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"Open Space" Zoning: What It Is & Why It Works

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Local officials in most rural and suburbanizing areas have a long-term choice about which many are not fully aware. That is whether to continue implementing "conventional zoning", or whether to refine their existing land-use regulations to ensure the preservation of open space through creative development design.

Conventional zoning is essentially a blueprint for development, and development alone. Of course, zoning normally separates incompatible uses, and it does establish certain standards (such as maximum densities and minimum setbacks), but it typically does little to protect open space or to conserve rural character. The reason many subdivisions consist of nothing more than houselots and streets is because zoning and subdivision design standards usually require developers to provide nothing more. While many ordinances contain detailed standards for pavement thickness and culvert diameters, very few set any noteworthy standards for the quantity, quality and configuration of open space to be preserved.

Conventional zoning assigns a development designation to every acre of land, generally residential, commercial, or industrial. The only lands which are normally not designated for development are wetlands and floodplains. Conventional zoning has been accurately described as "planned sprawl," because every square foot of each development parcel is converted to front yards, back yards, streets, sidewalks, or driveways. Period. Nothing is left over to become open space, in this land-consumptive process.



Above photo is of conventional large lot zoning in Middletown, Rhode Island.



Above photo is of open space development in Lower Makefield Township, Pennsylvania, where over half of this 431 acre tract has been preserved as farmland (137 acres donated to a local farmland trust) or as woods and wetlands (100 acres). Houselots are about 1/2 acre in size. Buyer response has been very favorable, with sales outpacing similarly priced developments. The developer advertises the project as "a community that will be forever surrounded by acres of preserved farmland, open fields and woodlands."

[Editor's Note: The Center for Rural Massachusetts's Web site contains excellent [drawings comparing development under conventional zoning principles and development using open space/cluster principles](#)].

A Better Solution

Local officials who are interested in ensuring that their communities will not ultimately become a seamless web of subdivisions, shopping centers and office or industrial parks now have a practical and effective alternative: compulsory open space zoning. This technique has been successfully implemented by a number of municipalities in New England and the Mid-Atlantic states, and by several counties in Virginia, Washington State and California.

In order to avoid disturbing the equity held by existing landowners, **open space zoning allows the same overall amount of development that is already permitted.** The key difference is that this technique requires new construction to be located on only a portion -- typically half -- of the parcel. The remaining open space is permanently protected under a conservation easement co-signed by a local conservation commission or land trust, and recorded in the registry of deeds.

As "open space zoning" is based upon the technique of "clustering," these two terms are used interchangeably throughout the rest of this article. It should also be noted that the cluster concept can be restricted to detached, single-family homes, each on its own down-sized houselot, in communities or in specific zoning districts where this is politically desirable. In other words, cluster housing is by no means limited to townhouses, apartments, or condominiums, as is typical in many PUDs (planned unit developments) and PRDs (planned residential developments). In fact, the classic rural village settlement pattern is a superb example of single-family clustering, sometimes with a central green constituting the permanently preserved open space.

Cluster Design

The basic principle of cluster development is to group new homes onto part of the development parcel, so that the remainder can be preserved as unbuilt open space. The degree to which this accomplishes a significant saving of land, while providing an attractive and comfortable living environment, depends largely on the quality of the zoning regulations and the expertise of the development designer (preferably someone experienced in landscape architecture).

Although the concept of clustering is fairly simple, this "new" form of development has raised concerns among some residents of rural or suburbanizing areas because it is quite different from the conventional, standardized subdivision pattern with which most of us are very familiar. Interestingly, the conventional suburban model, commonplace in many growing communities, is actually a pattern that is at odds with the otherwise traditional rural landscape. It looks "at home" only in our sprawling metropolitan post-war suburbs, where it has become the predominant building pattern.

The purpose of this article is to first briefly explain what I believe are the major advantages of requiring clustered (open space) development, and then to discuss several of the concerns typically expressed at local meetings where the open space planning concept has been discussed.

The Advantages of Open Space Development

The conventional approach to development results in the entire parcel being covered with houselots and subdivision streets. Communities which have had a lot of experience with this type of development ultimately realize that, as one parcel after another is eventually developed, their formerly open landscape

evolves into a network of "wall-to-wall" subdivisions. [See Sidebar, "[Large Lot Zoning](#)" at the end of this article].

The beauty of open space zoning is that it is easy to administer, does not penalize the rural landowner, does not take development potential away from the developer, and is extremely effective in permanently protecting a substantial proportion of every development tract. It does not require large public expenditures (to purchase development rights), and allows farmers and others to extract their rightful equity without seeing their entire land holding bulldozed for complete coverage by houselots.

This pattern of down-sized houselots and preserved open space offers distinct economic advantages to all parties. Developers can reduce the costs of building roads and, if applicable, water and sewer lines. Local governments save on snowplowing and on periodic road re-surfacing. And home buyers often pay less because of these cost savings.

Landowners who view their property as their "pension" no longer have to destroy their woods and fields in order to retire with a guaranteed income, as their equity is not diminished. Local governments do not have to raise property taxes to finance expensive open space acquisitions, and are not faced with the administrative complexities posed by TDR (transfer of development rights) systems. Developers are not placed under unreasonable constraints, and realtors gain a special marketing tool, in that views from the new houses will be guaranteed by conservation easements protecting the open space from future development.

Why Require Cluster Design?

Perhaps the most controversial issue surrounding the cluster concept is the suggestion that this open space approach be made mandatory. The rationale is that there are certain types of irreplaceable natural resources which are extremely important to protect. Among these may be listed aquifers, riverfront land, fields and pastures. In addition, clustering allows flexibility in layout so that a developer can avoid impacting important wildlife habitat areas, such as deeryards, or scenic features of the rural landscape, such as large rock formations, hill crests, and mature tree-stands. It is a local decision whether to require the cluster approach when development is proposed on any or all of these resource lands.

There are several possible options to mandating open space. One is to require the cluster approach in only certain zoning districts, or when certain resources are present. Another alternative is to authorize the planning commission to require it only when the developer's conventional plan would destroy or remove more than a specified percentage of certain listed resources, leaving determination on a case-by-case basis. Whatever the choice, it is important -- in my view -- not to leave it to the developer to decide whether to opt for cluster development. [See Sidebars "[Requiring Open Space Design](#)" and "[West Manchester Township](#)" at the end of the article].

Questions About Cluster Development:

Will It Harmonize With Its Surroundings? A concern I often hear is that cluster housing will not blend in with a town's rural character. It is true that some cluster developments done in the past have failed to harmonize with their surroundings. Recognizing this potential problem, a few communities are now requiring that new cluster plans consist of only detached, single family homes, each set on its own, down-sized individual lot, roughly resembling a traditional village pattern. This also ensures that everyone will have their own separate yard space, in addition to the larger "open space" which the cluster approach creates.

The related issue of "impact upon surrounding property values" is also often raised. Along any part of the parcel perimeter where down-sized lots would adjoin standard-sized lots, communities can require buffer strips. Along other edges, this may not be desirable or logical, as lots which border permanently protected open space almost always enjoy higher property values. Indeed, **most realtors would attest to the fact that all lots within a well-designed cluster development usually gain enhanced value as a result of the protected open space.** [See Sidebar, ["Enhancing Property Values"](#) at the end of this article].

"Open Space" Maintenance. Another issue is maintenance of the open space created by clustering. If this space is recreational (playing fields, jogging trails, tennis courts), upkeep is typically handled by a homeowners' association, to which everyone is contractually obligated to contribute when they purchase their home. Home buyers sign a legally enforceable agreement which enables the homeowners' association to collect any unpaid dues.

If the open space is agricultural, there are several options. The agricultural open space can be sold "in fee" to the homeowners' association, which can in turn lease it to local farmers. Alternatively, the original farmer can retain ownership of it and sell only his "development rights." I favor the latter option, even if the farmer is planning to retire, because he could still sell the field to a younger farmer in the neighborhood at an affordable price reflecting the land's agricultural value -- not its potential building-lot value -- thus strengthening the local farming economy.

Buffering Farm Operations. In order to reduce potential conflicts between new residents and agricultural practices, communities are beginning to require that cluster lots be separated from the protected farmland by a "buffer" strip, typically 75 to 100 feet wide. Where it is not possible to use existing woodlands for this purpose, officials can require new buffer areas to be thickly planted with a variety of rapidly growing native trees and shrubs. A similar requirement should also be placed on conventional subdivisions when they abut working fields, but this is rarely done.

Street Standards in Cluster Developments. When cluster developments are designed with privately maintained road systems, planning boards are often asked to reduce their normal street construction standards. This has sometimes created substandard conditions, and is a practice which communities would be well-advised to resist. If subdivision street construction standards are excessive

-- as they often are -- they should be revised for all types of new development, so that street width bears a reasonable relationship to the expected volume of traffic. [Editor's Note: On this point, see Joseph Molinaro's article, "Rethinking Residential Streets," in Issue 1 of the PCJ].

Sewerage and Septic Systems.

Because of the shorter road system needed to serve lots in a cluster development, substantial savings are possible with respect to the construction of roads, sewers, and water lines. Where sewer service is unavailable, however, people have expressed concerns about siting septic systems on the smaller cluster lots. Recognizing this factor, officials are requiring such houselots to be located on that part of the parcel where soils are most favorable for leaching fields. The flexibility of cluster design allows this to happen. On the other hand, in a conventional subdivision, septic systems are located wherever the soils manage to pass minimum health requirements, even on marginal soils whose long-term suitability is questionable. In addition, it should be noted that septic systems can be located beyond one's lot lines, on an easement within the protected open space.

Summing Up:

Whether continuous coverage by large-lot subdivisions is more desirable than a mixture of village-sized cluster lots surrounded by permanently protected fields and woodland is a decision for residents and officials in each town. As long as everyone is clear about the ultimate consequences of the various development types which are available to them, these decisions can be made on an informed basis.

Sidebars:

Large Lot Zoning

One of the "solutions" that many conventional zoning ordinances use for presumably maintaining open space and rural character is large lot zoning -- that is establishing large, five to ten acre, minimum lot sizes in rural zoning districts. Although large lot zoning does reduce the number of homes that can be built, it also spreads out the homes in such a way that none of the remaining land is useable for farming, forestry, or even recreational trails. Houselots become "too large to mow, but too small to plow," and the greater distance between homes effectively stifles the emergence of any sense of neighborhood.

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Open Space: What Size and Shape?

Unless local regulations require the open space to be at least a certain size with specific minimum dimensions, it can end up being a long narrow fringe abutting rear lot lines and the parcel's outer perimeter. This can be easily avoided by clarifying, in the ordinance, that lots and roads shall not cover more than, say, 50% of the parcel, and that at least half of this open space must be shaped so as to be useable for active recreation or agriculture, for example.

Requiring Open Space Design

Experience has shown that when clustering and open space preservation are left optional, only a small percentage of developers choose to take advantage of this approach. Most simply continue to do as they have always done: creating checkerboards of house lots and streets. This means that even though the clustering option is in the zoning ordinance, it remains essentially unused. The community is still left with conventional development patterns repeated over fields and woodlands.

If a community is reluctant to require clustering, it might consider the approach taken by Clallam County, Washington. The County recently revised its zoning from a density of one unit per five acres (which was creating non-functional "farmettes") to a minimum of thirty acres. However, the original one unit per five acres density remains available if the houselots are downsized so as not to consume more than fifteen to twenty percent of the parcel. Applying this kind of stiff "density penalty" to discourage land-consumptive farmettes may be a far more effective technique than offering meager density bonuses to encourage clustering.

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West Manchester Township, Pennsylvania

West Manchester Township, in south-central Pennsylvania, last year amended its zoning ordinance to require open space development within an undeveloped portion of the township. The area had been zoned for single-family detached residential homes, on half acre or smaller lots. Before amending the ordinance, the township had prepared build-out maps showing what the area might look like if developed under the existing conventional zoning. These maps vividly showed the potential loss of the existing farmland and open space. The township also mapped out the open space it hoped to preserve to show landowners and developers exactly what was envisioned: interconnected open spaces crossing parcel lines.

Under the township's open space zoning provision, a developer first prepares a sketch plan showing the number of units that could be built under a conventional

development pattern. This determines the allowable density that can be used when the project is designed in a clustered manner. According to Jan Dell, Assistant Township Administrator, allowing the same density was important to allay the concerns of affected landowners. At the same time, preserving views of open space would make developments more attractive to home buyers. One other note, West Manchester's open space zoning requirement only applies to developments involving more than fifteen acres.

Editor's Note: Manchester Twp. also made use of the design manual and video cited in the [Resources](#) sidebar.

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"Build-Out" Maps

One of the most understandable, inexpensive and effective tools for showing local residents and officials the long-term result of implementing existing zoning and subdivision regulations is the "build-out" map. This map shows the probable location of new roads and houses which could legally be constructed on the vacant and buildable land remaining within the municipality (or a portion of the municipality). Because so many people assume their town is adequately protected by existing zoning, a build-out map, by graphically showing what might occur, can be a real "eye opener" for members of the community. To ensure accuracy, build-out maps must not project development into areas where natural or regulatory constraints would prevent it. The [Center for Rural Massachusetts](#) has available "A Manual of Build-Out Analysis," a step-by-step guide to the preparation of build-out maps.

Enhancing Property Values

A recent study, ["An Examination of Market Appreciation for Clustered Housing with Permanent Open Space,"](#) by Jeff Lacy at the Center for Rural Massachusetts comparing conventional and open space developments in two Massachusetts towns over long periods of time found that the value of homes in open space developments appreciated at a greater rate.

An interesting article by Philip Larsen, "Open Space That Sells," in *Land Development*, the publication of the National Association of Homebuilders, explores how well-planned open space can enhance a development's market value. As Larsen notes: "The key is to view the various open space requirements as opportunities rather than as liabilities. A look at the most successful projects in any region will reveal that open space has not been wasted. Projects that feature open space are projects that sell and, at the same time, provide environmental amenities and opportunities for recreation." *Land Development*, Summer 1992, p. 25.

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Resources:

A valuable resource on open space development is "Dealing With Change in the Connecticut River Valley: A Design Manual for Conservation and Development," available for \$25 from the Lincoln Institute of Land Policy: (800) 848-7236.

"Rural Design," a 60-minute video of Randall Arendt's slide show, provides a very useful visual introduction to cluster design and related topics. It can be ordered from the American Planning Association: (312) 955-9100.

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