

cleaning up kansas city

For its part, the U.S. Environmental Protection Agency (EPA) also has encouraged sustainable design projects on brownfield sites. At its new Kansas City Science & Technology Center in Kansas, which has earned a LEED Gold rating, EPA chose a brownfield site with the express purpose of cleaning and revitalizing the surrounding area. The long, narrow site previously had been used as a service center for Denton, Texas-based Peterbilt Motors Co., and EPA assumed contamination was likely. After the requisite environmental testing found minimal oil contamination, 13 feet (4 m) of fill was removed, and the site was prepared for construction.

"A lot of people are put off by brownfields because of location," says Leslye Werner, a chemist at the Kansas City Science & Technology Center. "But it can revitalize an area, and that's why we're here. Don't put it off just because of location."

Among its sustainable design features, the center features a rooftop rainwater collection system that directs water from the roof into pipes leading into a 1,500-gallon (5678-l) underground sediment tank near the building's mechanical room. From there, water is pumped out for toilet flushing and landscape faucets. Based on Kansas City's average annual rainfall, the rainwater collection system is expected to supply approximately 763,000 gallons (2.8 million l) of water per year. In addition, low-flow plumbing fixtures and water-efficient landscaping minimize water use.



building on brownfields

Although brownfield sites require advance planning and testing and careful mitigation, the benefits can far outweigh the costs, especially in terms of revitalizing communities and bolstering local economies. The LEED reference guide outlines several steps to assist in the brownfield redevelopment process, including the following:

- Gain community support by highlighting the environmental, economic and community-related benefits of brownfield redevelopment.
- Negotiate with local municipalities and landowners for below-market purchase prices for brownfields.
- Work with remediation experts to develop a master plan for site remediation.
- Test for toxicity and hazardous pollution levels on the proposed site.
- Clean the site using technologies that have minimal disruption of natural features above ground and underground.
- Consider in-situ remediation schemes that treat contaminants in place instead of off-site.
- Continue to monitor the site to ensure that contamination problems do not return after remediation.

"One of the most important LEED concepts is that we're trying to slow or stop [environmental] damage," Boecker says. "This credit is absolutely about regeneration, about leaving the site better than you found it." ■

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