Eau Natural

It doesn't have the sparkle of that familiar patch of backyard blue, but the premise of the natural swimming pool is clear: Nature does it best.

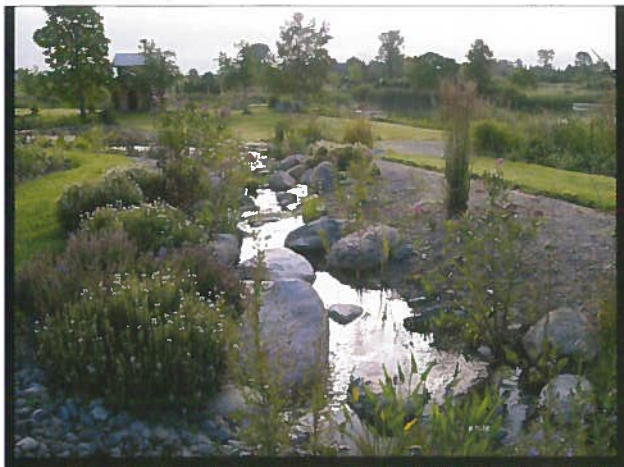
By Kelvin Browne

When it comes to swimming pools, our ambition to be green is making everything old new again. Today's trendiest pool is much like an old-fashioned pond. While a natural, or organic, swimming pool typically adds an element of mechanical efficiency—a recirculating pump—not found in a real pond, the premise is the same: Nature does it best. If you want a pool that doesn't use chemicals, water plants and bacteria can take their place. However, to achieve this, your idea of pool perfection may have to shift from concrete glamour to botanical beauty.

This change in expectation is not insignificant. While most believe they'd choose products and services that are environmentally friendly instead of those that are not, many reject a natural pool when they first see it. It looks different. It's not a vast pristine tub of sterilized, often very warm, sparkling blue water with tile around its edge. Even in a small city garden, a natural pool has the look of a wetland. There are unfamiliar plants that don't appear as tidy as people believe backyards should be. As well, natural pools are not inexpensive to install and there still aren't many skilled contractors competing for that business; there are certainly far fewer natural-pool experts than those familiar with the standard gunite variety.

In Canada, landscape architect Neil Turnbull is one of a handful of designers experienced with natural swimming pools. He has built several, including one for himself on his 100-acre property north of Toronto. "Initially, very few people had heard of natural swimming pools, including those who were knowledgeable about gardening or the environment," says Turnbull. "Awareness is much greater now and, over the next few years, we'll start to see [natural pools] appear and, perhaps, even become the norm."

One impediment to more natural pools being built is that there still aren't a lot of examples to give potential customers confidence. Most pools, and the vast majority of the ones built in urban locations, are still concrete even though they try to mitigate their environmental challenges by using saltwater instead of chlorine and heating water with solar power. However, natural pools aren't really a brave new frontier of environmental consciousness. Popular in Germany and Austria since the mid 1980s, they account for the majority



In natural pools, the ratio of planted section (usually 0.3 m to 1.2 m deep) to swimming area is about 1:1. Although separated underwater, the two sections can appear as one on the surface; alternatively, the planted areas can be separate and, via stream or conduit, feed into the swimming section. **Above, from top:** *the watercourse; native pickerelweed; a swimmer's view; midsummer growth at pool's edge.* **Top right:** *landscape architect Neil Turnbull in his aquatic garden.*

of swimming pools built there now and are growing quickly in popularity in the U.K. and in Asia.

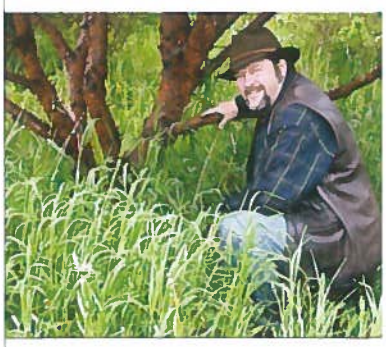
Germany is where the technology that supports organic pools was first developed. This relates to a widespread interest in green solutions there, long before the environmental movement took off in Canada. Not only are there thousands of examples of natural pools in Germany that have been in use for a decade or more, there are also many large-scale commercial applications because municipally owned pools, for instance, are built to be organic.

What is a natural swimming pool? According to Turnbull, "a natural swimming pool is chemically free and has two components that merge together—a swimming area and an aquatic-plant garden—to form a living ecosystem." The water is clear but not sterilized.

The planted section sustains a normal range of pond life—microscopic organisms, invertebrates, even fish and frogs. "The plants act as natural filters as well as absorb decomposing organic materials, bacteria, and pollutants," he says. "In addition to plants, the material the plants grow in, such as gravel, is part of the cleansing [process] because this is where useful bacteria live." This bacteria decomposes organic material that accumulates in the system and also sustains zooplankton (a natural algae predator) and aquatic plants. This cleansing process is enhanced by a pump that draws water in the planted section down and through the gravel. Once through this plant and rock filter, water is then recirculated to the top of the planted pond.

The swimming section is typically left unplanted and can be a naturally or artificially surfaced basin. The swimming and planted areas are kept separate by a wall that stops about 10 centimetres below the water surface, permitting the free transfer of water. The swimming area is filtered by the planted section in a way similar to the filtering and aeration system in a standard pool.

What about water temperature? "Particularly for swimming areas, large boulders act as natural heat sinks," explains Neil. "They absorb heat during the day and help moderate the water temperature." But don't expect the water to be steamy-warm. This is natural heating and hot water would kill the plants essential to the functioning of the system. ●



Pool Rules

There are three basic steps to constructing a natural pool:

First, dig the hole—or holes, if there is to be a series of ponds—and install a lining, which is usually not concrete but, rather, a multi-layered liner. The bottom layer of this liner is usually thick synthetic filter cloth, th middle layer is ethylene propylene diene M-class rubber, and the top layer is thin black landscape fabric.

Next, on top of the liner, add the gravel and soil for plants and then install the pumping system in the aquatic-garden section. The depth of the plant medium varies between 5 cm and 1 metre. Some plants need 1 metre for nutrients, while others, like hydroponics, get their food from the water.

Create the aquatic garden, making your selection from the following aquatic plant species. In deep water (0.6 to 1.2 m), plant water lilies. In medium-depth water (30 to 50 cm), plant lotus, pickerelweed, bog bean, water calla, and *Sagittaria* (arrowhead). In the shallows (15 to 30 cm), plant rushes, grasses, sedges, cardinal flower, marsh mallow, marsh milkweed, and watercress. Along the edges (under 15 cm), plant sedges, rushes, jewelweed, bog rosemary, and mars laurel. Finally, on the dry ledge, on top of the liner, above water, plant yarrow, phlox, and saxifrage.