

Going native, American style

The big landscaping trend in the US is “being green by going native”. This has particular resonance in Australia, as it’s largely about saving water. Christina DiMartino reports.



Sustainable landscape by Salsbury-Schweyer, Inc.
Photo courtesy Ian Adams

It's Earth Day, April 22, as this story is being finalised. Commemorative campaigns taking place around the world include committing to paying bills and salaries through the internet instead of by mail, not buying bottled water, using more public transport, reducing the over-consumption of goods that require fossil fuels to be produced, and reducing landfill waste.

Google celebrated the day by announcing that it is using goats to keep its properties mowed at its facilities where possible, rather than contributing to its carbon footprint by using lawn mowers.



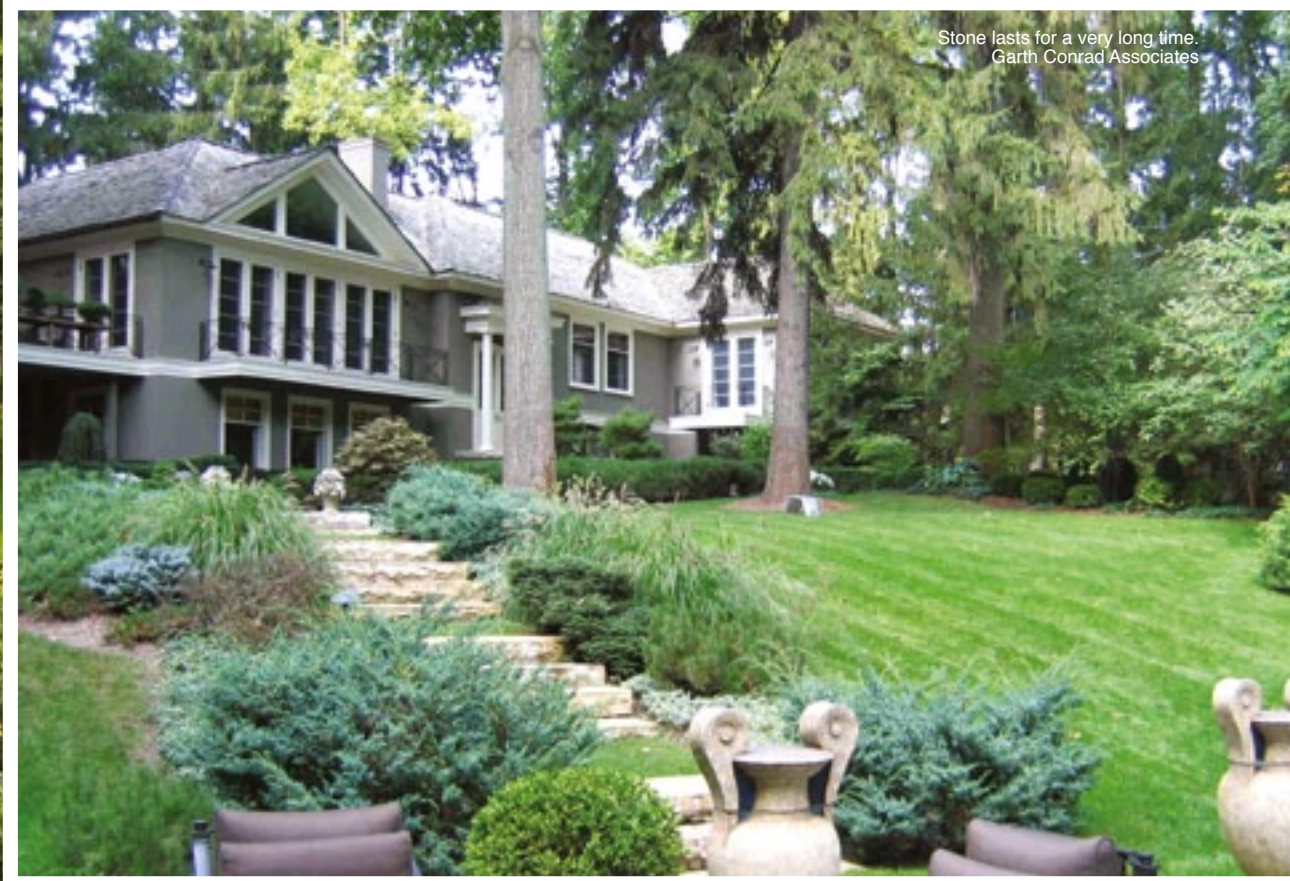
Terms including "sustainability," "ecology," "environment," "carbon footprint" and "green" are a common part of just about every language today, and every person and every industry around the world is being held accountable.

Change appears to be slow in some parts of the globe. In State of the World 2008: Innovations for a Sustainable Economy, World Watch Institute reported, "Clearly, Western Nations have been the key driver of climate change so far. Between 1950 and 2000, the United States was responsible for 212 gigatonne of carbon dioxide, whereas India was responsible for less than 10 percent as much. So it is clear that the richest people on the planet are appropriating more than their fair share of 'environmental space'. Yet their lifestyle is increasingly what the rest of the world aspires to."

Association of Professional Landscape Designers (APLD), a national organisation that establishes and encourages standards of excellence in landscape design, says the interpretation of "sustainability" is obscure.

"Clients don't understand the word in its correct definition," says Griffith. "They know that doing things right for the environment is important, so they will say they want a sustainable garden. But once they learn what's involved, they realise it's not what they really want. They want an instant and pretty landscape."

"Stone is not renewable, but it has longevity and can be reused indefinitely."



Stone lasts for a very long time.
Garth Conrad Associates

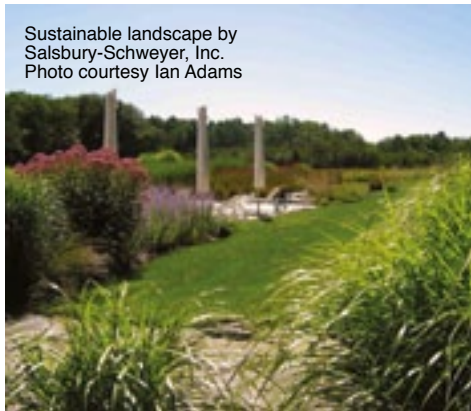
Defining sustainability

Some industries, including the landscaping industry, are progressing in the movement-turned-lifestyle to save the earth's resources in a variety of ways, besides hiring goat herders to keep the grass in check.

According to landscape designer, Richard Griffith, owner of Garden Design in Matawan, New Jersey, the problem with speeding up the sustainability movement doesn't lie entirely with designers, but with consumers. Griffith, a member of the

What homeowners often don't understand, according to Griffith, is that a true sustainable landscape takes time to develop and requires a different set of processes.

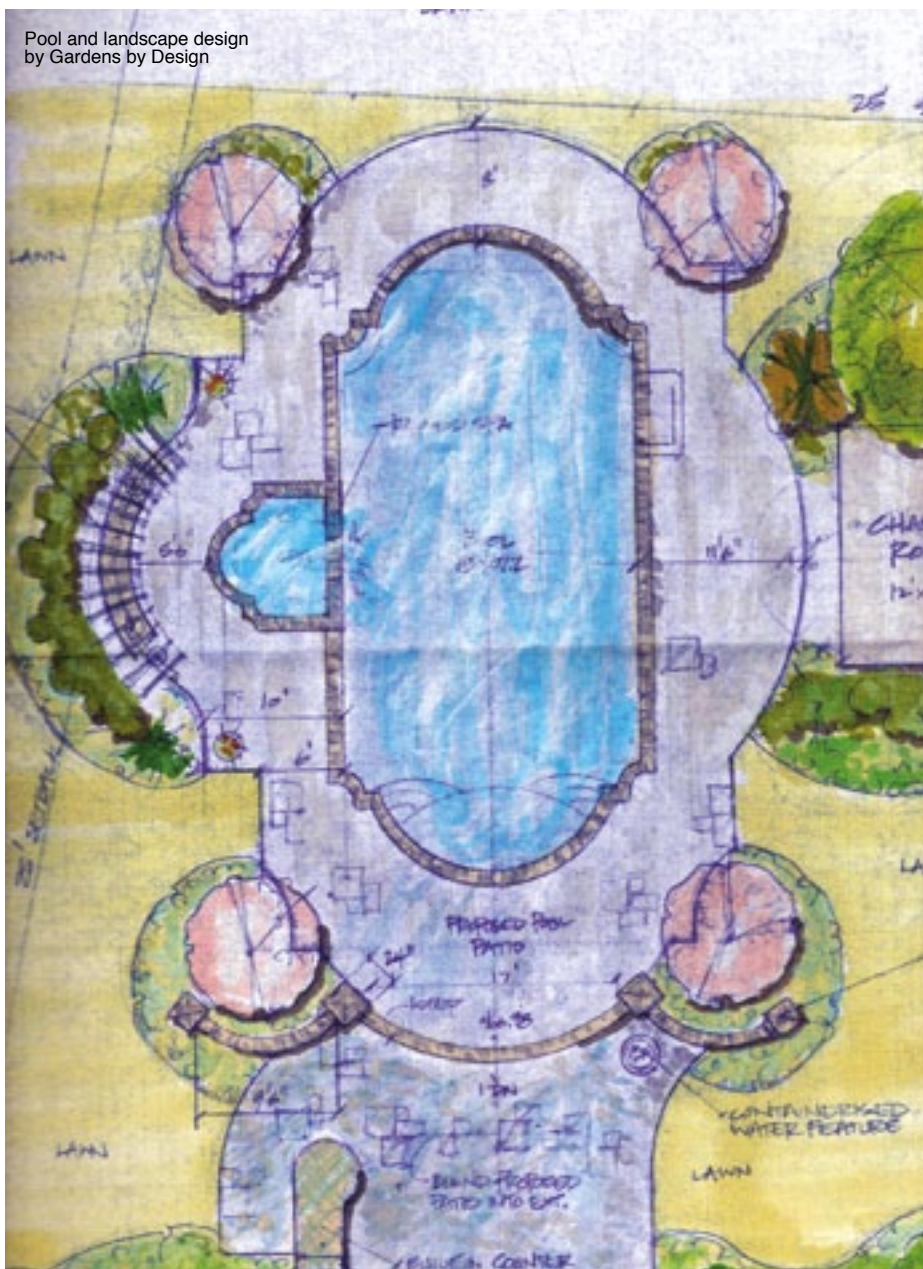
"At the end of the day, the environmental buzz is a good thing because it's influencing areas that aren't sustainable at all," he says. "Those who do fully understand it are prepared to pay time and money. These people know that as much as 80 percent of their budget will go to the bones, or hardscape, of the property. The cost of the plants becomes



Sustainable landscape by Salsbury-Schweyer, Inc. Photo courtesy Ian Adams



As much water is retained on site as possible. Garth Conrad Associates



Pool and landscape design by Gardens by Design

a minor part of the expenditure. Landscaping sustainably is expensive.”

A sustainable hardscape involves using the land in its native state, or reconstructing it back to approximate it, so designers can work with how it would naturally function. Proper preparation also ensures that native

or indigenous plantings will be introduced to the site successfully.

In the US, many municipalities are now involved in the runoff issue. “They want rain and surface water kept on properties,” says Griffith. “One thing they are asking for is the inclusion of underground tanks that act as

collection systems, so the water is fed back onto the property.”

Much of Griffith’s design work has been carried out in New Jersey, Pennsylvania and New York, although he’s also done offshore projects. He says it’s extremely difficult to get work permits in many municipalities in the US today without addressing the ecology of the landscape.

“These new laws are also affecting pool and spa installation,” he says. “Pools that hold water were not included in water retention laws in the past, but today they are in many places because they are categorised as hard surfaces that water cannot drain through. You can get away with a rock patio that allows water to run through to the ground, for example, but you cannot get away with a solid surface that doesn’t allow water absorption into the earth.”

The trend is toward more overall difficult regulations, Griffith says. “New homes

“A true sustainable landscape takes time to develop and requires a different set of processes.”

constructed in the US are also getting larger, which takes away from the amount of property for landscaping, which in itself is not sustainable.

He says that “green” homes are gaining in popularity.

“But we still face the challenge of convincing homeowners to use plants that are native to their regions. Native plants are as expensive as exotics, but they usually take years to mature, and they require a lot of maintenance before they provide the aesthetic appeal that owners want.”

A diet of local grass for the goats

Garth Conrad, owner and principle of Garth Conrad Association in LaPorte, Indiana, is an APLD board director and president of the Midwest Ecological Landscaping Association. He said the ecological movement in landscape design began when the Leadership in Energy and Environmental Design (LEED) began in 1993. The consensus system included non-profit organisations, government agencies, architects, engineers, developers, builders, product manufacturers and other industry leaders. From 1994 to 2006, LEED grew from one standard for new construction



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to a comprehensive system of six standards covering all aspects of the development and construction process.

"Once LEED gained a foothold on buildings, it flowed over into landscaping," says Conrad. "By the late 1990s, it had given landscape designers a sustainable measure for which to push. It especially addressed traditional turf lawn. At the time, consumers were more aware of the hazards related to chemical use on their lawns than on the overall sustainable landscape."

Most consumers do not know that typical turf grass used in America's backyards is foreign to the United States: it's from Europe.



Installing a plastic retention tank. Gardens by Design



Kentucky blue grass is not from Kentucky, but is also from offshore. Conrad says the native grasses being used today require more water, and that has helped to spur the runoff issue. The idea is to let water percolate right where it drops. If you're using pavers or decking, for example, you want to make sure that water can permeate it and run into the ground.

"I define sustainability as living today without borrowing from tomorrow," says Conrad. "It means using a minimal amount of water and chemicals. This also means that poorly drained sites may have to be reshaped to better hold moisture, and that plantings are used which help to soak up water more efficiently."

Conrad suggests selecting a range of plantings that can tolerate a lot of water for short periods of time. This translates into having to irrigate minimally and infrequently. Native and indigenous plantings also draw wildlife, which help to nurture the earth.

"In areas of the US where sustainability is a priority, people turn their backs on foreign plants," he says. "Native plants are naturally



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adapted for the site, and they have evolved in local conditions, meaning they require less care. Communities where residents pull together to practice this level of sustainability are typically less landscaped. More compost and fewer chemicals are used, making the land even more earth friendly. These organic methods are a reversal back to the original methods of landscaping, and they help us get off of this over-use of foreign material and chemical roller-coaster.”

“We can’t be selling off all of our virgin topsoil. We use compost to build up landscapes; the plants we use will tolerate existing soil conditions.”

able landscapes and good stewardship. About 10 years ago, she began lecturing on these topics to developers, municipalities and homeowners.

She agrees that consumers need a clearer definition of the term “sustainability.”

chemicals and not contributing to long-hauling materials from other parts of the country, or the world, to a landscape site.”

Salsbury-Schweyer’s philosophy is to connect people with nature in a truly personal way. When they are surrounded by nature, it helps them to better connect to the earth. When they become more sensitive to the earth, they tend to treat it more respectfully. That in turn leads to more awareness, which is passed onto others.

“More cities in the country are definitely cracking down on watershed systems that don’t manage storm water efficiently,” she says. “These new laws, and new awareness that comes with them, are encouraging people to reduce paving and other impervious surfaces in exchange for those that allow their lawns to catch water. Rain barrels are one solution to capture water that otherwise goes to the sewer. These are often tied to downspouts and then to a hose so the water can be recycled to irrigate plants and lawns.”



Installing a concrete retention tank. Gardens by Design



Sustainable water pond by Gardens by Design

Conrad often works with pool and spa designers. He says that maintaining a “green” environment requires all the designers and contractors meet together at the planning table from the beginning of projects.

“Things we strive for at such meetings are the reduction or elimination of bringing in foreign building materials from outside of the area,” he says. “The trend toward exotics—materials like stone shipped in from the east—became very popular over the years. One of the things LEED advocates is learning to use materials that have a regional identity. This is one way the pool and spa industry can contribute to more sustainable environments.”

Sustainable is Nature

Sabrina Schweyer is owner-partner with her husband, Samuel Salsbury, of

Salsbury-Schweyer, Inc., a landscape design firm in Akron, Ohio. She is a member of APLD, and she has been teaching gardening and landscaping for more than 20 years. Her focus has always been on organic, sustain-

“The first thing consumers think when they envisage sustainability is saving energy, like changing to energy efficient light bulbs,” says Schweyer. “Getting them to wrap their brains around an accurate definition is the first step. Give them a term like ‘earth-friendly,’ however, and they’re more apt to think about their landscapes. A sustainable landscape is more than about native plants and managing water runoff. It’s also about using fewer

The firm is currently looking into hot tub designs that don’t require chemicals.

“We are just beginning this process in our attempt to do everything in a more sustainable way,” says Schweyer. “And we would like to discover ways that filtration can be more sustainable. If this can be accomplished in hot tubs, it can also be done in swimming pools. We’re also studying ways to tie hot tub systems into home heating systems, and

then recycling that heat. This would help to cut down on fuel usage.”

She adds that non-toxic natural water systems, including in pools and spas, would help to encourage wildlife in lawns, which would add to the whole experience of a natural landscape.

“In Cleveland, Ohio, the sewer district is starting to address water waste by calculating a fee based on the impervious surface of a property,” she added. “Home owners would be made to pay more taxes according to the impervious surfaces on their property. In some areas of country, those who keep rain water on site are subject to fewer fees, and this helps to provide more opportunities for those who focus on sustainable projects.

“We’re doing more rain gardens, bioswales (see box), pocket wetlands and other projects that help keep rain-water on properties,” Schweyer continues. “We’re also incorporating prairies, and diverse plantings of native trees and shrubs. There are a lot of prairie plants that are native to our area. These have deep tap roots that allow the water to permeate down.”

She says that Ohio sits at the edge of the American prairie, and the landscape quickly turns into woodlands due to the amount of annual rain the area receives.

Doing things in a more sustainable way, Schweyer says, is quickly becoming mainstream, especially among younger people.

“We have never done an instant gratification landscape,” she says. “Even though trees and shrubs are placed appropriately for long term growth, we’ve always done organic amendments to the soil to accommodate good plant growth. We use perennials to provide diversity, beauty and interest. Clients see results within about two years. Landscapes with water ponds take two to three years to evolve.”

Schweyer advises that builders and designers take the embedded energy of materials into consideration before planning to use them. She suggests they ask themselves how much energy it takes to produce the material or to transport it to the site. Can the materials be reconstructed and recycled when they are no longer wanted or needed? What is the lifespan of the material? Will it decompose on site or will it end up in a landfill?

“We use a lot of local stone, so that in 30 years time the patio can be moved from one area to another as compared to pavers or con-

“A big issue is pavers, and will likely be legislated in most areas. If you want a patio installed, you’ll be required to use permeable pavers that allow water to seep into the soil.”

crete that become obsolete,” she says. “Stone is not renewable, but it has longevity and can be reused indefinitely.

“One of worse practices is bringing topsoil in to a landscape site,” Schweyer says. “It’s just taking it from one site and hauling



Fitting in with the landscape.
Salsbury-Schweyer, Inc

to another. We can’t be selling off all of our virgin topsoil. This is a big problem in our industry. We try always to use compost to build up landscapes, which contributes to healthier soil. The plants we use will tolerate existing soil conditions, which is an important factor.”

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Consumer awareness growing

When Ed McKenna, president of Gardens by Design in Saddle River, New Jersey, started doing lawn maintenance in the early 1970s, when it was a relatively new trade in the US

“By the late 1970s, I was contracting landscape designs, irrigation systems and swimming pools,” he says. “The subject of sustainability, at least for me, began in the mid-1980s, when I started to become aware of what the old timers had done. For the past several decades, it was a matter of doing whatever the client requested, which was typically based on the popular trends of the day. But I soon realised that didn’t work because the designs, materials and plantings weren’t right for the region. It seemed to me that less is more, and native is better. It’s how people over a half-century ago thought: pay attention to soil conditions, sunlight, airflow and water runoff, and especially that water does not sit in places.”

Today, the first thing McKenna does on a new job is to check for drainage. Then he considers the soil condition and composition.



Finding materials and plants that suit the local climate is crucial. Garth Conrad Associates

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What's a bioswale?

A bioswale is a drainage element in a landscape, designed to get rid of silt and pollution from surface runoff water. It consists of a swaled drainage course with gently sloped sides, usually less than six percent, which is then filled with vegetation. The water flows along a wide, shallow ditch, designed to keep the water in the swale for as long as possible. This aids in trapping the silt and allows the biological elements to help break down some of the pollutants. This picture shows two bioswales – the foreground one is under construction, the far one is established.

"There is a lot of clay and rock in New Jersey, so I usually have to do something with the soil in order for native plants to thrive and stay disease and pest resistant," he says. "We feel we've come up with good plant selections that fit this profile."

"Hardscape materials must also be considered," continues McKenna. "If you set up the right drainage system you won't have soil lifting or a wall crumbling down."

Winter 2010 in the north-eastern US

brought unusually heavy snow loads, causing some serious plant damage.

"This spring, people are calling me to replace those plants with varieties that are better suited to the region," he said. "This is a good indication that they are being educated."


Laws regarding water runoff are strict in New Jersey today. McKenna says years ago water was allowed to run helter-skelter down driveways into to a sewer on the street.

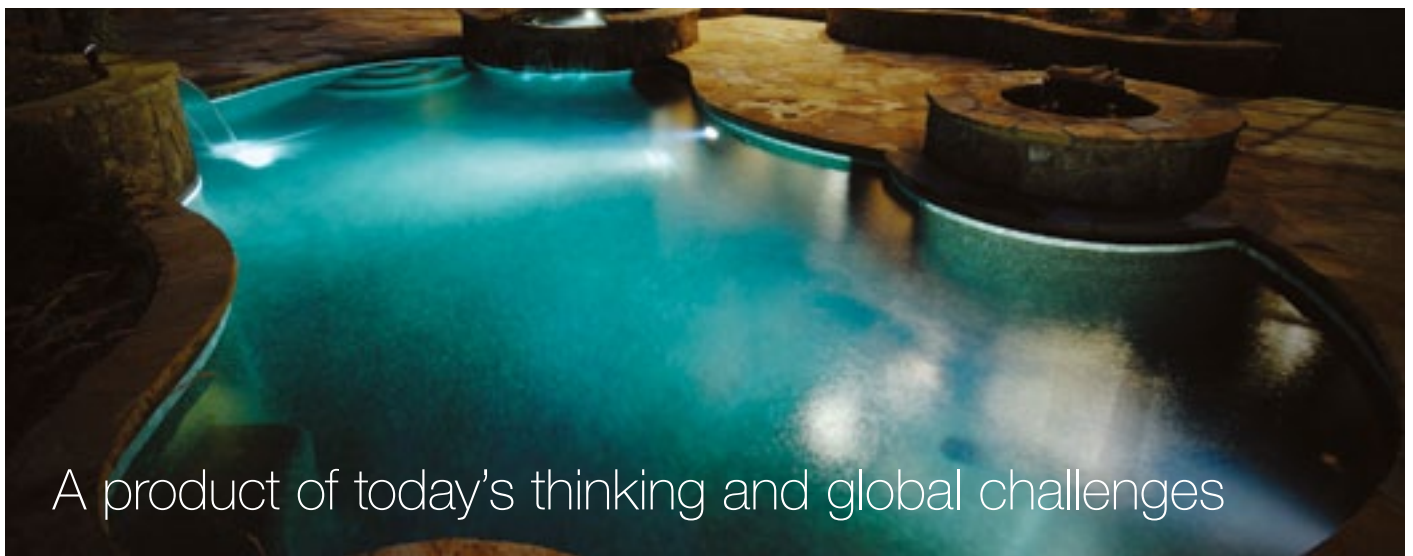
"Today, all water from gutters must stay on the property," he says. "We now install underground water tanks to collect the water, which then dissipates back into the soil. The tank's holes hold gravel and a filter fabric to keep the gravel clean."

Concrete tanks were initially used when laws went into effect, but today plastic is preferred because it is easier to transport and install.

"Another big issue here is pavers," says McKenna. "I anticipate this being a major movement across the country, and will likely be legislated in most areas. If you want a patio installed, you'll be required to use permeable pavers that allow water to seep into the soil."

Another issue that may cause new legislation to spread across the US in the future is land use. New home construction may be restricted to a percentage of the total lot area, insuring more preservation of the landscape.

"As sustainability knowledge and education increases, landscape design and development will continue to change," says McKenna. "There's no going back. Regardless of your industry, it's time to become better stewards of the earth." 



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