonald's Corporation announced plans to establish a branch—some might say a beachhead—in Italy. The obvious place to open the first Italian McDonald's would have been in a shopping mall on an anonymous ring road where American-style consumerism had already firmly taken root. Instead, McDonald's launched a modern-day barbarian invasion, opening a franchise in Rome's Piazza di Spagna.

The spectacle of Big Macs on the Spanish Steps was just too much for many Italians. Carlo Petrini, a food and wine journalist for dissident Communist newspaper *Il Manifesto*, responded with his own counter-attack, launching a crusade against this barbarian invasion with the goal of chasing McDonald's out of the famed piazza and all of Italy. It was a colorful battle that for a moment captured the media's attention worldwide. It was also a David-and-Goliath battle destined to fail.

Nearly a quarter century later, it's hard to see what all the fuss was about. Visitors to Rome today probably would have a hard time finding the restaurant at all if it weren't for the waymarkers along the "via di Propaganda" (irony presumably unintentional) helpfully pointing the way. Perhaps some of the shock of the new has worn off due to what has come since. Today, fast food is no longer a novelty in Italy, and the streets around the Piazza di Spagna are dominated by a phalanx of other multinational vendors of focus-group tested wares.

THE SLOW FOOD MOVEMENT

While the Battle of the Spanish Steps may have been lost, the war was just getting started. Emboldened by the skirmish, Petrini went on to formally found a new organization he named "Slow Food," demonstrating his seriousness of purpose and gift for the rhetorical flourish. In Italy, every movement needs a manifesto, and soon Slow Food had its own. Meeting in Paris in the fall of 1989, representatives of 15 countries (including the United States) formally adopted the Slow Food Manifesto.

The Slow Food Manifesto reads as if its signatories were prepared to storm the Bastille—just as soon as they polished off the last of the Barolo wine and Gorgonzola-stuffed figs. It's full of zingers like:

*"May suitable doses of guaranteed sensual pleasure and slow, long-lasting enjoyment preserve us from the contagion of the multitude who mistake frenzy for efficiency."*²

It is all too easy to dismiss this kind of rhetoric as a leftist flight of fancy. And yet the fact that American preservationists tend to be less labile and overtly political in our

writing does not mean that we don't share any principles with the baroque Italians.

If from our perspective, two decades later, the Slow Food movement seems built on a precarious foundation, it has nonetheless proven to be prescient. More than ever, people are concerned about where their food comes from, and this concern is spiced with fear and anger. When one factory's bad batch of peanut butter can trigger a coast-to-coast search for poisons disguised as food lurking in the cupboard, people start to ask smart questions about their family's and our nation's food security.

Despite the odds, the Slow Food movement has grown to be a worldwide phenomenon that seeks to move beyond a niche market to become a movement with broad cultural and economic relevance. Sound familiar? Today, Slow Food boasts 85,000 members in more than 1,000 "convivia" (local chapters) in 132 countries. There are seven national branches, including one in the U.S. As the movement has flourished and taken root around the world, there has been a gradual shift in the way the movement refers to people's relationship to food that should sound reassuringly familiar to preservationists.

Take, for example, the movement's five "Guiding Principles":

- Sustainability
- Cultural Diversity
- Pleasure and Quality in Everyday Life
- Inclusiveness
- Authenticity and Integrity

This is exactly the language we're comfortable with—it could have come straight out of a National Preservation Conference PowerPoint presentation.³

And it's not just the keywords that resonate.



Planting a 10,000-square-foot "urban garden" in front of City Hall was just one of the ways San Francisco's Slow Food Nation '08 showcased and celebrated locally produced foods. Photo by Anthony Veerkamp.

The Slow Food philosophy rests on four principles, including:

"Slow Food protects places of historic, artistic, or social value that form part of our food heritage, acknowledging the history and culture of every social group as it interacts within a broader network of reciprocal exchange."

Replace "Slow Food" with "historic preservation," and you have a philosophy that (I hope) all preservationists can embrace as our own.

SLOW CITIES

It's apparent that there's more that connects our movements than separates us, but perhaps we have our noses too close to the grindstone to notice. Fortunately, preserva-



At Taste Pavilions visitors could meet farmers and producers, and sample artisan-produced chocolate, cheese, bread, honey, and more. Photo by Anthony Veerkamp.

tionists both at home and abroad have started to connect the dots. In 1999 the mayors of four small Italian cities—Greve-in-Chianti, Orvieto, Bra, and Positano—got together to see if they could take Slow Food principles and apply them to their cities. They focused on working toward calmer and less polluted environments, conserving local aesthetic traditions, and fostering local crafts, produce, and cuisine. The results were the founding of “Cittaslow” (Slow Cities) and—no surprise—a lengthy charter that includes member city “requirements for excellence” falling under six headings:

- Environmental policies
- Infrastructure policies
- Technologies and facilities for urban quality

- Safeguarding autochthonous production⁴
- Hospitality
- Awareness

The very first requirement under “Infrastructure policies” is “plan for improving and for the reclamation of historical centers and/or works of cultural or historical value.” Other requirements include “programs for the safeguarding of artisan and/or artistic craft products in danger of extinction” and “safeguarding traditional methods of work and professions at a risk of extinction.”

The Cittaslow network has grown rapidly. From those first four Italian towns, the movement has expanded to 14 countries and a network of more than 100 towns “where quality of life is important.”

There is as of yet no American member. Part of the problem may be the equal footing the Cittaslow movement gives to the tangible and intangible aspects of heritage. Historically, professional preservation practice in America has been firmly grounded in the terra firma of real estate. Certainly, we've made advances; for starters, we've moved beyond preserving individual landmarks and now embrace the preservation of landscapes. We've also come to accept, if not fully embrace, the notion that places can be imbued with significance by virtue of their traditional cultural use or spiritual value. Still, the mainstream preservation movement has tended to treat these concepts as the exclusive domain of Native Alaskans, Hawaiians, and Americans rather than values that all humankind shares. While we love to include people in our snapshots of historic places, we still struggle with the notion that a community's ongoing relationship with a place can form the basis of its historical significance.⁵

VALUING PEOPLE AND BUILDINGS

Our slightly schizophrenic attitude concerning the role of people—especially working people—in placemaking can be observed at Point Reyes National Seashore. The National Park Service, with the best of intentions and in compliance with all relevant laws, regulations, and accepted planning practices, restored a ranch complex called Pierce Point Ranch, which was recognized as the most intact historic ranch of its type in the region. The NPS invested significant dollars in the rehabilitation of the ranch core, listed it in the National Register, and opened it to the public as an interpretive site.

The ranch looks great—certainly better than

it ever did while it was an active ranch. By most measures, the National Park Service did the right thing, and the public interest was served, but it's hard to escape the impression that we as a nation, with the NPS acting as our proxy, are willing to invest in the nostalgia of a ghost ranch while ranches still in active use—ranches with cattle that moo and poo, where families actually work to put food on our tables—are left to fend for themselves.

To the rancher, the NPS (and preservationists in general) may appear as well-meaning but out of touch with the realities of working the land. Harsher critics have branded preservationists as building-hugging, newel-post-stroking fetishists, more concerned with buildings than people. While we know our commitment to our built heritage to be virtuous, there's no denying that restrictive notions of heritage preservation diminish our long-term prospects for success. Simply stated, if we are to succeed, our work must preserve not just rural heritage, but rural life.

Fortunately, there are signs we are getting there. The old Pierce Point Ranch paradigm for rural preservation, however well-intentioned, is becoming a thing of the past. Saving a ranch but losing the ranchers and livestock is a hollow victory. Likewise, we are rethinking landscapes. No longer simply the frame for the building, we now recognize the landscape is a resource worthy of protection in its own right (and not merely as "open space," a term that gets creepier and creepier the more you think about it).

PRESERVING WORKING CULTURAL LANDSCAPES

One new model can be seen at the Grant-Kohrs Ranch National Historic Site in Montana. There the National Park Service



Farmers' markets not only offer fresh, locally grown food items but also the chance to interact with and directly support the people who produce them. More than just a place to pick up groceries, they increasingly appeal to "culinary tourists." Photo by Byrd Wood.

manages a herd of historic cattle breeds that authentically augment the look, smell, and feel of a historic home ranch. But the cattle aren't just part of the scenery. NPS management is committed to the concept of sustainable ranching, as expressed through resource protection, economic efficiency, and community and social connections. Many of the 75 cow-calf pair of Longhorns, Shorthorns, and Herefords are "schooled" in the practice of eating noxious weeds in appropriate proportions to effectively keep park rangeland diverse and healthy.

The NPS is not the only site steward that's

catching on to the opportunities presented by Slow Food and sustainable agriculture. At the 1870s MacGregor Ranch near Estes Park, Colo., sales of natural beef raised on the ranch are helping support the operation of the ranch museum.

At Historic New England's Casey Farm, an 18th-century historic site in Rhode Island, farm managers and volunteers grow organic vegetables, herbs, and flowers that are sold to shareholders who participate in a thriving Community Supported Agriculture Program.

The National Trust for Historic Preservation recognized the natural link between sustainable agriculture and historic preservation well before “sustainable” became a buzzword. Our Barn Again! program, for example, has long promoted the notion that, done intelligently, preserving historic barns doesn’t just enhance the rural landscape, it can also enhance a farmer’s bottom line. Sustainable farmers are rediscovering that older barns are often perfect for small scale, local agriculture. Made of wood and stone, and free of toxins, old barns provide healthy, well-insulated spaces for naturally raised livestock and produce. What’s more, historic barns become great marketing tools; they are evocative symbols of family farming and provide ideal venues for on-farm sales or Community Supported Agriculture operations. Perhaps best of all, by using an existing older barn, farmers are conserving natural resources and scarce capital that would otherwise be spent building a new structure.⁶

Barn Again! dovetails nicely with the National Trust’s National Main Street Program, which includes marketing (strictly speaking, “promotion”) as part of its four-point downtown revitalization strategy. Main Street was really quite revolutionary when it was founded in the 1970s, and remains one of the great success stories of our preservation movement. In recognizing that it was folly to talk about the preservation of place (small-town Main Streets) without addressing the needs of people (Main Street merchants, property owners, shoppers) the Main Street program not only established a coherent model for preservation-based economic development, it also inextricably linked people and place.

Today, Main Street programs are making the connections between locally grown food and

downtown revitalization as well. Farmers’ markets are bringing social and economic vitality, along with healthy food, to hundreds of small downtowns around the country. Last summer, the Virginia Main Street program organized a conference on “Nourishing Downtown,” which included sessions on starting farmers’ markets, encouraging local restaurateurs to serve local food and locate in historic buildings, and ideas for attracting “culinary tourists” to Main Street. A similar gathering was organized by Heritage Ohio this spring.

CHALLENGING FACTORY FARMS

More recently, preservation and sustainable agricultural interests have been practically flung together, requiring us all to be quick studies and become conversant in each other’s language. Such was the case a couple years ago with Concentrated Animal Feeding Operations (CAFOs, often referred to as “factory farms”).

Seemingly overnight, National Trust Regional Offices began to hear about cultural heritage resources threatened by proposed CAFOs.⁷

In the Western Office, we were dealt a quick one-two punch, with major new CAFOs proposed that would directly impact Allensworth State Historic Park in California and Minidoka National Historic Site in Idaho.⁸ Fortunately, the threat to Allensworth was eliminated when California State Parks stepped forward and bought the rights to build the two proposed “dairies” for \$3.5 million.

Minidoka had no such white knight in the wings. Recognizing the severity and urgency of the CAFO threat facing Minidoka, and that this threat was part of a national pattern, the National Trust decided to include



The Arkansas DeltaMade program highlights the unique and distinctive products made in the Arkansas Delta, including including arts, crafts, food products. A recent “marketplace” allowed local businesses, such as Uncle Cat, flash-frozen catfish fillets and breeding, to sell their products and network with larger retail operations. Photo by Beth Wiedower.

Minidoka on its 2007 list of America’s 11 Most Endangered Historic Places. Once that decision was made, it became clear that the National Trust needed to develop—quickly—a policy regarding factory farming. This raised important—and provocative—policy questions. Were we opposed to all CAFOs, or just ones that affected recognized historic resources?

A conservative reading of our mission would require that there be a “resource” at risk before we step in. Indeed, our listing of Minidoka was triggered first and foremost

by its historic significance and designation as an NPS unit. But how would we respond if the project proponent were to propose moving the CAFO away from the site but closer to a community where its impact on a “historic resource” might be less, but where far more people would be directly affected?

Ouch. Obviously, we shouldn’t have to choose between our mission and our conscience. In the end, we developed a policy statement that highlights how factory farms threaten not just “historic resources” but our “rural heritage.” We took this further

with a set of reasons why small-scale agriculture is an economically viable alternative to industrial agriculture that is better for rural communities.⁹

RURAL HERITAGE DEVELOPMENT INITIATIVE

Recently the National Trust for Historic Preservation has sought to demonstrate how many of these strategies can be brought together in one place. With the help of a grant from the W.K. Kellogg Foundation, rural pilot projects were launched in multi-county regions in central Kentucky and along the Mississippi River Delta in Arkansas. The purpose of the Rural Heritage Development Initiative is to demonstrate how a range of strategies—adaptive use of historic structures, Main Street revitalization, heritage tourism, barn and farmland preservation, local food and product development, regional branding and marketing—can all work together to support the goal of sustainable, heritage-based rural development. Local food and agriculture are emerging enterprises in both of these rural pilot regions.

In Kentucky, preservationists are working with farmers and county extension offices to find ways to keep historic farmsteads viable now that tobacco subsidies have been cut. Fostering local food production is one answer. In a fast-growing part of Washington County, Ky., one farmer decided to convert his former tobacco acres to grape production instead of ranchettes. Now he is working with Preservation Kentucky and other partners to convert his old tobacco barn to a winery and tasting room. Other farmers in the region are converting their tobacco acreage to fields for cattle, fruit trees, and vegetables and building a local audience for their products through down-

town farmers' markets and on-farm sales.

In Arkansas, the Rural Heritage Development Initiative brought together a diverse range of local food producers, artists, and craftspeople to begin marketing a new brand of "DeltaMade" products. From jars of wildflower honey and barbeque sauce to a book of Delta recipes written by "Mama Cash" (yes, mother of Johnny), these products are sold exclusively on the internet or in stores or restaurants that are located in one of the historic downtown districts in the Arkansas Delta Pilot region.

MAKING "SLOW" PROGRESS

Today we are embracing new approaches for sustaining both the land and the people who work it. It's becoming evident that we can't preserve our cultural heritage without also working to assure the viability of the communities that work the land and put food on our tables. We also need to restore the broken links between town and country, farmer and consumer. The Slow Food movement asserts that "eating is an agricultural act." Author and food activist Michael Pollan has upped the ante, stating that "eating is a political act." It's just as true that eating is a cultural act, and our choices of what we eat and where we buy it can play an important role in preserving our cultural heritage.

During last year's Slow Food Nation, Alice Waters was asked about her hopes for the next presidential administration. While many Slow Fooders were clamoring for a top-to-bottom overhaul of federal agricultural policies (including visions of food activist and author Michael Pollan as Agriculture Secretary), Ms. Waters had a simpler vision: a kitchen garden at the White House. Few in the Slow Food movement are cheering about President Obama's choice

for Agriculture Secretary, but this month, First Lady Michelle Obama, shovel in hand, broke ground on a kitchen garden on the White House's South Lawn. It's just one garden, but Waters believes that as a symbol of the nourishment of the nation, it promises a rich harvest.

And symbols are important, now more than ever. There are grim indications that as the current economic crisis has deepened, the American public's concern about our broken food system, environmental sustainability, even climate change, has faltered. There's more than a touch of bitter irony here. These should be the salad days of the Slow Food movement. In the wake of a tsunami of foreclosures and the giant sucking sound in our 401k accounts, Slow Food's warnings about the perils of a world economy that takes no prisoners seem less alarmist and more credible. What's more, like it or not, many of us have been compelled to slow down.

Stanford economist Paul Romer has noted that "a crisis is a terrible thing to waste." Rather than work frantically to get everything back the way it was, maybe this is our chance to get on the path to the way they should be. There's no time like the present to embrace a slower, more sustainable future. This weekend (or if you really want to laugh in the face of adversity, try a school night), take the time to enjoy the gratification of preparing food from scratch and the communal satisfaction of lingering over a meal with family and friends.

After all, what's the hurry?

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NOTES

1 "The Ethics of Eating," *The Land Report*, Number 52, Spring 1995, published by The Land Institute.

2 This probably sounds better in the original Italian; the English language version of many Slow Food documents are studies in the pitfalls of too-literal translation.

3 Perhaps with the exception of "pleasure," a word that makes American preservationists squeamish. I suspect that that has more to do with our own Puritan legacy than any fundamental disconnect between the preservation and Slow Food movements. In any case, perhaps it wouldn't hurt us to start thinking a bit more about how the places we preserve bring us joy and, yes, pleasure—it doesn't all need to be about economic development and learning lessons.

4 "autochthonous" means originating in the place where found; "native," in a nutshell.

5 Significantly, many cultural groups within the United States don't share this hang up. America's indigenous peoples especially don't find the parsing out of our heritage as tangible versus intangible or natural versus cultural to be logical or useful.

6 See: "Historic Barns: Working Assets for Sustainable Farms" at www.PreservationNation.org/issues/rural-heritage/additional-resources/Historic-Barns-Sustainable-Farms.pdf

7 For more on factory farms, see Jennifer Sandy, "Factory Farms: A Bad Choice for Rural America," *Forum Journal*, Volume 23, Number 2 (Winter 2009).

8 Both parks are significant for their relationship to specific ethnic groups (African Americans and Japanese Americans, respectively). While this may be coincidence, it is nonetheless illustrative of the fact that ethnic minorities are particularly vulnerable to the negative environmental consequences of industrial agriculture.

9 See "Factory Farms and America's Rural Heritage" at www.PreservationNation.org/issues/rural-heritage/factory-farms/

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