

Historic Preservation

The Greenest of Conservation Solutions

by Alana Coons

pre•ser•va•tion - The activity of protecting something from loss or danger, an occurrence of improvement by virtue of preventing loss or injury or other change

con•ser•va•tion - Preservation or restoration from loss, damage, or neglect

sus•tain - To keep in existence; maintain

The words preservation and conservation are by definition interchangeable. One of the premises of the historic preservation movement is that historic buildings provide us with a unique and tangible link to the past and that historic buildings represent a major and significant investment in irreplaceable resources.

“Historic buildings are inherently sustainable. Preservation maximizes the use of existing materials and infrastructure, reduces waste, and preserves the historic character of older towns and cities. The energy embedded in an existing building can be 30% of the embedded energy

of maintenance and operations for the entire life of the building. Sustainability begins with preservation,” so states the Association for Preservation Technology International (www.apti.org). By embracing these most simple of concepts we can make an enormous difference in regard to the quality of life for all.

The fact is that recycling buildings is the *most* environmentally friendly option, simply put, restoring a building is better for the environment than building a new one. Author Jennifer Buddenborg, explains, “At a time of rapid resource depletion and world population growth historic preservation rests at a pivotal point in the advancement of sustainable development and design. Historic preservation is inherently sustainable. While many people associate sustainability with environmentalism, the relationship between historic preservation and sustainability is a similarly close one, with a few critical intersections. Sustainability is a holistic planning approach, a comprehensive long-view of development that protects the environment as one of its outcomes. Nurturing the cultural environment is

another.” Continuing that train of thought, the World Bank, whose mission is to end world poverty, understands well the role historic preservation plays in a sustainable society. They specifically relate the concept of embodied energy with historic buildings stating, “The key economic reason for the cultural patrimony case is that a vast body of valuable assets, for which sunk costs have already been paid by prior generations, is available. It is a waste to overlook such assets.”

The last issue of *Reflections* included an amazing article on the economics of preservation by Donovan Rypkema, in which he wrote about “a triple hit on scarce resources” and laid out these three points:

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1. We are throwing away thousands of dollars of embodied energy.

2 We are replacing it with materials vastly more consumptive of energy. What are most historic houses built from? Brick,

plaster, concrete, and timber, among the least energy consumptive of materials. What are major components of new buildings? Plastic, steel, vinyl, and aluminum, among the most energy consumptive of materials.

3. Recurring embodied energy savings increase dramatically as a building’s life stretches over 50 years. You’re a fool or a fraud if you claim to be an environmentalist and yet you throw away historic buildings and their components.

That provides the perfect segway into a discussion of the green design and building movement, with which the historic preservation movement seems to share many of the same goals and ideologies. However, as Michael S. Wishkoski, AIA of Seattle, Washington explains it, “Standardized measuring tools, such as the LEED (Leadership in Energy and Environmental Design), Green Building Rating System® and BRE’s Environmental Assessment Method (BREEAM), are lacking in how they specifically address older and heritage properties. Specifically, these standards often

overlook the impact of projects on cultural value; do not effectively consider the performance, longer service lives, and embodied energy of historic materials and assemblies; and are overly focused on current or future technologies and do not look to past experience to determine sustainable performance. Many feel that sustainability is not compatible with aging structures, in part because superior new technologies cannot be efficiently integrated. Unfortunately, this idea is somewhat reinforced by the U.S. Green Building Council's treatment of resource reuse issues in its LEED certification program, **which awards only three points (out of 69) for the reuse of an entire building, including its interior walls.**" This is simply outrageous and hugely irresponsible. When building debris accounts for an estimated 40 percent of refuse in our landfills we have an environmental responsibility to save historic buildings and landscapes. And sustainable design does not have to use expensive, technological solutions. In its best practice it would encourage design that complements local conditions, taking advantage of available light, climate and terrain.

Ecologists ask us to consider the conservation perspectives of lifecycle value assessment and embodied energy. Meaning, that which has already been extracted, harvested, processed and constructed, offers a huge advantage over any kind of newly manufactured or newly harvested material. One great example found online touted by a preservation friendly developer is of a restored warehouse; the building's 300,000 plus bricks were not replaced with new materials. Each with an embodied energy value of 14,300 BTU's, represent 4.4 million BTUs of energy expended in the original construction of the building, or 1.3 million kilowatt hours of electricity. With the average household in the U.S. using about 8,900 kilowatt's of electricity each year, these bricks are equivalent to the amount of energy needed to power 145 homes for a year.

I think there needs to be a term or word coined that speaks to the alignment of historic preservation with economic viability, social responsibility and environmental stewardship. Some of you more clever folks out there should submit ideas; I think there has to be a better way to say all of this in a way that would attract and appeal to those who are not understanding or embracing it with the terms already in use.

Historic preservation is the most intelligent approach for the revitalization and sustainable development of our neighborhoods, and urban and rural areas. It should be demanded and mandated that our city leaders, planners and policy makers focus on things such as

alternative energy, resource efficiency, and quality of place when looking at economic development, that in trying to meet our environmental objectives they must bear in mind the value of our historic and cultural resources. And, we need to tell all our friends who are concerned about the environment that historic preservation is a conservation issue, that it is about sustainability, it is about cultural landscapes, and that it is an essential tool for sustainability and economic viability. The preservation movement should have enormous support and backing from the environmental community. It does not yet but I have great hope that with the heightened awareness and concern about the fragility of our planet these days amongst the mainstream public that we will see more and more people regard and react to historic preservation with the same angst and passion that they do when speaking of other endangered resources.



The 1924 Showley Candy Factory is a great example of building reuse. Rather than demolish this sweet piece of San Diego's history, the building was moved as a part of the SOHO and NTHP preservation agreement with the Padres, CCDC and the city.

Moving the Candy Factory was one of the most ambitious undertakings required by the agreement. The 100 foot by 100 foot, un-reinforced brick building, which weighs 3 million pounds with an estimated 3 million bricks, was moved on wheels one block east of its present site in order to preserve it.

Imagine this massive building in a landfill and what would have been built to take its place and the tremendous amount of resources squandered!