

Sustainable Sites in the Pacific Northwest

Although many residential developers include sustainable landscape features in their projects in order to achieve LEED certification, the benefits of green sites reach far beyond this objective.

SITE SELECTION IS THE FIRST step toward building community. Urban redevelopments and infill projects take advantage of existing infrastructure and help infuse new life into underused areas. Often, however, urban projects neglect the intrinsic human need to be connected to nature. Sustainable sites can reestablish this critical link.

Despite the persistent idea that sustainable site strategies cost more than traditional ones, green design actually can save money upfront. This was the case at North Main Village, a key component of Milwaukie, Oregon's downtown revitalization effort. As part of this \$14 million development—which includes apartments, condominiums, townhouses, and retail space—a green demonstration street, a rainwater conveyance and treatment system, and a courtyard in the center of a parking area helped create an inviting space in the city's core.

A study to analyze the various ways to manage site stormwater discovered that conventional hard-surface methods of directing water through pipes were very costly. While maximizing every possible green feature on the site also was

expensive, a combination of some conventional hard-surface techniques mixed with green options, such as stormwater treatment swales, was the most cost-effective choice. By using natural swales and the most appropriate sustainable landscaping features rather than traditional piping, the project saved \$13,220.

Leveraging green spaces for residents through the stormwater management features was an added benefit. When the landscape is integrated into the building's architecture and site layout, people report they derive more enjoyment from their day-to-day existence.

The Overton Condominiums project team in Portland, Oregon, decided to pursue Leadership in Energy and Environmental Design (LEED) Gold certification from the U.S. Green Building Council. The 115,000-square-foot (10,700-sq-m) development covers the entire lot, requiring out-of-the-box thinking on how to create a sustainable landscape. The solution

was native-plant ecoroofs, private and community rooftop gardens, and a community vegetable garden above the penthouse level that maximizes occupants' outdoor recreation opportunities, enhances resident interaction, and provides views of nature.

In Seattle, the Borealis Apartments include an array of sustainable features as well as a green screen on the building facade. The six-story, 53-unit workforce housing project is in a prominent location in the South Lake Union district, across from a park and at the intersection of two traffic arterials. The landscaped wall provides shade for south-facing units and helps screen rain and wind. Moreover, it provides health benefits for residents: the plant material acts as an air filtration system. It also serves as a noise buffer for the units perched directly above one of the arterial streets.

In Portland, a mixed-use brown-field redevelopment called B-33: An Urban Crossroads sits on a former



A rooftop courtyard includes a native-plant ecoroof and a public gathering place for tenants of the Overton Condominiums in Portland, Oregon.

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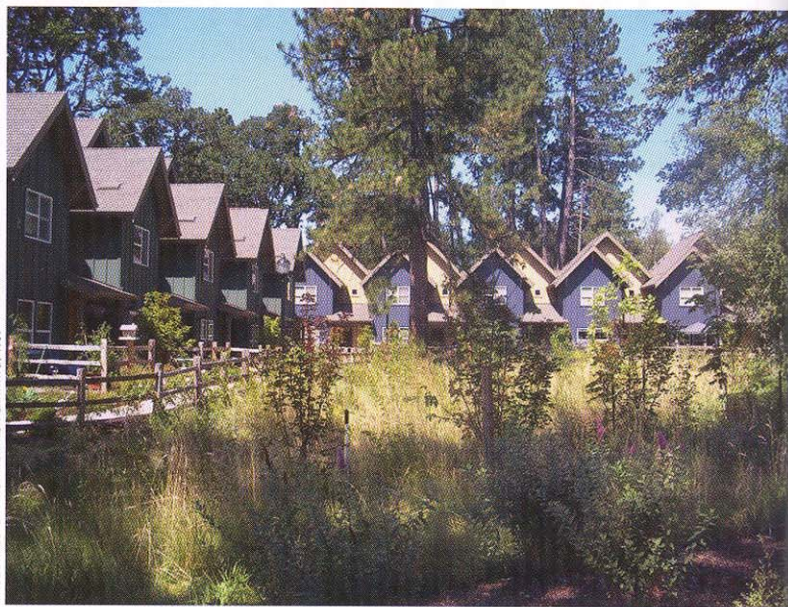
Albina Fuel site. Stormwater treatment was provided with at-grade flow-through planters that look like swales but have impervious bottoms to prevent potential migration of toxins. In addition, flow-through planters were placed at the courtyard levels atop the parking garage to capture and treat stormwater runoff from the adjacent roofs.

Native plants and sustainable landscape maintenance help protect health by minimizing the need for fertilizers and herbicides. Integrated pest management programs further reduce exposure to toxic chemicals to safeguard air quality. In addition, native plants create habitat for birds, butterflies, and small animals, which animate the areas around residential dwellings.

Oleson Woods, a \$5.5 million development situated in three

wooded acres (1.2 ha) in a growing suburb of Portland, includes 32 townhouse and flat-style units geared toward low- and moderate-income families. The project preserved a grove of oak trees and restored a degraded wetland, using these elements as a guide for the development's design.

Although the wetland is protected from the surrounding area only by a low split-rail fence, it is posted as a natural habitat, and the residents have shown respect for the wildlife area. A resident services coordinator provides after-school activities for children, including wetlands education, the building of birdhouses, and tours. The site fosters an integrated community through access to a playground, benches, and walking trails through a wooded area. With multiple opportunities to mingle,




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A restored wetland and a grove of existing trees provide connections to nature at Oleson Woods, a three-acre (1.2-ha) development in a Portland, Oregon, suburb.

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A green screen on the building facade at the Borealis Apartments, a workforce housing project in the South Lake Union district of Seattle, Washington, brings nature to an urban environment.

residents have become acquainted and watch out for each other, which has helped deter crime, create a safer environment, and give people a sense of inclusion.


Clara Vista Townhomes in Portland uses a community garden to encourage interaction and nurture camaraderie. Further, the garden is part of a grass-roots empowerment effort as residents develop self-reliance through growing their own food and selling it at a farmers' market.

At its core, sustainable design is about education and understanding. In order for sustainable systems to be maintainable over time, the knowledge being transferred needs to be articulated in a way that reaches every level of the project. This includes not only the development team, the lending community, and property managers, but also maintenance personnel, building operators, and tenants. Once information is passed down on how sustainable systems work, how to maintain them, and how

to participate in them, it becomes second nature. As a result, people not only become involved with their immediate surroundings, but many also develop a new appreciation for the broader environment.

Sustainable sites and creative use of outdoor space serve to meet a variety of resident needs, help developers strengthen their project's appeal, and become the catalyst for changing the way people interact with their world. **UL**

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