

Environmental Initiative and Sustainability at Camphill Village Kimberton Hills

Camphill Village Kimberton Hills is a farming and handcrafting community comprised of over 100 community members who “life share” on a 432 acre farm in northern Chester County. Resident volunteers and adults with developmental disabilities live in expanded families in 16 households, and they work side by side in the award winning Kimberton Hills Dairy, weavery, fibre arts, pottery, Sankanac CSA (community supported agriculture, which supports the village and 190 outside family members), orchards, herb garden, apiary, vineyard, homemaking, bakery and Camphill Café (open to the public). At the turn of the millennium, Kimberton Hills conducted five years of water study for its Environmental Initiative that resulted in many improvements to water use, integrated building and landscape design which became part of educational outreach programs open to the public. The community responsibly stewards land by using ecological design incorporating sustainable water-wise buildings, organic/biodynamic agriculture and daily ecological practices. Recognizing the interconnection between the health of people and the health of the environment, the Kimberton Hills Community cares for soil, plants, water, air, animals, and each other with dedicated conscientiousness.

www.camphillkimberton.org

Awards and acknowledgements

- 2014 - Sweet Water Baking Company voted Best of the Mainline 2014
- 2012 - Chester County Citizens for Climate Protection (4CP)'s Gene Wilson Award for Environmental Sustainability
- 2011 - Featured in GRID Magazine's July issue
- 2011 - PA Horticultural Society's Community Greening Award recipient
- 2010 - AmeriCorps/University of Toronto study determined that Kimberton Hills residents report an unusually high level of Quality of Life, as compared to that in other life options for people with disabilities
- 2008 - Pennsylvania Environmental Council's People's Choice Sustainability Award
- 2006 - Cornucopia Institute “Five Cow” (highest) award to the Dairy for its best healthy management and sustainable practices
- 2005 - PennFuture's Green Power “Turn It On” award
- 2005 - Featured in *Ecovillages: A Practical Guide to Sustainable Communities* by Jan Martin Bang, New Society Publishers
- The CarbonFund (carbonfund.org) estimated that Kimberton Hills's efforts have offset approximately 253,796 lbs of CO₂, and equivalent of taking 22 average American cars off the road annually

Land Use

- 250 acres of 432 are in Agricultural Easement, and 80% of the total acreage is permanently dedicated to open space (currently about 92% is open space).
- Sankanac CSA (Community Supported Agriculture) – Twelve acres of land are used to grow produce using organic and biodynamic practices. The gardens provide for the 100+ members in the community and 190 families in the area, beyond Kimberton Hills. The greenhouse is heated through radiant flooring using bio-diesel, and there is a composting toilet for crews and visitors. Two draft horses are integrated into the fields to increase soil fertility.
- Kimberton Hills Dairy – The raw milk pasture based dairy has an average 40 cows (plus young stock) that are so well cared for they can keep their horns. They graze on 250 acres of mixed pasture, hay and arable land. Manure pits have been built to decrease the amount of run-off from winter housing and milking areas, and the manure is used for CSA compost and their own pastures. It was awarded the top score: “5 Cows” from the Cornucopia Institute* for best organic practices.
- The Herb Garden - grows a wide variety of culinary and medicinal herbs organically and biodynamically.
- Orchards and Vineyard - uses organic and biodynamic practices.
- Beekeeping - Kimberton Hills keeps hives and produces honey for the village and for sale. A recent Rutgers University study found the highest count of native pollinators in the region to be at Kimberton Hills.
- Forestry - completed a DCNR forestry study in 2010 to decrease deer and invasive species damage through best practices of sustainable forestry and watershed management. Firewood for the village houses is sustainably harvested.
- Moveable chicken coops –This is a demonstration of fertility being provided to land through a permaculture practice of chicken manuring and weeds and pests control without chemical products.

Integrated businesses

- Camphill Café - local, organic, biodynamically grown food grown at the CSA and orchards is served to the public in a building that is sustainably renovated, including natural and recycled materials, natural Solatube lighting. It utilizes geothermal heating and cooling. Food waste is composted. Outside food is sourced from local businesses.
- Sweet Water Baking Company - a successful collaborative business arrangement that includes residents with developmental disabilities; using organic ingredients, hand-ground wheat, butter made from the KH dairy cows, naturally leavened bread, and a wood fired oven.

- Birchun Hills Farm - The community's cheese house, no longer needed for its own dairy, is leased to Birchrun Hills Farm to enable production of artisan cheeses that help them continue their nearby dairy farm.

Ecological Design - 2002-2004 Sustainable Building project

Ecological design is a kind of navigation aid to help us find our bearings again ...recasting the human presence in the world in a way that honors ecology, evolution, human dignity, spirit, and the human need for roots and connection. David Orr, *The Nature of Design*.

The following sustainable design elements are found in the "Heart of the Village" which includes the Serena House (elder care house), Asten House, the Community Health Center and the renovated Camphill Café and Bakery:

- Timber from certified forests
- Cellulose insulation from recycled newspaper
- Metal roofs (no petrochemicals), light color
- No VOC (Volatile Organic Compounds) in indoor paints
- Natural flooring materials (wool, tile, linoleum, bamboo)
- Point of use water heaters in the Community Health Center
- Wood chip/plastic composite decking
- Roof overhangs for shade and cooling, clearstory lighting, variable ceiling heights, with skylights to let heat escape and bring light and warmth in winter
- Solar light tubes to minimize electrical use during the daytime
- Efficient (water and power) utilities
- Ventilation system for cooling and airflow, minimal use (Serena) or no use (Community Health Center) of air conditioning, staying approx. 10° cooler in the summer
- Radiant heat flooring in The Community Health Center and the bathrooms of Serena House
- Individual thermostat controls for individual rooms to prevent unnecessarily heating rooms when they're not used
- Aesthetic design and use of color, including Lazur painting technique
- Balanced and varied use of social and private spaces

The Café/Bakery includes:

- Geo thermal HVAC installation
- Polished original cement floors
- Renovated within old garage/barn footprint using all sustainable natural materials—more insulation, recycled materials, solatubes, etc.

Other sustainable design

- An old CSA Greenhouse was an original Lord and Burnham greenhouse installed prior to the property being given to Camphill in 1972. It was carefully dismantled, renovated, and rebuilt by the CSA garden in 2007-8.
- White Pine, our state shed, was built by community members from windfall lumber milled onsite. Along side it is a compost toilet, also built from windfall lumber milled onsite.
- The garage for Serena House which holds the photovoltaic panels was built by community members and sided with windfall limber milled onsite.

Water-wise stewardship in ecological design

The "Exceptional Value" French Creek borders over half of our property. With the ecological design of the five buildings in the heart of the village, integrated water-wise elements were also designed. The area of the highest stream ecological quality was found on the Kimberton Hills's boundary, and the effluent from the wetlands waste water management are found to be clear of contaminants before it enters the watershed.***

- Pioneering constructed wetlands wastewater system, designed in partnership with the DEP, for on-site wastewater management; it serves as a model system for watershed conservation and protection.
- Building placement to minimize need for impervious surfaces, and maximize welcome and easy participation in village events
- Constructed wetlands for waste water management, including educational signage
- Native species plantings, sustainable landscape design including best practices stormwater management (catchment basins, rain garden , cistern)
- Pervious parking lots designed around the rain gardens
- Rainwater catchment systems from roofs into a cistern to be used for low-flush toilets, laundry, and landscape watering
- Riparian buffering installed in pastures for a tributary of French Creek and along the French Creek.
- Protection of existing wetlands and forest buffer zones.
- Best Practices on-site water infiltration in areas around newer buildings.
- High efficiency washers, low flush toilets and showerheads, attention to frugal water use. Grey water is used in the five newest buildings.
- Of course, good and balanced use of organic/biodynamic agricultural practices positively impact water quality.

Other land related work

- Fiber arts Weavery - Working with the wool from local sheep, yarn is washed, carded, plant dyed, hand-spun, and knitted and woven into a variety of articles that are sold to the public.
- Estate Crew manages the new forestry program and tends to the common garden areas including non-herbaceous plantings and native plant areas. The estate crew does not use chemicals, except low proportions of salt on icy areas in winter, including creating non-mow areas such as a wildflower field close to the bee hives. Electric mowers and push mowers are used for smaller areas.

Energy Use

- 8.3 kilowatt solar photo voltaic system is situated in the “heart” of the village, on a garage near the Café, powering Serena House, Community Health Center, Asten house, the wetlands system, Bakery and Café. Additionally, an electric golf cart draws its power from the panels.
- The community buys all the rest of its electricity, sustainably produced, from the Energy Coop and purchases 5% biodiesel heating oil from Oehlert Brothers. Every house has wood stoves using its own sustainably harvested wood.
- 11 buildings qualified and were retrofitted for energy efficiency through the state’s Home Weatherization Program. Another older stone house was retrofitted with energy efficient windows.

Problems we are addressing

- Forests and pastures - There are many invasive plant species on our property, including multiflora roses planted in the 1930’s, bittersweet, spice bush, white garlic mustard and Japanese silt grass, which we address as we can, by hand weeding and by introducing goats.
- Deer population is partially controlled by a local bow hunter.
- We would like to limit the use of petro-powered lawn mowers to a greater extent.
- Our paths need more care.
- Some pastures need better care and nourishment.

A few examples of the many sustainable lifestyle practices

- Low-impact living practices include up-cycling, reuse and recycling
- Composting kitchen waste
- Laundry lines
- Electric golf cart, bicycles and walking to work
- Community Transportation budgeted line item for encouraging the use of public transportation
- Wherever economically possible, replacing cars with more efficient vehicles
- Using environmental considerations in decision making
- Car/ride sharing
- Use of CFL’s, and minimizing electrical use when possible

Current Outreach, In-reach and Education

- Member of West Vincent Township’s Resilience Task Force which focuses on regional sustainability issues.
- Educational outreach to approximately 600-800 people annually who come for training programs, including a two year apprenticeship in gardening and an apprenticeship in dairy farming, internships, volunteering, high school and college social service practica, adjudicated youth service, class tours, conferences, retreats and workshops.
- Our community members, including one year resident volunteers, are educated to the environmental aspects of their activities through material sharing, talks, and visits by environmentalists.
- DEP funded Sustainable Forestry Project and workshops (2012)

*www.cornucopiae.org (see scorecard: Kimberton Hills)

** <http://phoenixville.patch.com/articles/a-pollination-celebration-at-camphill-village-kimberton-hills?ncid=M255#photo-6707179>

*** French And Pickering Creek Watershed study, French and Pickering Creeks Conservation Trust, www.frenchandpickering.org

