



Architects Advisory Service

Your Home – Sustainability

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

A sustainable home is one that is more livable, healthier, saves you money on water and energy bills, is constructed using environmentally efficient materials and thereby reduces its environmental impact.

Sustainable homes are resource efficient. They incorporate passive solar design features such as house orientation, good ventilation, insulation and shading; integrate water, waste and energy efficiencies, as well as cost effective use of building materials to maximum comfort and minimise the energy costs in running the home.

Sustainable homes start with good design features and the use of low-maintenance materials in order to make the home more liveable and cost-efficient over time.

Areas of design to consider are the form of the home, the layout, the construction and the landscaping. Archicentre Australia Architects are experts in sustainable design and can assist you in achieving the optimum outcome for your new home or renovation project.

Building Sustainable New Homes

The Building Code of Australia determines that all new homes incorporate a minimum level of sustainable design features. The specific regulations may vary from state to state however one thing is consistent throughout Australia in

that you can no longer build a house or undertake a renovation without first demonstrating that it will meet the minimum state energy-efficiency requirements. These are usually measured in terms of a star rating system.

Energy efficient sustainable new homes require clever design, accurate specifications and meticulous construction, all of which lead to the creation of a comfortable building that's also cost effective to run and will increase in value over time. It can be a challenging task as there are many variables to consider such as the home orientation, zoning, ventilation, shading, construction materials, glazing, insulation and heating and cooling.

Home designs and allotment orientations have to be considered together in the initial design phase to ensure the most energy-efficient buildings. The energy rating of a standard design may vary significantly from one site to another purely due to orientation and the surrounding landscape and topography simply upgrading the window specifications for example 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.

Established Homes

Most established homes were neither designed nor built with consideration to energy efficiency or water conservation. Ironically, many of our earliest homes came complete with verandahs and water tanks, but recently these features have been abandoned as homes have become



bigger, more energy hungry and more water thirsty than ever before. Our challenge is to try to improve the performance of our existing homes reducing the home's demand for energy and water, but at the same time maintain or improve our quality of life.

The good news is that many Australian homeowners want to make their homes more sustainable. A recent Archicentre Australia survey found that:

- Approx. 80% of our architects' clients were keen to install a solar-boosted hot water service
- Approx 75% were interested in energy efficient lighting
- Over 90% wanted a water tank

Many people are concerned enough about the environment and/or informed enough about the ongoing cost savings, to want to spend money on energy or water-saving home improvements, but what to do? Where to start? How much will it cost?

The answer is easy..... inform, implement and improve! Inform is listed below but Implement and Improve aren't...need to be consistent.

Inform yourself...find out where and how energy and water is wasted in your home. For further helpful information the federal government website, www.yourhome.gov.au is a great place to find information.

Homes Energy Efficiency Tips

- 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
- Install ceiling fans
- Insulate the ceiling
- Buy high star-rated appliances

Checklist Improvements for your Home

- Fix leaky taps, showers and toilet cisterns
This item doesn't save energy...check source document)
- Change to low-flow shower heads (as above)
- Plant a drought-tolerant garden (as above)
- Install solar panels
- Replace your toilet cisterns with water efficient dual flush units
- Upgrade your heating system to a more efficient design
- Put in a water tank
- Upgrade your hot water service
- Fit a grey-water diversion system
- Upgrade your windows using double glazing or other high tech. glass
- Build a pergola or verandah to provide shade when needed

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, cost effective to build and will add value. Talk to us about your renovation!

If you would like to talk to an Archicentre Australia architect – a building expert - about a particular matter, please call Archicentre Australia on 1300 13 45 13 or go to www.archicentreaustralia.com.au