



green renovation

CONVERTING YOUR HOME INTO A GREEN HAVEN

A sparkling new kitchen or bathroom can give an otherwise tired home a new lease on life, but our desire for continued 'home improvement' is having a negative environmental impact.

The way we build, renovate, decorate, maintain and furnish our homes can also increase the level of pollutants indoors and can lead to short and long-term health problems.

STORY GINA CACHO (BSC)



Organic bed linen from
www.ecodownunder.com



Choose bath towels and bedding in certified organic cotton. ecoLinen range available from holySheet, www.ecolinen.com

In most cases, renovating an existing building is far environmentally superior to demolishing and building from scratch. Modern design and technology now allows for greener and safer renovating than ever before, with a little know how, your home may not only look better but may also be more comfortable for your family and better for the earth.

There are numerous elements to sustainable design, so the key is choosing an architect and builder who have expert knowledge in environmentally sustainable homes. Even if you are merely 'freshening up' your home there are a number of important considerations.

UTILISING SOLAR PASSIVE DESIGN

On average, 39 percent of energy consumed in Australian homes is through space heating and cooling, but using passive solar design can dramatically reduce this figure. In simple terms, passive-solar design is about keeping the summer sun out and letting winter sun in.

The Greenhouse Technical manual, www.greenhouse.gov.au/yourhome, released by the Australian Government describes solar passive design as incorporating:

- Northerly orientation of daytime living areas
- Appropriate areas of glass on northern facades
- Passive shading of glass
- Thermal mass for storing heat
- Insulation and draught sealing
- Floor plan zoning based on heating needs
- Advanced glazing solutions
- Choosing materials wisely

Embodied Energy describes the total energy that goes into making an item, from its raw materials to the finished product. Choosing products with lower embodied energy is a good place to start, but you must also consider the operational energy and end of lifecycle costs. That is, how does your choice of material affect the need for other forms of energy use during its lifetime and what happens at the end of its life; can the material be recycled? Looking for local products is also an environmentally positive option.

WHERE DOES THE WASTE GO?

According to the Greenhouse Technical Manual: "Australians generate approximately one tonne of waste per person, per year, which goes to landfill. Up to 40 percent of this is building waste." The 'reduce, reuse, recycle' framework can be used to limit waste during the building process; ensuring that we only build what we need to live comfortably. Focusing on exceptional design rather than grand size will also make a positive impact.

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BAUWERK Lime paints are toxin-free and have no nasty fumes. Available from BAUWERK, Fremantle.

temperature and can contaminate indoor air. Paint strippers, pesticides, carpet, furniture and building products can all be sources of VOCs. Common VOCs in the home, such as formaldehyde (found in furniture and building glues and varnishes) and benzene (released from paints), have been listed as carcinogens.

In addition to high-level exposure during application, these pollutants continue to release gas for many months and can be exceptionally harmful. Fortunately, the majority of these products now come in eco-friendly, non-toxic varieties.

Conventional synthetic paints contain a vast array of toxic synthetic chemicals, most of which are derived from petroleum. Toluene, benzene, formaldehyde and isocyanates are all commonly found in paint. Less toxic alternatives are plant-based paints, which are not only a safer option but tend to offer better coverage.

Our homes will always be our havens, but they needn't be environmentally damaging to be stylish, comfortable and user friendly.

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Choosing to reuse existing materials will prevent these items from going to landfill, in turn reducing greenhouse gas emissions from landfill sites and minimising toxic chemicals leaching into waterways and causing damage. Building materials now able to be recycled include steel, aluminium, gypsum plasterboard, carpet and even concrete.

Contact your local council or regional waste authority to see exactly what can be recycled in your area. Ensure you have contracted your builder to adopt a waste minimisation approach.

LOCATION

When designing your home, consider the position of your backyard. Lots of sunlight is conducive to a great vegetable patch and 'growing your own' remains one of the most environmentally positive steps a family can take.

Vegetation can also reduce glare and reflected heat. The design stage is also the perfect time to consider water saving devices such as rain tanks and grey-water systems.

MINIMISE INDOOR AIR POLLUTION

Volatile Organic Compounds (VOCs), are emitted compounds that vapourise at room



PROTECTING YOUR AIR

Choose non-toxic paints and sealants and plant-based hard oils or waxes rather than polyurethane finishes. Install physical termite barriers rather than chemical versions and choose hard floors with rugs. If you must have carpet, opt for a low emission product and leave the house during and after installation if possible.

Purchase furniture made with non-toxic glues and sealants. If this isn't possible, buy floor stock that has had time to off-gas. If you do purchase a new product, ask if it can be unwrapped and allowed to off-gas in the warehouse for several days before it is delivered. Instead of petrochemical derived PVC, polyester and virgin forest wood, choose natural organic fabrics and sustainable woods such as bamboo. Consider antiques and second hand items.

Look for organic cotton, bamboo or hemp products for your bedding or bathroom needs to avoid the off-gassing from pesticides and synthetic dyes that occurs with conventional products.

Ensure good ventilation during and after renovation by keeping floors and windows open. Consider relocating during the renovation or, if that is not possible, keep the renovated area separate from your living and sleeping areas for several days after the work is complete.



All products are non-toxic and made from renewable materials. Available from the Planet Ark Shop, Fremantle, www.livos.com.au

