

These guidelines are meant to supplement
the

***Rhode Island
Conservation Development
Manual: A Ten-Step Process
for Planning and Design of
Creative Development
Projects***

by the DEM Sustainable Watersheds Office

The following design guidelines are intended to illustrate some basic open space preservation principles and to show plans from actual sites.

How These Sketch Plans Evolved

These conservation subdivision studies illustrate the design principles behind Pennsylvania's statewide planning program *Growing Greener: Conservation By Design*. This program, created to help improve local development patterns, is a partnership between the Pennsylvania Department of Conservation and Natural Resources; the Governor's Center for Local Government Services; Natural Lands Trust, a regional land conservancy located in Media, Pennsylvania; and an advisory committee comprised of officials from state and local agencies including the Pennsylvania Environmental Council; The Pennsylvania State University Cooperative Extension, and other non-profits and the private sector. Since its inception in 1996, Natural Lands Trust staff and program partners have worked with communities to show them how to incorporate parks and conservation lands into the design of residential developments through a new generation of municipal open space plans, zoning standards and subdivision requirements.

The sketch plans and open space preservation guidelines are courtesy of the Natural Lands Trust:

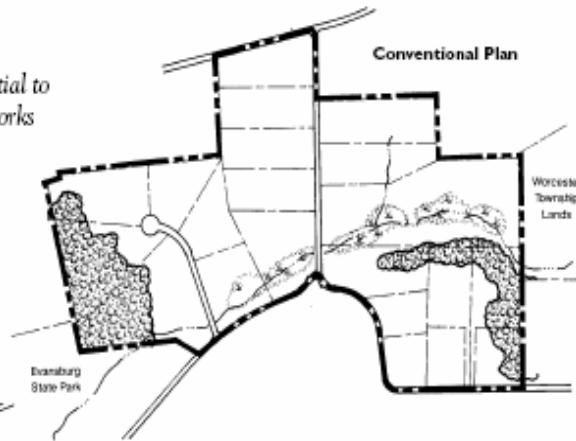
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Evansburg Area

Conservation Design Illustrates the Potential to Create Interconnected Open Space Networks

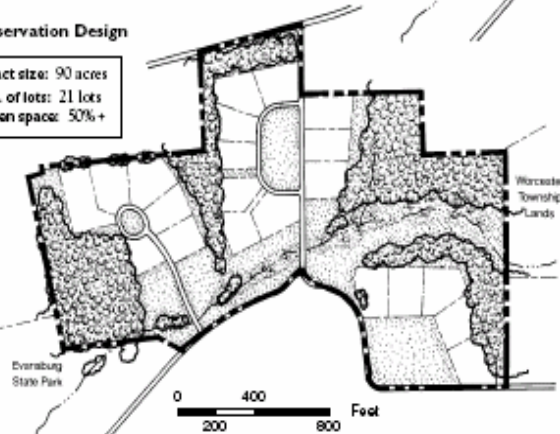
Worcester Township, Montgomery County

After seeing an early version of the Growing Greener slide presentation at Temple University, several supervisors from Worcester Township asked Natural Lands Trust staff to visit a property proposed for complete coverage by three-acre lots and recommend an alternative layout that would conserve significant open space. Their concern had been heightened by the fact that this property adjoined not only a parcel of township land



Conservation Design

Tract size: 90 acres
No. of lots: 21 lots
Open space: 50%+



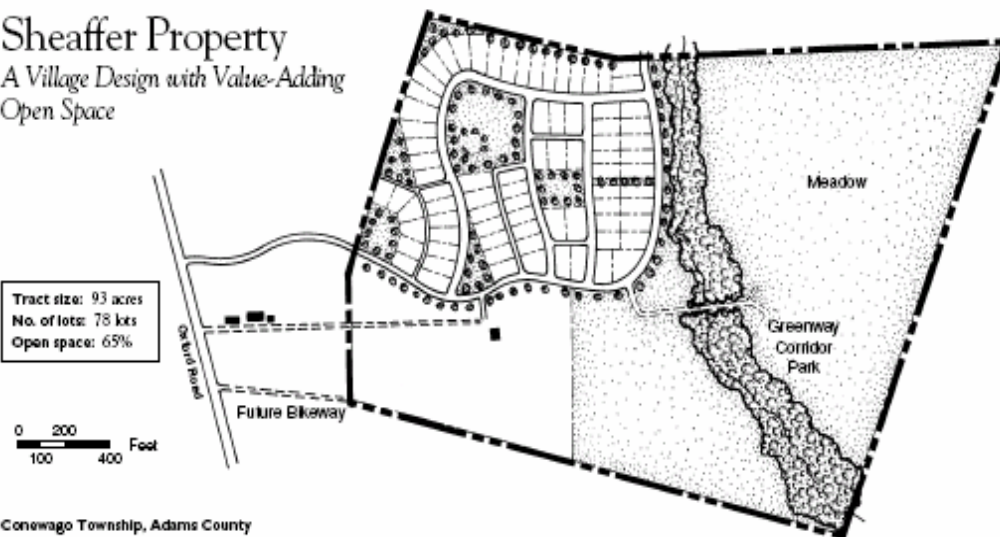
intended for future park development, but also abutted the Evansburg State Forest. Moreover, a limestone stream noted for its trout fishery flowed through the property and essentially connected the township land with the state forest. After visiting the property and evaluating the importance of the woodland habitat (which was closely associated with the stream valley tributaries), the design solution practically suggested itself. All of the forested areas were "designed around", in addition to reserving a "foreground meadow" in a highly visible farm field—which was an important element in conserving the community's rural character. The possibility of a trail linking the two public landholdings remains a distinct possibility. No further action on the property has yet been taken by the owner who is considering several conservation options.



Sheaffer Property

A Village Design with Value-Adding Open Space

Tract size: 93 acres
No. of lots: 78 lots
Open space: 65%



Conewago Township, Adams County

This design was commissioned by a realtor/developer who recognized he needed assistance in devising a plan that would achieve his goal of creating a distinctive neighborhood which would corner the local market for homes built in a neighborhood with a special sense of community. With water and sewer availability, lot sizes could easily be reduced to the village scale, enabling the development "footprint" to be about one-quarter of what it would otherwise have been. In addition to conserving value-adding open space that will increase marketability and boost sales, this approach cuts street construction and site grading costs by more than

half. (In another similarly-sized development of village lots, the author and site designer slashed grading costs by more than 80% simply by designing with the terrain and scraping only half of the land area.) The major loop road serving this development is largely "single-loaded" (homes on one side only) to maintain the open feel of the property, which is critical during the sales phase. The original brick farmhouse is sited to form "terminal vistas" from three different directions, and the strategic use of back lanes (alleys) enables 16 homes to front directly onto neighborhood greens with no street frontage per se. Very progressive ordinances permit such design innovations,

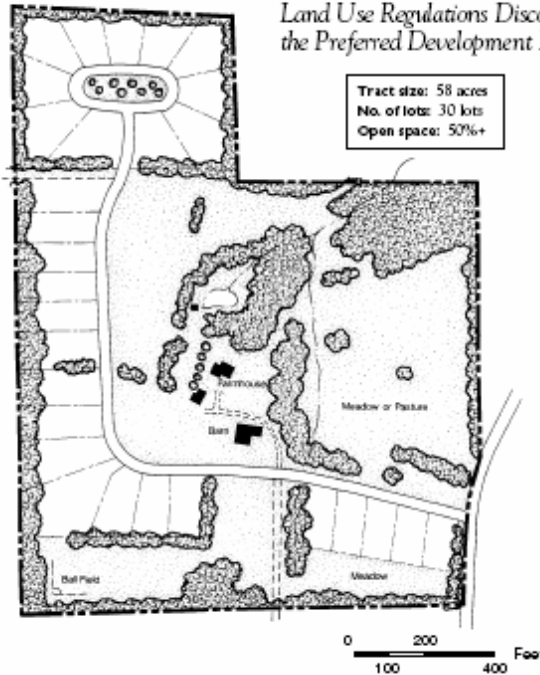
with officials recognizing that fire access is easily achieved by pulling hoses across the modest open space from the street, or through rear access drives (which most developments fail to provide at all).

For further information about this design approach, see Aardt, Randall, Crosswalk, Harvie, Village, Town Design Characteristics of Traditional Neighborhood, Old and New. Chicago: American Planning Association, Planning Advisory Service Report No. 457/485, 1999.



Blosinski Property

*A Community Discovers That Its
Land Use Regulations Discourage
the Preferred Development Plan*



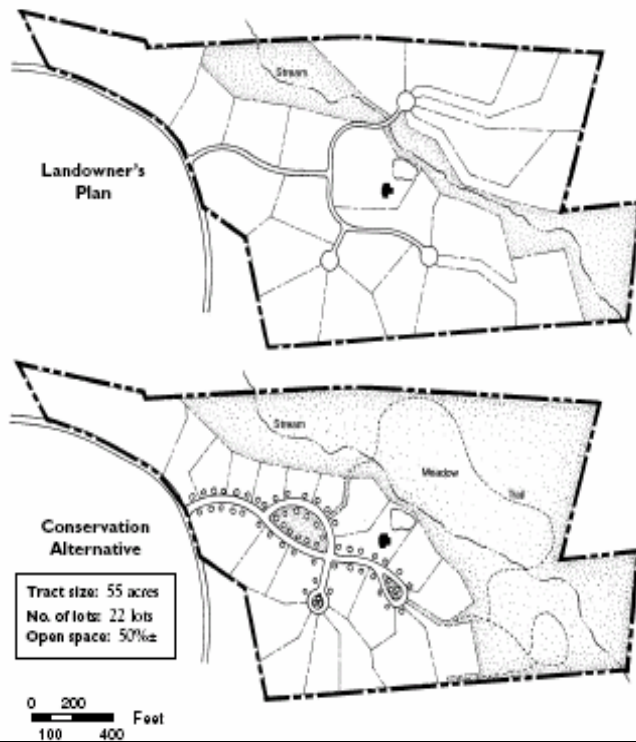
Edgmont Township, Delaware County

This redesign was requested by the township manager, who was deeply interested in introducing the Growing Greener principles to her community. Although the landowner consented to this demonstration exercise, he expressed no particular preference for a layout that would protect the essential features of his property, stating at one point that he did not care what happened to the place after he sold it. The design took advantage of the several hedgerows on the property, using them to separate distinctive neighborhoods, and to separate yards from adjacent open space. However, by far the most salient aspect of the design involved its retention of the original stone farmhouse and barn (both in good structural condition), surrounded by meadows, pastures, and locust groves. The intention was to create a very high-value "conservancy lot" to be purchased by a gentleman farmer who might enclose his property with a white board fence and bring horses back onto the land. The principal (southern) view from the farmhouse, past the barn, was also to have been protected, as noted on the accompanying plan. Except for a dozen homes centered around a neighborhood green, all of the lots were situated to face onto very attractive major open space (and nine of them were also to enjoy backyard open space views as well). Unfortunately, the developer simply wanted to divide the land into large suburban lots, and was not interested in discussing alternative layouts. In the absence of any strong municipal regulations actively discouraging such land-consuming practices (as through the Growing Greener density disincentives applied to conventional plans), communities remain impotent in issues involving the pattern of future development and its impact upon their diminishing open space and rural character.



Schultz Property

A Redesign Emphasizes the Importance of Ordinance Standards for Open Space



London Britain Township, Chester County

This design was tendered to a speculative landowner who complained to Natural Lands Trust about the difficulties he was experiencing with a Planning Commission he said was not impressed with his submission, which he described as containing substantial open space. The drawing he subsequently sent to the Trust for its informal review, however, missed significant opportunities to site homes with lesser impact upon the landscape and natural resources. In fact, its extensive street system, long driveways, and needless stream crossing deeply fragmented the resource areas and scattered the house sites across almost the entire property. The alternative layout was prepared by the Trust to show the landowner how the same number of homes could be more sensitively arranged to both enjoy highly marketable views of protected open space and to better protect the property's special features. However, by this point in his interactions with local officials, he was unwilling to consider changes to his initial plan. Township officials were pleased with the alternative layout but were unable to influence the applicant to submit a conservation design with less sprawling lots, because their existing ordinances did allow large-lot layouts, albeit with certain dimensional requirements not met on the landowner's plan. Precisely because the original proposal did not fully comply with those existing ordinances, that plan was not approved. The landowner neither challenged the Township's position nor submitted a revised plan. This unsettling and unsuccessful experience convinced officials they needed to restructure their codes so they would be able in the future to actively discourage proposals with inadequate or highly fragmented open space, and more effectively persuade applicants to follow the conservation design approach. They accomplished this restructuring over the subsequent fifteen months.



WeatherstoneSM

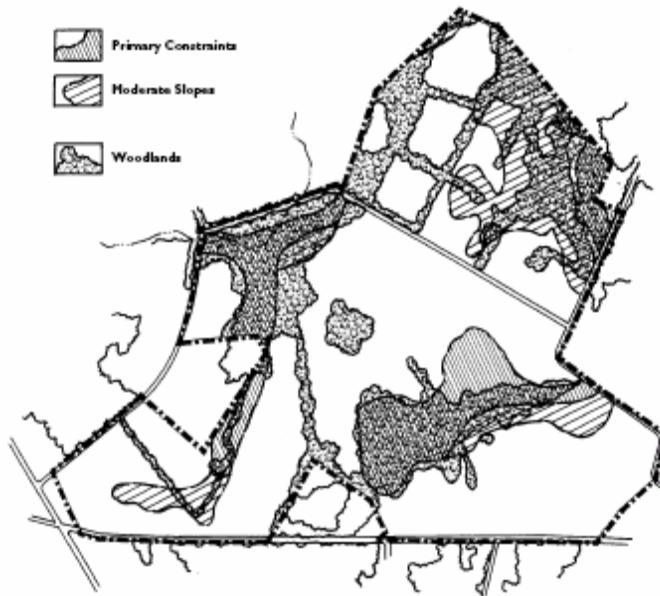
Village Design Respects a Township's Conservation Lands Map

West Vincent Township, Chester County

This large 300-acre parcel is located at Ludwig's Corner, a major intersection of two state highways (Routes 100 and 401) in West Vincent Township, Chester County.

This development by the Hankin Group of Exton, Pennsylvania, is important for several reasons. First, the extensive conservation lands (totaling 195 acres, or more than 65% of the total tract area) were laid out with reference to the Township's Map of Potential Conservation Lands. This map, which is a key element of the Growing Greener conservation planning process, identifies both Primary Conservation Areas (unbuildable wetlands, floodplains, and steep slopes) plus conservation opportunities on significant portions of the remaining developable acreage.

The Township map was originally created by Natural Lands Trust and Castle Valley Associates, Doylestown, PA to demonstrate the four-step conservation design process. Weatherstone assists the municipality in achieving its comprehensive, long-range conservation goal of securing protection of a township-wide network of open space. This open space is being used for a variety of approved purposes, including agricultural production, grazing, forest habitat, and both active and passive recreation (including acreage dedicated to the municipality). Equally important, all of Weatherstone's development areas are located in those parts of the property that were indicated on the community's maps as appropriate for such uses.

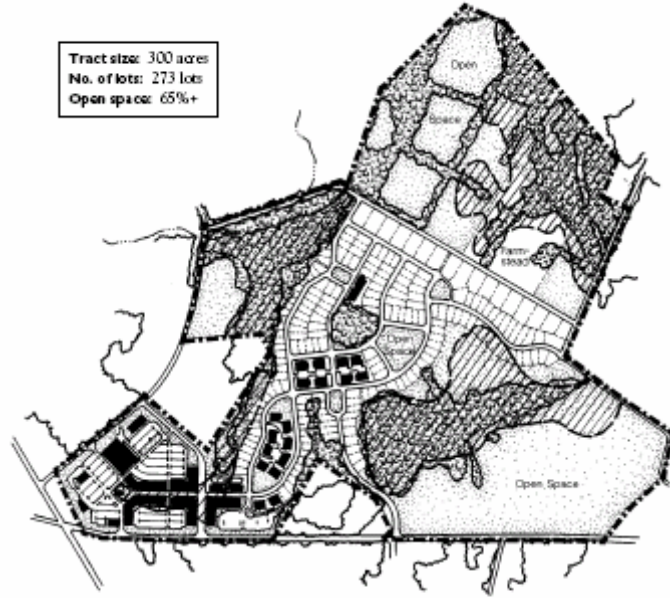


Another notable aspect of this landmark development is its recharge of groundwater supplies through the use of spray irrigation (fully-treated wastewater applied to conservation lands) and stormwater management techniques featuring infiltration measures rather than employing the more conventional "catch-and-release" approach that does little or nothing to replenish the underlying aquifer. The project's advanced stormwater management design also filters discharges to the sensitive headwaters streams emanating on the property.

The plan reflects the Hankin Group's assemblage of a team of talented designers to carry out the initial village concept. From a development perspective, *Weatbentone* is noteworthy for blending different but compatible land uses, including a mixture of 273 single-family and attached residential units, 240,000 sq. ft. of retail and office space, and a new branch of the county library system.

This property carried a long history of controversy and several development scenarios were put forth over the years. Credit goes to the Township Supervisors who, faced with inevitable development, approved a plan that upholds high standards for conservation and development in their community.

Tract size: 300 acres
No. of lots: 273 lots
Open space: 65%+



0 800 1600
400 Foot

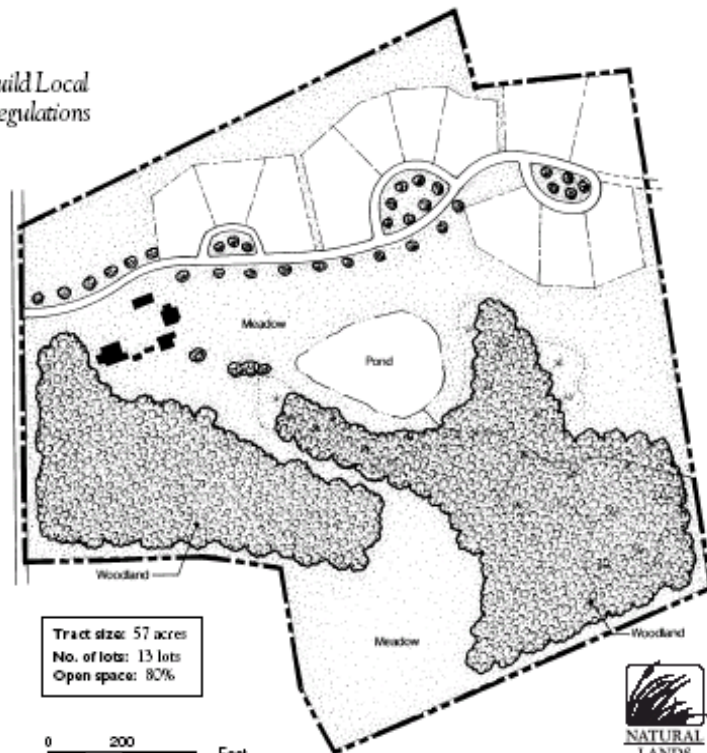


Frankel Property

A Conservation Design Helps Build Local Support for Flexible Land Use Regulations

Honey Brook Township, Chester County

The veterinarian who lived on this property requested design assistance from Natural Lands Trust while its staff was helping Township officials draft improved language for their new zoning ordinance. This landowner welcomed the opportunity to create a dozen houselots on his land in a way that would minimize visual and environmental impacts, as well as keeping development costs down. The layout was accomplished in an elegant "single-loaded" fashion (with homes on one side of the street only) to preserve open space views both front and back from most of the houses. Additional variety was provided by two crescents where road widths could be minimized by designating them as private common driveways. This landowner and others like him voiced their support for the proposed zoning and subdivision ordinance changes, which are currently undergoing adoption.



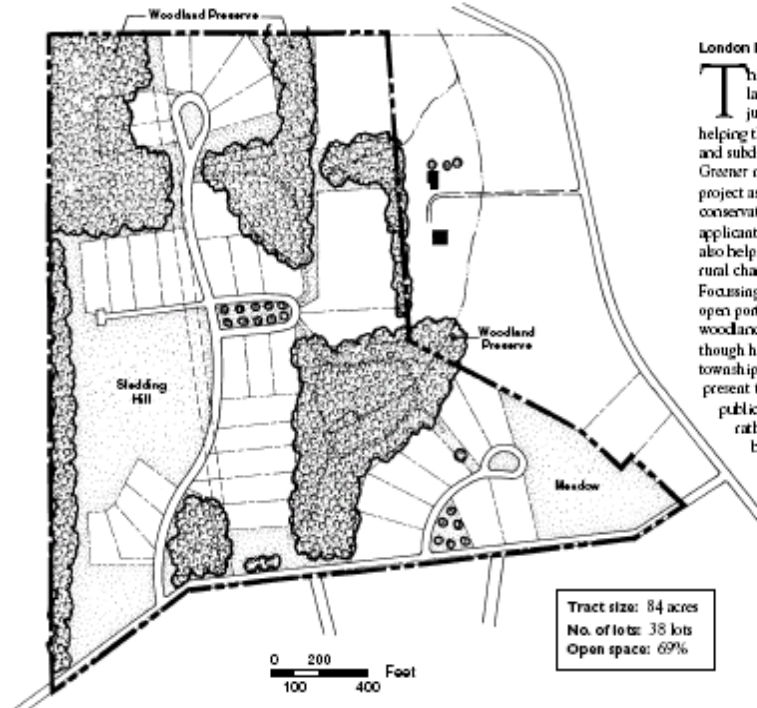
Tract size: 57 acres
No. of lots: 13 lots
Open space: 80%

0 200 400
100 Foot



Lang Property

A Community's New Growing Greener Ordinances Permit a Landowner to Preserve the Woods and Neighborhood Sledding Hill



London Britain Township, Chester County

The design was commissioned by the landowner, who grew up on the property, just at the time Natural Lands Trust was helping the Township officials update their zoning and subdivision ordinances to include the Growing Greener model language. Both parties viewed the project as an opportunity to demonstrate how the conservation design approach could help the applicant achieve his financial objectives while also helping the community to accomplish its rural character and resource preservation goals. Focusing the vast majority of the houselots on the open portions of the site has enabled most of the woodland habitat to remain undisturbed. Although homes will be visible from the existing township roads, they are carefully oriented to present their most attractive faces toward the public viewshed, across "foreground meadows", rather than displaying their less attractive backsides (with decks and sliding glass doors). Two other noteworthy design features are the preservation of the neighborhood sledding hill and the substitution of a "loop lane" with a central landscaped green instead of a standard cul-de-sac.

