

LIVING GREEN

When it comes to living green, your biggest asset – your home – can have a huge impact on the planet. Your choices can make all the difference.

BY VALERIE KHOO

GETTY IMAGES

It seems that wherever you turn these days, you're faced with a range of green choices. You can choose green energy, drive a hybrid car, print on recycled paper and wear eco-friendly clothes. While all of these purchasing choices help make the world a greener place, what about the biggest purchase you're ever likely to make in your life: your house?

An increasing number of Australians have realised that it's not just about installing water tanks and solar panels. While these elements are important, the biggest impact on the environment may actually be the building itself: how it's built, what materials are used, and what's going to happen to it at the end of its life.

GREEN DESIGN THAT DOESN'T COST A DOLLAR

Progressive builder Michael Condoleon from Cosmopolitan Homes says that he's seen an increasing "green" awareness amongst consumers. "A few years ago, maybe one in 10 people were interested in sustainability," says Condoleon. "Now, it would be at least one in four people who are actively asking about it."

One of the myths surrounding building "green" homes is that it's going to cost more. Condoleon is keen to debunk that myth. He says: "There are good practical design features that don't cost you a dollar."

He suggests that it's "not rocket science" to incorporate simple factors like orienting the building to suit the site and designing good airflow and ventilation to reduce the need for airconditioning. "If you design to let in a lot of natural sunlight, you need use less lighting during the day," he adds.

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However, it's not just individual homes that are going green, it's also whole communities. While established suburbs have inherited a certain amount of infrastructure, new suburbs and communities can incorporate sustainable features from the outset.

Mawson Lakes, in the northern suburbs of Adelaide is developed by Delfin Lend Lease – part of integrated property group Lend Lease. Situated on 620 hectares, planning began in 1997 and various stages have been developed and released since then. The whole project is expected to be completed in 2010.



Cosmopolitan Homes at Murrays Beach in NSW, built to preserve its pristine surroundings.

ARCHITECT: SCHREIBER HAMILTON

Do it green today!

You can use sustainable building materials. The house above features Scyon™ Linea™ weatherboard and Scyon™ Matrix™ cladding.

According to Guy Gibson, General Manager for Affordable Housing and Sustainability of Lend Lease Communities, Mawson Lakes has an energy rating score sheet which aims to reduce domestic energy consumption by 50% compared to the Adelaide average. This is being done through a number of strategies. Gibson told *Australian Innovations* it was the first project in South Australia to mandate wall and ceiling insulation and solar hot water systems. Solar powered lighting is also used in selected public areas.

"It also has an innovative water recycling system whereby stormwater and effluent is treated for use in gardens and toilets as well as to irrigate the public domain," says Gibson. "The aim is to reduce the use of mains water by 50% compared to the Adelaide average and to reduce the reliance on water from the River Murray and Mount Lofty Ranges."

Gibson says that Mawson Lakes has waste management guidelines that are targeting a 50% reduction in construction and domestic waste dumped as landfill.

Gibson also points to the supply chain – such as builders and material suppliers – which is an integral part of creating sustainable outcomes. "We're trying to influence builders of homes and also the smaller developers who ultimately come onto our sites to create shopping centres, for example."

However, Mawson Lakes is not the only new community that can lay claim to green credentials. There is also the Aurora development, where VicUrban has mandated all of the 8,000 homes built achieve a 6 star energy rating. According to Aurora's Development Director Theo Della Bosca, this has never been done before within a greenfield housing estate in Australia.

"This isn't the norm in the development industry," says Della Bosca. "We wanted to achieve a contemporary built form that was well designed so as to best achieve a 6 star energy rating." →



Architects and builders are creating sustainable, liveable homes.

To assist builders in achieving this, VicUrban provided a series of comprehensive guidelines on building orientation, designs to reduce overshadowing of neighbouring houses, insulation, ventilation, 4 to 5 star energy efficient appliances and gas-boosted solar hot water.

But you don't have to live in Aurora to build a house with these best practice guidelines. You can follow them yourself no matter where you build your house.

PROTECTING THE ENVIRONMENT

Some builders and developers are also leading with innovative construction ideas that are kinder to the environment. One example is the development by Stockland at Murrays Beach, near Lake Macquarie and Wallarah National Park.

In this natural undulating environment, sloping sites are common. Traditionally, "cut and fill" building methods are used where builders cut into a hillside or slope, and remove this material. This is then used to fill the area below the slope. Typically, a concrete slab is laid and the house is built on that.

According to Stockland's Northern Regional Manager Paul Hogan, Stockland encouraged minimal use of retaining walls and of extensive cut and fill areas. "We didn't want major earthworks for each dwelling, so within each lot, we have carefully created the building envelope and have quite strict guidelines," says Hogan. "Houses can be on piers and beams rather than cut and fill slabs."

Hogan suggests the use of lightweight products – in lieu of a brick house and tile roof – helps support that vision.

A similar challenge has been faced by the Springfield Land Corporation, developer of Brookwater golfing estate, about 30 minutes from the Brisbane CBD. According to Brookwater's General Manager Residential, Andrew Whitson, one of the challenges was building on the undulating terrain. Some home sites had anywhere between a two metre to 10 metre fall.

Brookwater worked with a number of builders to provide consumers with options that not only worked with the terrain but also catered to specific consumer needs and lifestyles.

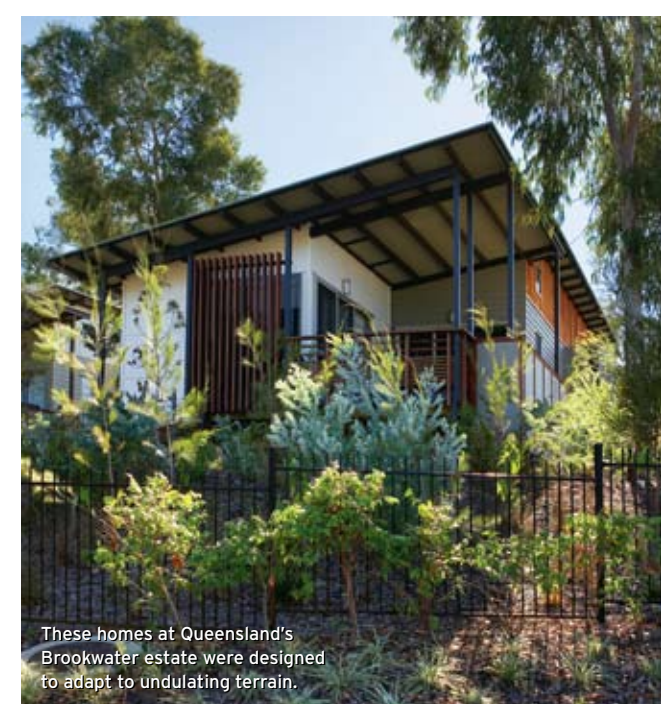
Using lightweight materials has been a key factor in this process. "One of the big issues is the weight of the structure," says Whitson. "When buildings are a lighter weight construction, the foundations don't have to be so substantial. You can also do a suspended type of structure with lightweight materials."

At both Murrays Beach and Brookwater, choice of building materials is critical in building a home with minimal impact on the environment. However, some builders are also considering the environmental impact at every stage of the building process – from raw materials to manufacturing and even transporting and assembling.

The has led builder Craig Riddle of Living Green Designer Homes to create what he believes is Australia's first carbon neutral home, at Kurri Kurri in New South Wales. Riddle has worked with carbon reduction specialists Climate Friendly to evaluate every step of his building process to reduce emissions and then offset the balance with carbon credits.

The display home was only completed in September 2007 and Riddle says he has fielded interest from home buyers all over the state. "What's amazed me is that the same little house has attracted an unbelievable cross-section of buyers," he says. "From people who want affordable housing to a couple of beachfront homes in excess of \$1 million. They all want the energy efficiencies this offers."

A simple suburban garden is not only a "carbon sink", which absorbs carbon emissions, but also can provide shade and cool in warmer temperatures.



These homes at Queensland's Brookwater estate were designed to adapt to undulating terrain.

GREEN-NOVATING YOUR HOME

Building sustainability isn't confined to home owners who are building their home from scratch. If you're renovating, your decisions and choices can also have a significant impact on the environment and the sustainability of your home.

Celebrity renovator Cate Blanchett has been green-novating her Hunters Hill home, transforming it into an eco-friendly residence. She is reportedly installing features such as grey water recycling, a 20,000 litre water tank, solar panelling, energy-saving lights, to name a few.

Blanchett engaged Lesiuk Architects on the project. Principal Stephan Lesiuk has been working on green architecture for decades, gaining a PhD in it in 1984. Lesiuk says he's noticed a shift in the attitude of clients on this issue. "The impacts people have on the environment and the necessity for thinking green has been an evolution," he says. "Water restrictions and Al Gore, however, gave this thinking an imperative – a call to action."

If you're green-novating, Lesiuk suggests focusing on improving three main areas: energy usage, water usage and ecological diversity. The latter is a reminder that a simple suburban garden is not only a "carbon sink", which absorbs carbon emissions, but also can provide shade and cool in warmer temperatures.

Lesiuk says many people want to know that they are doing something positive for the environment. "The economic spin-off is just seen as a further benefit. While we can tell them that the design of their house will reduce their energy bill by 50%, they only sit up and pay attention when we tell them that the design will reduce greenhouse gases by so many tonnes each year."

The trend towards greener homes is unlikely to go away. "Customers ... have raised the bar," says Lesiuk. "And are now expecting more than designer features like granite benchtops from their new house." ■



ARCHITECT: DKO ARCHITECTS

ARCHITECT: PLANT ARCHITECTS

DID YOU KNOW?
Using smart design principles and building guidelines, you can have an innovative green home. All 8,000 homes at VicUrban's Aurora estate must have a 6 star energy rating. This house by Orbit Homes features Scyon™ Linea weatherboard and HardiFlex® sheets.