



Architects Advisory Service

Guide to Sustainable Homes

“Global warming” “climate-change”, and “sustainability” are words we hear regularly these days, but what do they all mean for home-owners, home-buyers or new home builders?

The answers aren't always clear and the information is often confusing. Most people will agree, however that we're building more, bigger homes than ever before, that collectively they consume vast amounts of energy and water and that we should do something about it.

This Guide simply aims to outline some sustainability initiatives that we believe Australian home-owners should consider. It also gives an approximate indication as to how much they might cost.

Archicentre Australia architects have been inspecting and designing great homes since 1981...now it's time for us to help make them as energy-efficient and water-wise as we can.

Talk to us about making your home more sustainable!

NEW HOMES

New homes these days are required by law to be sustainably designed.

Regulations vary from State to State but one thing is common throughout Australia...you can't build a house without first demonstrating that it will meet the minimum State energy-efficiency requirements incorporated into the Building Code of Australia.

Energy-efficient new homes require clever design, careful specification and meticulous construction, all of which will create a comfortable building that's to live in and cost-effective to run. It's not always easy, however and requires the consideration of several sometimes conflicting variables:

- orientation
- construction materials
- zoning
- glazing
- ventilation
- insulation
- shading
- heating and cooling

In an ideal world, the allotments all have views to the north and the clients all have big budgets! Unfortunately, the reality is usually different, and even the simple principle of “living areas to the north and sleeping areas to the south” is often difficult to achieve in practice.

Home designs and allotment orientations have to be considered together to ensure the most energy-efficient buildings. A “5-star” home on one allotment may be a “4-star” home on another and simply upgrading the window specifications is unlikely to be the most cost-effective solution. Similarly, a “water-wise” home is more easily created during the design process than by adding tanks or grey water re-use systems later.

Sustainability is more affordable if it's designed into a building at the outset...into the form, the layout, the construction and the landscaping.

Archicentre Australia architects have been designing sustainable homes for years – not because they have to; because they want to...and because they want their clients to have the best homes they can.

Talk to us about your new home.

ESTABLISHED HOMES

Most established homes were neither designed nor built with much regard for energy efficiency or water conservation.

Ironically, many of our earliest homes came complete with verandas and water tanks, but these features have since been abandoned as homes have become bigger, more energy-hungry and more water-thirsty than ever before.

Our challenge now is to try to improve the performance of our existing homes...to reduce their demand for energy and water but at the same time maintain our quality of life.

The good news is that many Australian home-owners want to make their homes more sustainable. A recent Archicentre Australia survey found that almost 80% of our architects' clients were keen to install a solar-boosted hot water service, nearly 75% were interested in energy efficient lighting and over 90% wanted a water tank.

Many people are concerned enough about the environment to spend money on energy or water-saving home improvements, but what should you do? Where do you start? How much will it cost?

The answer is easy... Inform, Implement and Improve!

1. Inform yourself...find out where and how energy and water is wasted in your home. The federal government website, www.yourhome.gov.au is a great place to find information.
2. Implement change...as much as you can:
 - fix leaky taps, showers and toilet cisterns
 - turn lights off when you leave the room
 - don't leave computers or appliances on standby
 - re-set the thermostats on your heating and cooling (18° in winter and 24° in summer)
 - install low-energy light globes
 - fit weather-seals to your windows and doors
 - install external blinds to shade from summer sun
 - put in a ceiling fan
 - change to low-flow shower heads
 - plant a drought-tolerant garden
3. Improve things...as soon as you can:
 - insulate the ceiling
 - put in a water tank
 - buy high star-rated appliances
 - upgrade your hot water service
 - install solar panels
 - fit a grey-water diversion system
 - replace your single flush toilet cisterns
 - upgrade your windows
 - upgrade your heating system
 - build a pergola or veranda

Finally, if you're planning to renovate make sure it's properly designed!

Archicentre Australia architects understand the importance of orientation, zoning, construction and ventilation and can design you a home that will be comfortable to live in, inexpensive to run and cost-effective to build.

Talk to us about your renovation.



COST GUIDE

Archicentre Australia has prepared the following guide to help people understand and budget for sustainable home improvements. The Guide can be used as a short term 'shopping list', for example, or to plan longer term improvements. Perhaps both!

The estimates are based on the installed cost of a variety of common household upgrades and range from improvements to a typical 2-bedroom unit up to a more substantial improvements to a 4-bedroom family home.

In any case, our advice is simple – do whatever you can do now and then do more later.

Talk to us about your home improvement.

Ten Top Water Saving Improvements		
1	Rainwater tank	\$2,000 - \$4,000
2	Downpipe diverters	\$300 - \$500
3	Grey water diversion system	\$2,000 - \$3,000
4	AAA – rated shower head(s)	\$200 - \$300
5	Dual flush toilet cistern(s)	\$600 - \$900
6	Flow reducer on meter	\$300 - \$400
7	Low-flow tap(s)	\$600 - \$900
8	Fix leaking fixtures	\$200 - \$300
9	Water efficient appliances	\$1,000 - \$2,000
10	Drip watering system	\$300 - \$500

Ten Top Energy Saving Improvements		
1	Door & window seals	\$200 - \$300
2	Ceiling insulation	\$1,200 - \$1,800
3	Evaporative cooling system	\$2,000 - \$3,000
4	External blinds (per blind)	\$600 - \$1,200
5	Ceiling fan	\$500 - \$1,500
6	Energy efficient appliance	\$800 - \$1,500
7	Solar-boosted hot water	\$4,000 - \$5,000
8	Install damped exhaust fan	\$300 - \$500
9	Install down-light guards	\$300 - \$500
10	Replace light globes (whole house)	\$100 - \$200

Finally, remember that...

- plumbing and electrical work must be done by a licensed contractor
- rebates are available on many sustainable home improvements – check with your supply authority

Small changes can make a big difference, so start making your home more sustainable today...every little bit helps!

Talk to us about making your home more sustainable.