

The Arbor House in Madison, Wisconsin, is an admirable example of a model of not only green design but also of education. This bed and breakfast which calls itself “The Environmental Inn” declares its mission to be one of environmentalism in addition to serving as an example of successful urban design that can be applied elsewhere:

Arbor House’s mission is to provide the art of hospitality within a model for urban ecology. Our goal is the wise use of resources and providing guests with an unparalleled combination of natural design, features, fabrics, amenities and surroundings, while providing opportunities for recreation and learning more about urban ecology.¹

Green building practices offer specific benefits to the building owner and building occupants:

- Reduced maintenance/replacement costs over the life of the building.
- Energy conservation.
- Lower costs associated with changing space configurations.
- Greater design flexibility.
- Improved occupant health and productivity²

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The sustainable features of the inn include its history and site, extremely efficient design, its use of materials in construction and amenities, ecologically sound landscaping, energy and water-efficient design and appliances, and environmentally-conscious operation.³ As a “warm respite in a bustling urban neighborhood”⁴ Arbor House contributes to the green design of Madison in that it promotes eco-tourism as a site in itself as well as in the region. That is, while the House serves as a model for sustainability and its message is received by a large and diverse audience, this message furthermore emphasizes the environmentally-friendly aspects of Madison. It creates for visitors the image of Madison as a green city and encourages further environmental awareness upon arrival. It serves as example of how to make communities more livable by integrating environmental protection, social equity and economic progress.

Arbor House is sustainable from its beginnings as The Plough Inn, and it is a building on the national register for historic homes as one of Madison’s oldest existing homes. This history is integrated into its current use:

The main arbor connects the two buildings serving as both a physical connection and a symbolic connection between two periods of time: how we used to live and how it is possible to live today and in the future. Even our home wing uses special relationships and principles common in frontier life more than a century ago for family living.⁵

The House is a prime example of adaptive reuse from the building itself to its use of antique furniture. This type of reuse is beneficial in that it conserves materials and it more importantly discourages waste by embracing the aesthetic of a rich history. Since

¹ www.arbor-house.com

² California Integrated Waste Management Board: Green Building Guidelines

³ www.arbor-house.com

⁴ Capital Region Business Journal, “Options for Getaways”. April 1, 2005

⁵ www.arbor-house.com

adaptive reuse projects may use most, if not all, of the existing building's infrastructure, it dramatically cuts down the amount of concrete and lumber used for the project as compared to new construction. The key is that it recycles the existing building materials already used. Adaptive reuse also reduces the amount of demolished-building waste that currently clogs our nation's landfills with reusable materials.

Finally, there is a noticeable reduction in the energy consumption needed with adaptive reuse when compared to tear-down/build-new projects, not to mention that the fewer number of heavy trucks needed for any project means far less fuel consumption and the reduction of carbon monoxide to the existing microclimate.⁶ Most relevant to its impact on the city, Arbor House is an example of a historic site that is recycled and made economically viable again, bringing new life and activity to the surrounding area.

In addition these benefits, the architecture of the building is efficient and therefore sustainable. Not only is the structure of Arbor House beneficial to its use of resources, but it also has a very modest size for its rooms which entails conscientious use of space; the space planning is 'just right', with no wasted space. A family of five visitors occupies 1,100 ft.² with a single (albeit divided) bathroom, occasionally expanding into the inn's Breakfast Room for their own entertaining. The inn has 10 bedrooms and can accommodate many guests in a relatively small space⁷. Children have bed-alcoves instead of separate bedrooms, and common space is shared between visitors. The owner's kitchen also functions as the inn's kitchen. Its award-winning design maintains comfort without an excessive amount of space. This emphasis conveys the beauty of efficient living to visitors and promotes an anti-sprawl mentality. Furthermore, this unique design is more "cozy" than the typical (and impersonalized) layout that prioritizes the ease of the constructor to the needs of the user; the design promotes livability by placing quality over quantity and comfort over value⁸. The entire structure facilitates sustainability. The shape of the building in plan, and its placement on the site responds to numerous influences: the root systems of the many mature trees on the site, the (future) rooftop solar collector orientation to the sun, and neighbors' concerns about traffic patterns and views.⁹

The Arbor House furthermore encourages sustainability with its use of materials. First, the lumber used in its construction limits environmental degradation since it was specified from regional, sustainably harvested sources wherever possible. No toxic-treated lumber is used for exterior decks and posts. Instead, naturally decay-resistant species are used and carefully detailed. Products were chosen whose manufacture demands less encapsulated energy, with less pollution. For example, the floor tile is manufactured with recycled glass content, and the timber framing and wood floors are century-old recycled Douglas Fir. The insulation is recycled cellulose; interior paints are derived from plant-based chemistry (not petrochemicals). Also, the exterior walls are constructed of Faswall. In use in Europe for more than 40 years, Faswall is an insulating stackable, permanent concrete formwork composed of 85% recycled wood and 15%

⁶ www.sustainablehomemag.com

⁷ Capital Region Business Journal, "Options for Getaways". April 1, 2005

⁸ Susanka, Sarah. *Creating The Not So Big House: Insights and Ideas for the New American Home*. Taunton Press: 2002.

⁹ Design Coalition, Madison Wisconsin: www.designcoalition.org

Portland cement, with recycled foam inserts. The Arbor House complies with general guidelines for materials in Green Building. It uses products with identifiable recycled content, including postindustrial content with a preference for post consumer content. Those materials that cannot be found recycled are materials harvested from sustainably managed sources and have an independent certification (e.g., certified wood). Also, those materials that are more processed (such as the floor tiles) are also resource efficient where products manufactured with resource-efficient processes reduce energy consumption, minimize waste (recycled, recyclable and or source reduced product packaging), and reduce greenhouse gases. Arbor House also specified local material since building materials, components, and systems found locally or regionally save energy and resources in transportation to the project site. The use of salvaged material (as discussed pertaining to adaptive reuse) saves a material from disposal and renovating, repairing, restoring, or generally improves the appearance, performance, quality, functionality, or value of a product. Another consideration was incorporating durable materials that are longer lasting or are comparable to conventional products with long life expectancies. The builders of Arbor House designed it for a lifespan of 100 years, minimum¹⁰.

The Bed and Breakfast is even ecologically-conscious in its landscaping. The outdoor plantings emphasizes the use of native plants, including prairie, woodland and butterfly garden species, while avoiding the use of pesticides. This impressive inclusion reinforces Arbor House's commitment to being thoroughly sustainable.

Energy and water efficiency are two more hallmarks of Arbor House's sustainable design. It features a 95 percent efficient hot water, boiler and radiant in-floor heating, and ultra-quiet, energy-efficient ventilation for superior indoor air quality where heat-recovery ventilation system for fresh air is used in place of a bathroom fan. There are also triple-glaze, high efficient low-e windows, and water efficient faucets and fixtures. It takes advantage of its passive solar design and no mechanical air conditioning because passive cooling is accomplished via a combination of strategies: timber trellises with ivy shading the southern glazing, and window blinds elsewhere; oversized eave-to ridge ventilation; thermally massive walls; design for good cross-ventilation; preserved tree cover; and ceiling fans. The house also features high insulation levels and radiantly heated floor slabs allow a lower air temperature while still maintaining comfort.¹¹ Arbor House also is a sponsor of Wind Power in its operations at the highest level as a "Wind Power Leader"¹². By participating in a program for renewable energy, Arbor House sets an example in the area for all businesses to run efficiently while minimizing its environmental footprint.

Finally, such sustainable practices extend to Arbor House's operation as well. The owners are careful to use non-toxic and biodegradable cleaners and even unbleached organic linens and mattresses. Guests are encouraged to themselves promote sustainability during their stay when offered the following guidelines:

¹⁰ www.designcoalition.org

¹¹ www.designcoalition.org

¹² Madison Gas and Electric: www.mge.com

As a guest you can participate in using resources more efficiently by doing the following:

1 Please leave towels on the floor or in the tub to signal housekeeping that you would like a fresh towel. A towel hanging will not be changed.

2 Please turn off lights when you leave. Avoid leaving a light on all night.

3 Recycle glass bottle, aluminum cans, newspaper, magazines, cardboard and plastic (#1 & 2) in the blue bins in your room. The other wastebasket is for other trash such as tissue, paper, receipts, pizza boxes, broken glass, etc. There is also a compost bucket outside the service kitchen for fruit, plant and flower refuse.

4 To maximize comfort in the summer months: a.) Please keep windows closed during the day and the shades drawn. Open windows at night to allow in cooler air. b.) Please keep the bathroom door closed and run the exhaust fan during and after bathing to eliminate heat and humidity build-up.

5 During the winter months use the additional heat source in your room (fireplace or heater) so that you are comfortable. Please turn off the fireplace and/or turn down the thermostat when you leave.

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6 Arbor House is a smoke-free environment. There is a significant cleaning fee for violations to this policy.¹³

While these guidelines inevitably benefit the proprietor, Arbor House can be credited for at the very least educating their guests about sustainable practices when traveling. Guests can in turn apply this knowledge to other hotel stays. Arbor House contributes to a network of sustainable lodgings through its membership in the Green Hotels Association, a trade association and mail-order business with an inventory of environmental products for hotels, lodges and B&Bs. It boasts about 200 members representing more than 17,000 rooms across the United States.¹⁴ John Imes, the owner of Arbor House believes more green hotels will sprout up in the future, and not just because it's good for business: "Folks are taking the environment into consideration as part of their purchasing decisions, and people look at that in terms of travel. "It's a win-win-win, and customers appreciate that," he said.¹⁵ Imes, a seven-year Hyatt Hotel veteran stated his goal of wanting "to provide the art of hospitality in a way that's ecologically sound--in terms of the landscaping, the furnishings, the textures, the aromas, the sounds and the way the food is prepared--and still be profitable,"¹⁶ Such establishments draw attention to the opportunities the hospitality industry has, not just to improve their own efficiency, but to

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¹³ www.arbor-house.com

¹⁴ [KRTBN Knight-Ridder Tribune Business News: Environmental News Network](#). "Environmentally-Friendly Hotels Gain Favor with Guests". August 27, 2000.

¹⁵ [KRTBN Knight-Ridder Tribune Business News: Environmental News Network](#). "Environmentally-Friendly Hotels Gain Favor with Guests". August 27, 2000.

¹⁶ Earth Action Network, Inc. "Eco" is in with the inn crowd; hotels roll out the green carpet – slowly". August 1, 1994.

help affect large-scale change. According to the American Hotel and Lodging Association, on any given night about two million people are staying in one of the nation's 44,800 hotels and motels¹⁷. That creates two million opportunities to communicate environmental messages to a relatively literate, educated audience.

More significant to the impact on Madison, this hotel highlights “ecotainment” during visitors’ stays. That is, Arbor House encourages guests partake in the many natural venues of entertainment throughout the area such as local parks for bird watching and bike riding by offering free bus passes to town (5 minutes away) and usage of their mountain bikes. It is ideally located within walking distance of Lake Wingra, the UW Arboretum, and the up-and-coming Monroe Street Shopping District. Arbor House also advocates guests visiting local sites such as the Farmer’s Market, museums, and the Madison Orchestra. All suggested restaurants and businesses are locally owned and operated. This emphasis ensures that tourism dollars circulate in the local economy and promotes growth that benefits the community and city.

The Arbor House is a truly successful example of sustainable design that has a notable impact on its city. The recipients of numerous Green Design Awards the Imes’ environmental efforts have been noticed. They won the Boston Society of Architects’ prestigious “sustainable design” award and are listed in the National Green Pages, the largest annual directory of America’s leading socially and environmentally responsible businesses. The Imes and their inn were also photographed for the Money magazine article that named Madison the best place to live in the United States¹⁸. The Bed and Breakfast even markets itself as “The Environmental Inn” with rooms named after early environmentalists, Aldo Leopold, John Muir, and John Nolen. This acknowledgement conveys to guests how sustainability is extremely relevant to consumer decisions and promotes this ideal through any and all of its activities. Arbor House recognizes its role as a community leader in setting an example for environmental awareness and truly invigorates its surroundings by promoting economic activity within the region. Arbor House’s success can be measured by the many local Madisonians who suggest Arbor House to out-of-towners as a unique experience as well as a model for sustainability. One local architect expressed his appreciation for Arbor House in praising its architect, Lou Host-Jablonski, whose creation is truly beneficial to the community:

[Host-Jablonski’s] explanations for what was important, and what he was trying to do, were persuasive and valuable (Sustainability, green architecture, appropriate design for site and original structure).

The final result of this architectural project is something I have to live with every day. It’s in my own neighborhood and I appreciate the fact that it’s wonderful; I love seeing it every day. I appreciate something that is attractive and responsible to the environment and the neighborhood.¹⁹

While the Arbor House has been successfully both economically and as a model for sustainable design, this venture revealed to the owners the difficulties inherent to running

¹⁷ www.ahma.org

¹⁸ Wisconsin State Journal, “GREEN HOUSE MADISON BED AND BREAKFAST EARNS NATIONAL RECOGNITION FOR ENVIRONMENTAL AWARENESS”. March 2, 1997.

¹⁹ The Capital Times, “Commission Zeroes In On Urban Design”. May 11, 2004

such a business that may deter the proliferation of such environmental endeavors. Their project made the couple aware of how difficult it is to find a lot of "green" products in the Madison area: "We tried to find a lot of these things locally, but when we couldn't we had to look elsewhere," said Cathie Imes. "The public hasn't supported a lot of these businesses, like Glacier Paints, which was a fantastic source of non-toxic paints. The guy who owned it was an expert, but he couldn't keep a retail store open."²⁰

The Imes were forced to turn to catalogs or distributors in other Midwestern cities to find many of the organic and recycled products for the inn which interfered with their desire to keep their operation as local as possible. Some things they managed to have customized locally, like the futon stuffed with recycled plastic made at Affordable Futons of Madison, but many supplies could not be found in Madison or even in Wisconsin.

At the historic Plough building, where horses once walked through what is now the kitchen to deliver firewood, the Imes faced an entirely different set of challenges.

"In a house this old, you're constantly doing repairs," Cathie Imes said. "We'd never even built a shack before, and we're not handy."²¹ The couple also need to be prepared for questions about "the ghost people" who, as the story goes, sometimes check into the Tap Room, where a 19th century murder supposedly occurred—an unexpected consequence of adaptive reuse. "This has been no bag of gold for us," said Imes, who can remember the nights he and his wife slept at friends' homes because they booked their room for the weekend. "It's very important for us to be advocates for the sound use of resources, and the Arbor Inn is a great example of what we believe in."²² While dedication to principle can ensure commitment to and execution of particular goals, this steadfastness can prove problematic when it necessitates sacrifice. When interests compete such as a desire for profitability and a passion for sustainability, decision-making can be exceptionally difficult and this challenge may prove too great for hoteliers at large. Therefore, the Imes's example lessens but does not eliminate the burden for future sustainable businesspeople by providing footsteps in which they can follow.

In spite of minor difficulties, the mere survival of Arbor House is not as telling of its city as its accolades from the community and national organizations who hail it as "a progressive, responsible, modern business"²³. Its economic sustainability demonstrates to both consumers and other businesses that it is "possible to do well financially by doing good for the environment".²⁴ "I wanted to show people it could be done," said Imes. "People need to touch, see and experience this before they understand what sustainable development looks like."²⁵ Madison embraces Arbor House as an example of how the city values sustainability and it is a landmark of which the city is truly proud.

²⁰ Wisconsin State Journal, "GREEN HOUSE MADISON BED AND BREAKFAST EARNS NATIONAL RECOGNITION FOR ENVIRONMENTAL AWARENESS". March 2, 1997.

²¹ Wisconsin State Journal, "GREEN HOUSE MADISON BED AND BREAKFAST EARNS NATIONAL RECOGNITION FOR ENVIRONMENTAL AWARENESS". March 2, 1997.

²² The Milwaukee Journal Sentinel. "Couple cater to environment in historic Madison inn Recycled material, natural bedding fill Arbor House". December 25, 1996.

²³ Wisconsin State Journal, "GREEN HOUSE MADISON BED AND BREAKFAST EARNS NATIONAL RECOGNITION FOR ENVIRONMENTAL AWARENESS". March 2, 1997.

²⁴ Wisconsin State Journal, "CITY RIGHT TO PUSH GREEN SAM'S CLUB ; BUILDING "GREEN" NEED NOT COST COMPANIES MONEY. IN FACT, IT CAN INCREASE PRODUCTIVITY AND SAVE MONEY OVER TIME" March 18, 2002

²⁵ [KRTBN Knight-Ridder Tribune Business News: Environmental News Network](#) . "Environmentally-Friendly Hotels Gain Favor with Guests". August 27, 2000.
