



# Green Infrastructure & Stormwater Management CASE STUDY

---

## Westminster Place at Parkesburg

**Location:** Parkesburg, Chester County, PA

**Client:** Housing Development Corporation of Lancaster

**Design Firm(s):** KMS Design Group, LLC, The Major Group

**Landscape architect/Project contact:** Adam A. Soplee, RLA, ASLA, AICP, LEED AP

**Email:** [asuplee@kmsdesigngroup.com](mailto:asuplee@kmsdesigngroup.com)

**ASLA Chapter:** Pennsylvania/Delaware

### Project Specifications

**Project Description:** The project was conceived by a private non-profit housing agency to provide quality, affordable rental housing for independent seniors. The site was an abandoned forge which made metal parts and castings for locomotives. The small community, which wanted to see the derelict site restored, worked with the planner and developer to meld this 72-apartment building into the community fabric. Designed to meet the "Green Communities" guidelines, the site features native plant materials in all of the stormwater elements including rain gardens, vegetated swales, porous pavements and sub-surface storage/infiltration beds. Of particular significance, the site was designed without grass areas, except one small area designated for the residents' dogs.

#### Project Type:

Multifamily residential

Part of a redevelopment project

**Design features:** Bioretention facility, rain garden, bioswale, porous pavers, curb cuts, and a sub-surface storage/stone-filled storage bed.

#### This project was designed to meet the following specific requirements or mandates:

Local ordinance, to meet funding criteria, developer/client preference, Green Communities Guidelines

**Impervious area managed:** 1 acre to 5 acres

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** less than 5,000 sq/ft

**The regulatory environment and regulator was** supportive of the project.

**Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements?** Yes. The client selected the design team based on LEED credentials. KMS, with LEED professionals lead the site design team, working with the community's boards to reduce impacts on stormwater and community systems, to take advantage old public transportation networks and walkable community amenities, such as shopping, places of worship, and community services. The project was designed to meet the "Green Communities" criteria.

## Cost & Jobs Analysis

**Estimated Cost of Stormwater Project:** \$10,000-\$50,000 (Public funding: Federal, private foundations)

**Related Information:** Not available

**Was a green vs. grey cost analysis performed?** No

### **Cost impact of conserving green/open space to the overall costs of the site**

**design/development project:** The green space was designed within the requirements of the local zoning and land development ordinances. The client had hoped to increase the amount of green space, but local ordinance requirements for parking, etc. would not permit additional green space.

**Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)?** Slightly reduced costs (1-9% savings). The use of innovative stormwater management/storage systems permitted the construction of additional residences which changed the pro forma of the project.

**Number of jobs created:** 50 temporary (construction), 5 permanent admin/maint staff; additional through local retail within the project

### **Job hours devoted to project:**

Planning and Design: 2,000  
Construction: Unknown  
Annual Maintenance: Unknown

## Performance Measures

**Stormwater reduction performance analysis:**  
100%

**Community & economic benefits that have resulted from the project:** The major community impact was to rehabilitate a derelict site and return it to the tax rolls. The new development was thoroughly integrated into the community fabric. One amenity provided was an accessible trail through the property to allow access to a nearby community park. Since the project was completed, several neighboring property owners have upgraded their building facades. The community has also made major improvements to the community park which abuts the site.

### **Project Recognition**

2009 Chester County Conservation District "Constructed Project of the Year"

### **Additional Information**

**Links to images:** <http://hdcweb.com/westminster-place-at-parkesburg-named-construction-site-of-the-year-for-2009/>

KMS was the lead consultant for all things related to the site - from initial planning to preparation of final construction documents and specifications.