

thinkGiraffe

ENVIRONMENTAL DESIGN

www.thinkgiraffe.ca

Sample Project
Cherryvale Organic Farm,
Prince Edward County



thinkGiraffe Design specializes in sustainable, energy efficient residential and office design. Our projects include construction and permit drawings for new residences, additions, renovations, cottages, and offices. We are linked with a landscape design firm and work on the inside and the outside as one concept from the very beginning of the project. Most of our clients request contractor references from our list of construction and millwork companies that we have screened for ethics, technical know how and the ability to work as part of a team with designers and engineers. We remain involved in projects during the contractor selection, contract, and construction phases. For pictures and contact information see www.thinkgiraffe.ca

The design of the Cherryvale buildings attempts to reflect the core values of the entire project. Some of the guiding principals are:

Use local materials

Local materials mean less trucking and lower embodied energy costs. Local stone used for the patios and sand and gravel are from local quarries. The steel roofs are manufactured in Ontario and the lumber was milled at a local lumberyard.

Use recycled materials

Stone from an old barn foundation will be re-used for the chimney of the Cherryvale house.

Use local builders, engineers and sub-contractors

Since the design team is based in the greater Toronto area, using an experienced local construction team, far fewer site visits are required.

Construct buildings to be as energy efficient as possible

Wind turbine and solar energy sources mean "free" energy but that does not mean that building envelopes should not be as efficient as possible. Legalett heated slab on grade foundation systems, ICF wall construction, medium density spray foam in all remaining cavities mean an average R-values of at least 30% to 50% higher than the 2006 Ontario Building Code requirements. ICF and spray foam ensure continuous vapour barrier envelopes.

Orient buildings to be passive solar

All buildings are oriented with windows facing south for passive heat gain. The manager's residence was placed close to two large maple trees on the south westerly side to reduce heat gain in the summer. Roof overhangs and westerly porches and arbours also provide summer protection.

Make use of constant breezes from Lake Ontario to cool the buildings

Lake Ontario provides a nearly constant breeze. Windows on the west and east sides of buildings are placed to ensure air flow. Since no air conditioning will be installed all bedrooms in particular have windows designed for air-flow.

Vestibules prevent strong winter winds to cool down the buildings.

Express an agricultural design language

We can have a bit more fun with the exterior of the buildings because of the rural setting. No existing streetscapes have to be taken into account. Roof lines resemble old barns, and the steel roofs, some steel siding and window frames are in RED. The windows are double hung to resemble the old Ontario farm house style and the Farm Centre's main door resembles a large barn door. Ceilings are rough cut beams with wide white pine planks above and rough cut 8"x 8" posts were used throughout. Concrete floors were tinted to resemble old pine floors.

Strive for clean, VOC free interior air

No carpeting or cabinetry containing formaldehyde is used. Clean Air paints and sealed concrete floors further reduce indoor contaminants. Paperless drywall is used in any areas prone to mold.

Design buildings to have multi-purpose functions in order to reduce the number of buildings

Just the act of construction, however green, depletes the environment. The more intensively buildings are used, the more sustainable they are by definition. Great care is taken to have multi-purpose functions for buildings in order to reduce the total project sq meters.

Use good quality materials that are long lasting

Steel roofs, green sedum roofs, steel cladding, stucco, concrete and wide plank pine floors, solid surface counters, porcelain bathroom tiles, quality wood with exterior aluminum doors and windows, and solid core doors all contribute to buildings with virtually no upkeep.

Use roofs to collect rainwater and construct cisterns to store water

Much of the design takes the collection and re-use of rainwater into account.



For more information on the Cherryvale Organic Farm in Prince Edward County visit www.cherryvale.ca