

the SUSTAINABLE HOME

enjoy life in an efficient dwelling



Making your home sustainable

Your sustainable home will save you money by reducing energy and water use. It will help reduce the amount of waste you produce and improve your surroundings by:

- making use of renewable energy to heat, cool and power the home
- recycling and reusing your household and garden wastes
- avoiding excessive waste production
- producing some of your own food or buying it from businesses that sell food produced sustainably, such as farmers' markets and food co-ops.

An easy place to start

The solution to making our towns and cities better places to live begins at home. Starting right now, we can take those small initiatives that make our homes energy efficient, less wasteful and polluting and which make careful use of resources to create a healthy home environment.

Bill Mollison who, with David Holmgren, devised the Permaculture design system, put it this way:

Wherever we live, we should start to do something. We can start first by decreasing our energy consumption. You can actually live on 40% of the energy you are now using without sacrificing anything of value.

We can refit our houses for energy efficiency. We can cut our vehicle use by using public transport and sharing with friends. We can save water off our roofs into tanks or recycle greywater to the toilet system or garden.

We can also begin to take some part in food production.



Solar-electric panels - energy is sold to grid

Solar water heating

Insulated roof and walls keep building warm in winter, cool in summer

Above-ground tank stores rainwater

Few areas of glass to west reduces warming by hot afternoon summer sun

Eaves wide enough to exclude summer sunlight, admit warm winter sun

In-ground tanks store rainwater

Large glass areas to sunward admit winter warmth and heat thermal mass floor

House aligned so that long axis faces sunward to capture solar energy

Food garden provides vegetables, herbs, fruit to residents

Resource efficient house at Aldinga Arts Ecovillage, South Australia

FOOD

A reliable supply of fresh, nutritious food is a necessary part of the sustainable home:

- where possible, buy local food for freshness and nutrition, to reduce pollution and greenhouse gas production in transporting food and to support local farmers and small business
- turn your excess lawn into a garden producing fruit, vegetables, herbs, nuts and eggs
- no garden? join a community garden if there is one nearby
- if you have no interest in growing your own food, buy certified organic foods (look for the logo of certification agencies)
- join a food co-op or community supported agriculture scheme for shared food buying or buy from farmers' markets
- buy Australian and organic from supermarkets.

Medium density passive solar

Sydney's Kogarah Town Centre combines apartment living with passive solar design, water harvesting, rooftop solar electricity generation and small business around the public plaza and streetfront.



The sustainable home

ENERGY

The greatest reductions in domestic energy consumption come through:

- a solar hot water system to reduce household energy use and expenditure by 30 to 40 per cent
- insulation in the roof and, in cooler areas, in the walls.

Other approaches include:

- reducing energy use for heating and cooling by growing a deciduous vine, such as a grape, over a pergola on the sunward side of your house to provide shade in summer and to let warming sunlight inside in during winter; a deciduous tree to sunward achieves the same result
- building or renovating using passive solar energy design – in temperate climates, large areas of glass facing sunward; tile or concrete floor to absorb warming solar energy in winter; eaves shade walls and windows in summer – saves on space heating and cooling which consume up to 17 per cent of domestic energy
- in winter, retain heat by closing doors to unheated rooms; design for cross flow ventilation in summer
- weather strip window and door frames to prevent warm air loss in winter and reduce the need for heating
- buy energy efficient appliances – turn appliances off and don't leave on stand-by
- use natural light whenever your can; install skylights to bring light into dark rooms; install compact fluorescent light bulbs.

House at Penrose Rural Co-operative, NSW Southern Highlands



Cold climate solution — glasshouses face sunward on this mudbrick and timber house to warm the interior in winter. Heat is vented off in summer. A cosy sitting and dining nook was placed between glasshouses.

WATER

Water is a scarce resource in Australia. It may be conserved by:

- storing roofwater in tanks for garden irrigation, clothes washing, toilet flushing and car washing
- installing low-flow shower heads and tap fittings and taking short showers
- installing a dual-flush toilet cistern or composting toilet
- using a water saving washing machine and only washing with a full load
- in your garden –
 - mulch to conserve soil water
 - choose a water conserving irrigation system such as drip irrigation or permeable hose
 - divert kitchen and laundry rinsewater to garden irrigation — for health reasons, do not use on vegetable crops.

WASTE

Disposal of domestic waste is a costly environmental problem in our cities. In Sydney, between 40 and 50 per cent of domestic waste is organic — lawn clippings, garden waste, food scraps — which can be composted to produce fertiliser for our gardens.

To reduce waste:

- **avoid** — buy fresh food—avoid pre-packaged; buy unpackaged or minimally packaged products
- **reduce** — buy quality products which last longer; repair products rather than replace them
- **reuse** — extend the useful life of packaging and other materials by finding further uses
- **recycle** — choose products in recyclable packaging; recycle food scraps and garden vegetation by composting them; use wastewater for garden irrigation; put out metal, glass and recyclable plastic containers for council recycling collections if you cannot reuse them at home.



PRODUCED BY...

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TerraCircle is an international development consultancy working in the South West Pacific and in Australia in: food security, livelihood development, training in small scale sustainable agriculture, community health, project management.

AUSTRALIAN CITY FARMS & COMMUNITY GARDENS NETWORK (ACFCGN)
www.communitygardens.org.au

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