

House & garden

Often gardens play second fiddle to the house design – a deck and a vegie patch tacked on once the build is accounted for and if any budget remains. Free Range Food Gardens permaculture landscape gardener Gordon Williams makes the case for an integrated approach.

WORDS Gordon Williams

PHOTOGRAPHY Nick Stephenson

THERE'S NO SHORTAGE OF

knowledge about good design in both the building and landscaping fields covering aesthetics, functionality and efficiency. But for the most part they are treated as separate entities, failing to consider the exciting possibilities a holistic approach during the design process can offer.

While it is important to make improvements to existing homes by retrofitting them and the surrounding landscapes, many options are limited by the cost of making changes to previous works. New projects allow the chance to step back and look at the whole picture. We can design places to live that are comfortable, affordable to heat and cool, resource conscious and beautiful when a broader

approach is taken. Pen and paper design changes early on can multiply savings during construction and implementation, while reducing ongoing running and maintenance costs.

Let's consider the ways we can minimise energy and resource use by integrating the outdoors and the built environment. There is the obvious role that plants can play in providing shade. We all know the difference the shade of a tree can make on hot and sunny days. But there are many less obvious ways they can benefit our indoor spaces.

On those sunny days when plants are photosynthesising their food from sunlight, they also transpire water from their leaf surfaces. Kind of like sweating, it keeps the plants cool and has the added benefit



Phil Edwards took an integrated approach with the sustainable renovation of his inner Melbourne terrace [profiled in *Sanctuary 26*]. There is the small outdoor area on the ground level with a rain garden and a sand pit for the kids (which will eventually become a plunge pool); the front and back rain gardens; an internal courtyard that lets in natural light and air, and a green roof which make the outdoors an ever-present aspect of every part of the home.





The vegetable garden is a key part of Melissa and Rafael's life, so it made sense to prioritise garden access and green views in their Melbourne renovation [profiled in Sanctuary 21].

GREEN SHADE

- In tropical Australia, evergreen plants are ideal for keeping direct sunlight from entering and heating the home.
- In southern and temperate regions where temperatures are hot in the summer and cool in the winter, evergreen plants are best kept on the southern side of the building. Deciduous plants can be used on the north, east and western sides to let in valuable winter sunlight.
- Trellis vines are a great way to provide shade. By using a trellis it is easy to control the size and shape of the plant and what it shades. The root systems of vines are much more suitable to have near a building than that of a tree.
- Shade- and moisture-loving plants such as ferns can be placed on the shady sides of the building where a breeze can bring cool moist air into and around the home. A pond and a trellised evergreen vine over this area can enhance this effect. [Ed note: see more on edible shading tips in *Sanctuary* 27.]

of cooling the surrounding air. Leaves also provide a perfect surface for water vapour in the air to condense upon, warming the leaf surface and surrounding air. Simply put, this means that plants have the effect of moderating the temperature and the humidity of their surroundings. For more comfortable and stable temperatures year round, and a reduced reliance on electricity or gas for heating and cooling, it makes sense to make use of plants around the home.

Not only can the landscape benefit the home, but the building itself can be of great use to the landscape. Consider how physical and energy resources like the wind and sunlight move through your site. The shading and wind buffering effects created by the building can allow for ecological niches and a greater diversity of plant life.

The home is also a source of resources that can help a garden thrive. Rainwater harvesting and grey-water recycling systems can provide an additional supply of water through the dry times. We all know water wants to move downhill so why not design to use gravity to move water where it is needed instead of pumps. Planning for the redirection and use of greywater and stormwater for your garden early on, around your plumbing system, will avoid

difficult or costly infrastructure changes later.

A large volume of organic material from the kitchen can be directed to compost, worm farms or even to the humble chicken where the nutrients will be conditioned to improve soil and plants. And if you play your cards right, you could even be rewarded with fresh fruit, veggies and eggs.



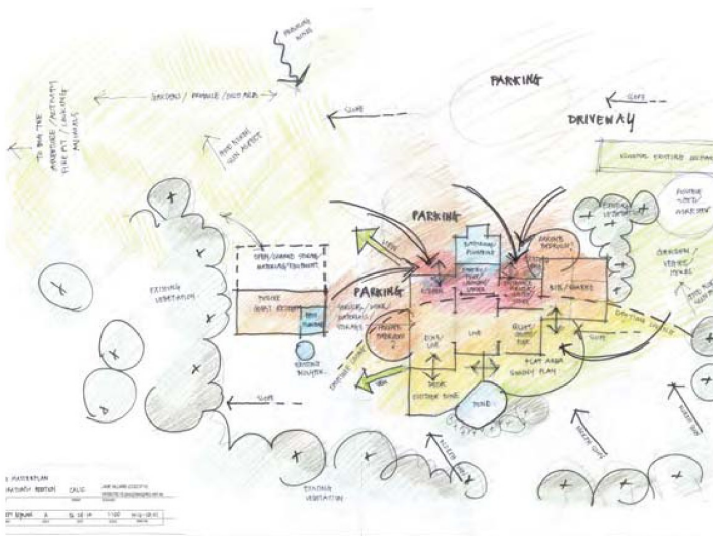
Gordon Williams is a permaculture landscape gardener and principal of Free Range Food Gardens in Sydney.
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Jane Hilliard is lead designer at sustainable garden and home design agency Designful in Hobart.
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Building designer with Designful, Jane Hilliard, is an advocate for an integrated approach, and teams up with Good Life Permaculture to create interconnected sustainable homes and gardens. She says most systems in a home and garden can feed into each other, to create a self-supporting 'ecosystem' that reduces the need for outside resources. She shares some tips:

- The whole property system needs to be designed around the topography, the sun and climate. A master plan concept can help prioritise and connect the best use of available sun, aspect, flat areas and drainage systems. For example, a natural drainage system could be used to complement food gardens. The house can be positioned on the property so it doesn't shade productive gardens from much-needed sun or to protect areas from wind.
- A fundamental link in the food production system is the vegetable garden to mud room, to kitchen flow. This link allows the natural and easy progression of food from the garden to the table. If considered in the design stage this flow can be maximised, easy to use and a satisfying part of your lifestyle. (The mud room is an intermediate room between outside and inside that can combine laundry, storage, potting and seed-raising – I consider mine one of the most important rooms in the house!)



Designful and Good Life Permaculture teamed up to create this integrated master plan design for a Hobart renovation. The concept integrates natural drainage and plumbing to benefit productive gardens, and makes the most of natural habitat for biodiversity. The new garden and the home are designed around the sun and climate for optimum food production, environmental benefit and enjoyment.

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