

Natural Selection

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Filled with flora and fauna rather than chemicals, natural pools make an alluring setting for serene swimming. No wonder we're lapping them up, says Nicole Swengley

It's a tranquil, fragrant setting. The sun sparkles on clear, fresh water. Dragonflies dart among the reeds, irises and water lilies. Dive into the warm water, and it tastes as fresh as it looks. This could be a natural, unspoiled lake, but it's not. It can be found at the end of the garden – your own, environmentally friendly swimming pool.

To be technically precise, it's a natural swimming pool which relies on its own biologically sustainable ecosystem to keep

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the water clean and pollutant-free. A lack of chemicals is the key difference between a natural swimming pool and a conventional one. Aesthetically, too, the contrasts couldn't be greater. Counting lengths in a rectangular, chemical-filled, blue box – even if it's an infinity pool – just doesn't compare with the sensuous pleasure of swimming in a completely natural pool surrounded by plants.

“Having a swim in my own garden really appealed but I wanted a pool that looked very natural,” says Lucy Scott-Moncrieff, a solicitor living in north London. Her attractive oasis – a 63sq m oval pool with gently sloping sides fringed by bulrushes and water lilies – has “its

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own built-in serenity”, she says. “It offers quiet, soothing, gentle swimming and I love listening to the trickling water. It’s like an extension of Hampstead Heath.” Scott-Moncrieff’s pool was supplied by London-based Gartenart. Tim Evans, its managing director, estimates that there are now around 50,000 natural pools at private residences in mainland Europe. And this Continental enthusiasm for natural pools is now catching on in Britain, with increasing numbers of companies offering design and construction services.

“A natural swimming pool is specifically designed so you can swim in clear water with no chemicals,” Evans says. “It’s also a beautiful landscape feature and a wildlife sanctuary as well as a practical swimming facility.” William Woodhouse, a director of Cambridge-based

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Woodhouse Natural Pools, agrees, “It’s a whole environment.”

Michael Littlewood, a Somerset-based eco landscape architect and author of *Natural Swimming Pools, A Guide for Building*, has designed 25 natural pools in the UK and others in France, Canada and the US. He first encountered the concept when a client with a Grade II listed house in Gloucestershire requested one in 2001. “As part of my philosophy of ecological design, I had been looking for some time for an alternative to chemical swimming pools,” he says. Littlewood’s research led him to Vienna, where he visited the pioneering Austrian company Biotop, whose

success with a self-cleansing biosystem for swimming pools was followed by the German company BioNova, and Swiss-based Bioteich, each with their own version of the system.

“Natural swimming pools are very popular in Austria and Germany, where ecological awareness is very high,” says Littlewood. Now he is finding that health-conscious, environmentally-aware British clients are following suit, while property developers are starting to incorporate them at upscale sites. One of the first commercial natural pools opened in 2006 at the spa on the Lower Mill Estate in Gloucestershire, an exclusive eco-community of second homes set in a nature reserve. Jeremy Paxton, the estate chairman and former champion water skier, is a big fan of natural pools and has one at his home on the estate. “It takes me back to my childhood when I loved diving into lakes and rivers,” he says. “You feel very connected with nature when you’re swimming in an eco-pool. I find it very relaxing – it sucks all of life’s irritants away. And it’s great hanging out in a boat then flopping over the side to swim.”

Littlewood describes a natural swimming pool as a “chemical-free combination of a swimming area and aquatic plant garden,” and stresses that it must not impose on the landscape in a brutal way. “My philosophy is that you’re designing in harmony with nature, not against it,” he says. “Look out of an aeroplane window over Provence or Tuscany and you see how all those blue rectangles – conventional pools – scar the landscape.” And it goes beyond the visual aesthetics. “As you listen to the early summer sounds of frogs and birds, with water splashing over rocks and boulders, a natural pool becomes your own private oasis,” he says.

So how does a natural swimming pool work? Physically, by having two distinct zones – a deep, central swimming area (usually

from 1.5m to 3m) and a shallower gravel-bed for plants chosen to purify the water. “The basic difference between a natural pool and a conventional swimming pool,” says Evans, “is that the latter uses chemicals, such as chlorine, to kill bacteria, while a natural pool cleanses the water organically. It uses the natural purifying properties of plants, along with a small filter, to extract surface debris such as leaves, and a small pump to keep the water circulating efficiently through the planting area. This eliminates the need for constant cleaning as well as chemicals – the biological self-cleansing process is completely effective.”

The purity of the water is a draw for many users. “We’ve always liked swimming in lakes and rivers and the water in our natural pool is similar – it even tastes sweet,” says Richard Herbert, the Cambridgeshire-based director of an engineering business. And film producer Stephen Margolis, who has a small natural pool in the garden of his north London home, says, “It’s so clear you can see right to the bottom.”

“The water is clear but not sterilised, as it is in a traditional swimming pool, and is therefore able to sustain the normal range of pond life, microscopic organisms, invertebrates and even frogs and toads,” says Littlewood. He is quick to point out that wildlife remains in the plants zone and that aquatic fauna make a quick exit when anyone enters the swimming area. Fish are excluded because they introduce impurities into the water, while mosquitoes are eaten by dragonflies and other predatory insects.

The swimming area, which is usually waterproofed with rubber or foil, is separated from the plant zone by an underwater wall submerged about 10cm below the pool’s surface. This division avoids plants and gravel spilling into the swimming area while allowing water to transfer freely between each area, which can be positioned side by side or located in two

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areas separated by a channel or waterfall. The difference in temperature between the shallower and deeper areas keeps the water circulating slowly, aided by a small pump. When the water leaves the swimming area it passes through a skimmer which removes surface debris, and is then cleaned further in the plant zone. “The plants act as living filters by absorbing decomposing material, bacteria and pollutants from the water and converting them into biomass [vegetable matter], which aquatic plants rely on for their growth,” explains Littlewood. Micro-organisms continue the water-cleansing activity, with algae filtered out by zooplankton, and although some silting occurs due to decaying vegetation, it is easily removed with regular vacuuming.

It can take a few weeks or months for the

The vast 600sq m pool by Gartenart at the Norfolk home of Carphone Warehouse magnate Charles Dunstone.

natural balance of the water to be established but, when achieved, the water feels softer than chlorinated water and swimmers say they never emerge with matted hair, dry skin or sore eyes. “The water is softened by the natural filtration processes so it makes your hair soft and shiny and your skin feel good,” says Woodhouse.

As half the space is devoted to aquatic plants, natural pools look good all year round (with no need for a winter cover) and evolve visually as the seasons change. David Nettleton, an aquatic ecologist who runs Clear Water Revival, a Bristol-based supplier of natural swimming pools, recommends that plant varieties should include submerged oxygenators such as water

violet and water crowfoot and floating plants such as water lilies. Since aquatic plants grow more quickly than soil-based types, it may be necessary to prune and thin them out. Generally though, there's minimal maintenance.

Each pool is designed to suite its location. The plants can surround the swimming area in an attractive fringe, line one side only, or be annexed to a second pool, perhaps uphill, with circulation facilitated by a waterfall. Some homeowners choose a formal shape. Others, such as Gloucestershire-based Tish and Tim Rickard, are seduced by the untamed loveliness of a wilderness pond. "Most chlorinated outdoor pools in Britain are used for six weeks in summer and are then an eyesore for the rest of the year," says Tish. "Our natural pool fits perfectly with the rural surroundings and looks utterly beautiful throughout the year. Even in winter, when the vegetation is cut down, it's such a pleasure to look at."

The smallest pool built by Gartenart is a 30sq m pool in a London garden, while the largest, so far, is the 600sq m pool built for Carphone Warehouse owner Charles Dunstone at his Norfolk manor house.

It's also possible to convert a conventional swimming pool by surrounding it with a shallow plant area or separating the existing structure into two separate zones.

Costs obviously depend on the size and complexity of the design. Littlewood cites a typical price of £450 per square metre while Evans suggests a figure between £50,000 and £80,000 for an average-sized pool (100 to 150sq m), although there may also be further landscaping costs to consider. Overall, it probably works out about the same as building a conventional pool. However, maintenance costs are much lower since there's no need for chemicals and regular cleaning, nor seasonal

draining and refilling.

Pools can be heated, although it's not really necessary because the shallow area acts as a natural solar panel by heating up quickly and circulating the warmer water to the swimming zone. "Natural pools are generally warmer than conventional outdoor swimming pools," says Evans, and water temperatures regularly reach 24°C in summer in the UK. "Ours was 23°C in May last year and we swam from mid-April to mid-September," says Woodhouse. "Solar panelling only increases the water temperature by a couple of degrees and probably isn't worth installing, except at new-build properties. Adding a hot tub or sauna to the infrastructure is a better way to extend its use." A couple of his clients, however, have requested heated pools despite the additional construction costs. Solar panelling costs between £5,000 and £15,000, depending on pool size, while an underground heating system – recommended only where it heats the house too – costs around £20,000.

Although the construction and biological processes involved in creating a natural swimming pool mean that costs are on a par with building a conventional pool, there's no comparison in terms of aesthetics and sensual experience. With clear pure water, fragrant flowers, birdsong and visiting kingfishers, a natural swimming pool, as Tish Rickard says, "blends in perfectly with the landscape and is a great source of joy."