

Whole System Design—utilizing Zones.

The placement of environmental and social elements (i.e. trees, open space, plants, buildings) is fundamental to the whole system design (Permaculture) approach at Windekind because we seek to optimize the best relationships between elements with the least work and costs. This means designing with the entire farm and all its many elements in mind.

One tool we use to implement this approach is to break the areas of the farm into **zones; zones** are designated areas that tend to emphasize key environmental and social elements that succeed best in that area. Ongoing design and planning comes into play as we sit down, as a community and evaluate which elements are best suited for which area and the optimal relationships between elements.

More Principles that we adhere to:

1. We create zones as a framework to create connections because resiliency comes from strong connections between parts including, for example, our emotional connection to the land.
2. All zones and their elements (i.e. buildings, wetlands, septic) must be in compliance and, even better, enhance local and state regulatory requirements.
3. There is two of the same zones spread throughout the Commons but not connected, the reason for this is that they have the same basic elements.
4. Often there are no hard boundaries between zones, but we have tried, where possible, to use natural features like trails, contour lines and streams, when available, to define a border.
5. In most cases, nonliving elements such as structures and energy infrastructure tend to be more numerous in Zones 1 and 2 and nonexistent in the outer zones.
6. Conversely living elements, like animals, tend to be smaller in zones 1 and 2 and larger in outlying zones. For example, chickens have a place in Zone 2; cattle could live in zone 3. A kitchen garden could work in Zone 2, while a commercial garden would be more appropriate in Zone 3.

Zone 1-Residential Zone:

This zone encompasses our homes including their interiors, like kitchens and living spaces that are used almost constantly by its inhabitants. This area focuses on how indoor and outdoor elements converge and augment one another. For example, a shade tree cools

the indoors in the summer, southern exposure warms it in the winter, food raised in a nearby garden feed the family at the kitchen table. There are elements, hedges for example, that encourage privacy and elements, like porches facing open areas that encourage social engagement.

Dogs, cats and other pets are also part of our indoor/outdoor system, our dog Elsa, gives us companionship during the day while barking away hungry deer, from our garden, at night.

The Residential Zone is the most intensely used social space for the community and the center of most our day-to-day activity. As such it is an ideal place for smaller outdoor spaces and structures like an herb gardens, flower beds, lawns, a tool shed, a greenhouse, a small shop, outdoor furniture, terraces and encloses for small animals.

Zone 2-Neighborhood Zone:

The 7.35-acre **Neighborhood Zone**, owned by the community, weaves its way amongst the privately owned residences of the community as a means of intertwining the community together into a coherent neighborhood; the principle of one area enhancing the others applies. **The Neighborhood Zone** provides more space yet is central to many homes; it is an ideal area for picnics, games and day-to-day encounters while nearby is space for privacy and individual activity. Plantings and gardens in the **Neighborhood Zone** can extend into and enhance personal gardens and spaces.

The area is designed to contain little nooks and crannies, terraced garden, walls and rock outcropping and large open lawns for recreation and gatherings joined together by a network of pathways, roads and even our garden railway called the Cold Creek. This zone could be home to a common house, a greenhouse, a gazebo, storage and enclosures for small animals.

There will also be in this zone space for roads, trails, parking and utilities with the goal of minimizing impact by consolidation and a better economy of scale. For example, the main power line to the farm runs through both the residential and neighborhood areas, for aesthetic and space reasons the line should be buried, an expense that would overburden an individual family but be viable as a community expense because we all benefit from the buried line.

Zone 3- Meadow Zone:

The 13.03-acre Meadow is the area that transitions from a social and smaller space oriented landscape to one that utilizes larger spaces hosting larger animals, plantings and more commercial buildings like a barn and a shop. The Meadow Zone is a work oriented, a place where people gather for common tasks like tending a commercial garden or the raising of animals. Here people can work alone or together in groups depending on their and community's goals.

Illustrating again the enhancement across zones, a barn, a stable, a shop, greenhouse and a coop could be placed on the borders (the north west corner- is ideal) where they are nearest to their neighborhoods while animals have access to areas further out for pastures and runs. It is an area for staple crops, large fruit trees, and pastureland and produce grown for market sale.

A 13.03-acre parcel is not a large area and part of it is wetland, but its south leaning slope, good soils, beauty and approximation to the home community offers many possibilities including utilizing the wetlands in this zone. Wetlands are ecosystems that receive, trap, produce, consume and export organic matter; because of this they offer many agricultural, aesthetic and wildlife options for the community.

Zone 4- Forest Management Zone:

Like the Meadow Zone the **Forrest Management Zone** offers larger spaces with commercial, recreation and aesthetic potential. Recreation is another example of enhancement across zones, recreation starts and finishes in our homes and in nearby staging areas but its raison d'être for its existence is the 28-mile trail system that goes deep into the forest, including the **Forrest Management Zone**, across land owned by many who have views about use in these areas similar to ours.

This zone has two sub-areas, the first is the **13.38-acre Plantation** of Norway Spruce that abuts and almost surrounds the western residential area of the Commons, including two parcels located within. Interested individuals or the community as a whole can manage the **Plantation** for commercial and aesthetic purposes mostly by selective and careful thinning of the existing Norway's and introducing, because the Norway's are not regenerating, new species of trees and ground cover. In some instances, small clearings can be created for gardening and human activity, recreation and gardening. We are in the midst of the starting edge of this process, right now.

The other Forest Management area, the **9.15 acres North Woods**, is located in the northeastern most portion of the farm that is home to many hard wood trees including Maple. For a number reason, including soil drainage and a southern oriented slope this is an optimal growth area for hardwoods, which is a major reason that the stand has enjoyed excellent management over the years and is in very good condition today. We can continue to do selective cuttings of the hardwoods (Maple, Ash, Yellow Birch) or, another option would be to point this stand in the direction of becoming a sugar bush by selective harvesting practices, favoring the Maples.

In addition, a major stream, called **Dead River**, and one of the main arteries of the ski trails passes through this area, making it an outdoor recreation and natural beauty wonder.

Zone 5- Wilderness Zone:

We considered the 62.19-acre Wilderness Zone, a light impact area where people go to observe

and ski, hike and bike for recreational purposes. For instance, directly to the east of the home farm two streams have cut spectacularly deep canyons, over 200-foot-deep, filled with boulders bigger than an automobile. Other than being a great habitat for small mountain trout and an area for firewood harvesting the highest use in this area is for observation, recreation and leaving it, as much as possible, undisturbed. Letting nature lead helps is a modest way, to reduce carbon in the atmosphere.

Zone 6- Broader Community:

Again, seeking integration, this zone, beyond the boundaries of the Commons, encompasses how our choices tie into the larger community that surrounds us.

The commons are being created in a design process based first and foremost on an ethical framework (see principles) incorporated into the logic of natural systems. Given this, our purpose is not to propagate and impose our ideas and principles on others, but rather, to outreach with our examples that hopefully teach and inspire while they do the same. The boundaries of Community never end; the Commons is merely a little light in the great sea of humanity,