

The Cleveland Eco-Village Case Study:

Connecting Green Affordable Housing and City Planning

Kelly A. Lowry, M.R.P.

Combining renovation with innovation, the Cleveland Eco-Village has dealt with the two distinct needs of an urban community: affordable housing and sustainable development. Green building emerged as their nexus: as a way to provide mass amounts of urban housing in a sustainable, inexpensive, and eco-friendly manner.

In Cleveland, Ohio during the mid 1990s, a group of inspired individuals began laying the groundwork for an inner-city infill and redevelopment project which would follow the principles of green building. The project, known as the Cleveland Eco-Village, was located in West Cleveland's Detroit Shoreway neighborhood and was initiated by a partnership between EcoCity Cleveland, a non-profit think-tank, and Detroit Shoreway, a community development corporation.

The effort to build the Cleveland Eco-Village occurred concurrently with a large-scale effort to redevelop many of Cleveland's poorest neighborhoods. The Cleveland-area environmental and citizen groups, which were under tremendous pressure to produce as many housing units as possible, began to question the sustainability of conventional-style development. In particular, they realized the need to provide for energy-efficient housing that would allow residents to save on utility bills. Additionally, the Regional Environmental Priorities Project (REPP), an initiative of the Case Western Reserve University, had ranked suburban sprawl and out-migration from the urban core as the most serious environmental

problem facing Northeast Ohio. This issue placed the Detroit Shoreway neighborhood in prime candidacy for a neighborhood revitalization effort that could both save the neighborhood and address the greater regional issues outlined by REPP (Gillespie 2003).

EcoCity Cleveland began researching the feasibility of an Eco-Village in Cleveland as a tool to reduce sprawl and attract people back into the city by creating a healthy, attractive, urban neighborhood. Dr. Wendy Kellogg, an associate professor at Cleveland State University, was hired to conduct the study (Gillespie 2003).

To determine the best site for the Eco-Village, EcoCity Cleveland, along with Wendy Kellogg, met with a variety of stakeholders including: staff of non-profit

Kelly A. Lowry, who holds a Master's degree in City and Regional Planning from the University of North Carolina, Chapel Hill, is currently working with the Development Corporation and Bryan Bell to address the housing, community, and economic development issues of North Carolina's migrant farm worker community. In the fall of 2005, Kelly will begin work on a Master's degree in Architecture at North Carolina State University.

housing organizations, staff of the city's departments of Planning and Community Development, neighborhood development funding organizations, architects, and transit specialists. The group sought to determine which Cleveland neighborhood would be the best location for the development. Kellogg developed a survey that was sent out to all of the neighborhood-based development groups in the city, inviting groups to nominate sites for the Eco-Village. With a long list of possible sites and neighborhood partners, EcoCity Cleveland used the following criteria to narrow down the choices:

- proximity to transit (presence of Regional Transit Authority Rapid station or bus lines or potential for bike/pedestrian facilities);
- presence of vacant land for development;
- diversity of population (percent minority, income levels, education levels);
- neighborhood economic status (moderate income, need for employment, small business/commercial areas);
- existing community resources (presence of active organizations and churches, health services, recreational programs, funding for programs like the Federal Empowerment Zone);
- physical characteristics (condition of housing stock, affordability of housing, presence of brownfields needing environmental remediation);
- environmental activities (for example, participation in lead-abatement programs, urban gardening, green space planning);
- community development organization (technical capacity, including quality of past projects and the ability to be a partner in an Eco-Village project); and
- interest in an Eco-Village among the community development organization, other neighborhood institutions, and residents.

EcoCity Cleveland selected the area of the Detroit Shoreway neighborhood near W. 65th and Lorain Avenue because of its “potential for transit-oriented development, a vibrant mix of residential and commercial

uses, and a combination of new development and rehab of existing buildings” (Gillespie 2003). Furthermore, Detroit Shoreway Community Development Organization had a reputation for being one of the most capable non-profit groups in the city. However, before any steps could be taken, EcoCity Cleveland sought to gain broad-based acceptance throughout the community for the Eco-Village.

The first few months of the project planning process were spent with staff of Detroit Shoreway. The organization's staff was already very familiar with its focus neighborhood, as they had been working to introduce the project to block clubs, Ward 17 Councilman Timothy Melena, local church leaders, and other neighborhood organizations. EcoCity Cleveland and Detroit Shoreway received a positive response from the public, so they decided to sign a formal partnership agreement and begin looking for funding. EcoCity Cleveland obtained a grant from the Katherine and Lee Chilcote Foundation for development of an Eco-Village plan, and Detroit Shoreway received a grant from the city's Cityworks program. The partners hired City Architecture—a local planning and architecture firm specializing in environmentally-sensitive design—to create the development design. Throughout the development of the Eco-Village, the community held various meetings that helped the project to achieve positive and inclusive change.

The one major obstacle was that the Eco-Village was planned to span within a quarter mile radius of a Rapid Transit stop in the neighborhood. The transit stop, at the time of the planning process for the Eco-Village, was deteriorating and widely known as a dangerous area within the neighborhood. Early in the development of the Eco-Village, the city announced the imminent closing of the neighborhood's transit stop. The announcement to close the station resulted in a strong outcry by residents and neighborhood organizations. Officials responded by keeping the station open.



Figure 1. Cleveland Eco-Village Rapid Transit Station. *Photo courtesy of Kelly Lowry.*

Today, the Eco-Village features twenty of Cleveland's first green townhomes, a four million dollar rapid transit station with green features (see Figure 1), a straw bale garden shed on the community garden site, two independently-built green homes, a designated footpath that weaves throughout, Cleveland's first school to incorporate solar panels, and large scale green space improvements (see Figure 2). The project has attracted assistance from the local U.S. Green Building Council (USGBC) affiliate, the Cleveland GBC, and the U.S. EPA. Construction has been supported by the City of Cleveland and other sources.

Green Rehab in Eco-Village

The Eco-Village stands "as an opportunity to realize the promise of urban life in the most ecological way possible" (Gillespie 2003). Oregon Housing and Community Services' "Green Building Source Guide" points out that in a development that aims to implement green

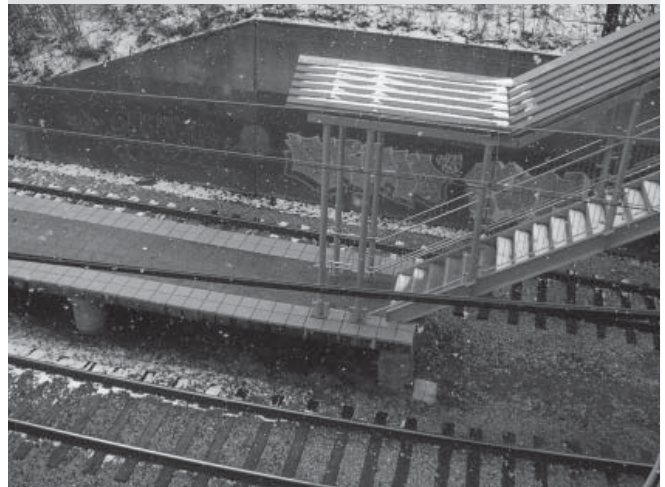


Figure 2. From top: community garden with straw-bale garden shed, stair access to transit platform, and newly constructed green building transit station. *Photos courtesy of Kelly Lowry.*

principles, “a team member should be available to add a sustainable perspective to relevant discussions and decisions” (Barnett 2002). Jim LaRue, local residential green building consultant with the Green Building Coalition has served that role for the Eco-Village since they first began developing housing, both new and rehab. He has conducted research for the Eco-Village, located contractors and suppliers that shared their vision, and has evaluated products and services of others who have come forward claiming to be green (LaRue 2004).

LaRue served as consultant on one particularly interesting project in the Eco-Village: the Ecovation, or green rehab of a drafty, dark, cramped 1916 bungalow. The Cleveland Housing Network, a low-to-moderate income housing advocacy organization, purchased the house with the goal of renovating it within the context laid out by the Eco-Village: “in an environmentally responsible way.”

The renovation focused first on making the 1,172 square-foot house more energy efficient with the use of cellulose insulation, upgraded windows, and low-VOC foam to fill in air leaks. Duct work in the exterior walls was moved to the interior walls of the house to cut down on heating and cooling loss. The square footage, insulation levels, and windows were all calculated carefully to determine the appropriate size energy efficient HVAC system, a measure that is often overlooked in conventional building. The HVAC unit, which is four times more efficient than the standard 20-year-old ones, is a sealed combustion design that brings in fresh air from outside, an important feature in a tightly sealed house. A tubular skylight, which does not produce heat, was placed above the stairwell, and the wall was opened up halfway to create a light-well to take advantage of day-lighting.

The work on the interior made use of recycled wood from inside the house, as well other new recycled products. An office or spare bedroom was carpeted with car-

pet squares from one of two companies in the country that take back their own product and re-use all of it. The tile in the bathroom is composed of more than 50 percent recycled material, and the new drywall installed is composed of paper that is 98 percent recycled and gypsum that is 100 percent recaptured. The kitchen cabinetry is composed of wheat straw and sunflower seed husks, a strong alternative to particleboard that contains formaldehyde. The cabinets are covered with a maple veneer derived from hardwood certified by the Forestry Stewardship Council. The water-efficient toilet, which was donated, only uses 1.4 gallons per flush. The kitchen sink is made from dust left over from the production of other granite products. The rear detached garage, which was unfixable, was rebuilt with a south-facing oriented roof for future possibility of photovoltaic panels (Taxel 2004).

The buyer of the Ecovation will have access to assistance through the Cleveland Housing Network’s Homeward program in the form of tax abatement and a reduced interest rate. The relatively low prices of the Ecovation house (\$135,000) and the Eco-Village townhouses (roughly \$200,000) are intended to lead to economic diversification of the area.

Spreading the Word

Eco-Village coordinators have been walking door-to-door to share information about the new green additions in order to help those in the neighborhood understand how they could apply green building principles to their own homes. LaRue believes that “once [the residents] learn about the energy savings and health benefits, they will be more interested. We will be focusing on those families who are just above the income level that would make them eligible for various programs.” There is talk of collective purchasing of building materials and services to make green building endeavors less costly. “Our goal is to help folks prioritize work so they are getting the most for the money they spend” (LaRue 2004). Resident Kevin Borowiak believes that due to the resi-

dent meetings, the signage on the buildings, the press, and word of mouth communication, approximately 85 percent to 100 percent of the residents of the area are aware of the Eco-Village (Borowiak 2004). According to Mandy Metcalf, Eco-Village coordinator, there are increasingly “more people in the neighborhood who not only know about the Eco-Village but who are really excited about environmental issues—meaning both new people who have moved in and existing residents who have been inspired” (Metcalf 2004).

The Eco-Village is not without concerns. LaRue explains that “one of the biggest headaches for existing residents is that building new housing and renovating old raises property values, which raises taxes. If you are paying more taxes, then you have less money to spend on maintaining and improving your home” (LaRue 2004). However, the Eco-Village, as a sustainable redevelopment tool, does have an environmental edge which can be used to create and maintain affordability through the greening of housing, perhaps making up for the market shift that is bound to occur. The words of Greg Watson, executive director of the Dudley Street Neighborhood Initiative in Roxbury, Massachusetts, ring true for a project like the Cleveland Eco-Village: “If you cut your home heating bill 30 to 40 percent, that’s money in your pocket, and that’s a form of economic development. That’s a very powerful concept. That’s one that you have some control over...Economic development certainly means jobs and job creation, but if you can also find ways to cut your costs of living, especially around energy and food, in many respects that’s almost like getting a raise” (Pitcoff 1999).

Works Cited

- Borowiak, Kevin, Eco-Village resident. Email Interview. March 26 – April 7, 2004.
- Gillespie, Manda. “Faith in Real Cities.” U.S. Green Building Council’s Green Build Conference paper. November 12-15, 2003.
- Gilman, Diane and Robert, eds. *Eco-Villages and Sustainable Communities*. Context Institute, 1991.
- LaRue, Jim, Residential Green Building Consultant. Email Interview. March 26 – April 6, 2004.
- Metcalf, Mandy, Eco-Village Coordinator. Personal Interview. 12 March 2004.
- Pitcoff, Winton. “Sustaining Community Power.” *Shelterforce*. Issue #103, January/February 1999.
- Taxel, Laura Faye. “This Old House Goes Green.” *The Housemender*. April, 2004.
- Barnett, Rick. “Green Building Source Guide.” Oregon Housing and Community Services. 2002. Available online at www.hcs.state.or.us/data_research/greenbuilding/pdfs/greenbuildingsourceguide.pdf, accessed May 2005.