

## Building Your Sustainable Home

Building a sustainable home requires discipline. Making sure you get what you want and pay for. Be informed about the decisions you make as you will be paying it off for a very long time. As Building Designers we will work for you, and don't be afraid to ask questions until you get the answers, and don't be put off. We can do it the sustainable way (and it meets the Building Code of Australia and the regulations, etc).

We will design and make suggestions for products and features for your new home. Most all of the modern houses built today are toxic with high levels of carcinogenic substances, formaldehyde and volatile organic compounds contained within the indoor environment.

Too often we came across Builders saying "we have always done it this way... because it's cheaper and people need to be able to afford to buy their houses" rather than looking at the safer alternatives. As soon as you mention something different, they immediately say it will cost you more to put you off, rather than looking at the real costs and then making an informed decision. They have their suppliers and don't want the hassle of looking for new suppliers, building relationships, researching new products or ideas.

This information sheet is dedicated to those people who want to build a sustainable home:

- Energy efficient - that use no more energy than is required for our needs and using solar energy and highly energy efficient devices;
- Accessible Whole-of-Life house - that would be able to be lived in from the Cradle to the Grave no matter what age or state of health;
- Non-toxic - a building that does not use building products that contain carcinogenic, toxic, neuro-toxic, formaldehyde or volatile organic compounds;
- Sustainable - from building materials and products that are available now and will be for generations to come that work with the environment and don't pollute our air, water or soils, are socially responsible and are economically sustainable.

We can design your new home trying to use only sustainable and healthy products, but some of these things maybe outside your means, so we can compromise in some areas, but if everyone insisted on healthy building products then this would not be such a hard task. There are a number of criteria that can be applied to your new building:

- You want a healthy house where you could breathe easy.
- You want to have a house that can be able to be lived in from the Cradle to the Grave no matter what age or state of health.
- You want your house to be as Energy Efficient as you could possibly make it.
- You want a house where you and workmen will not be at risk when working on your house.

- You want to use devices that are highly efficient and produce the lowest possible amount of greenhouse gases.

## Energy Efficiency

- Help reduce your own energy requirement by using energy smart devices.
- Insulate your house well - Air-Cell in the roof, in the walls and under the floor, and/or polyester batts or rolls, or wool insulation are the safest and are recyclable when finished with.
- Double glaze your home so that you don't lose the heat out the windows, reducing your heating bills. For added security and safety use laminated glass.

## Renewable Energy - use energy from renewable sources.

- Use Solar Hot water heating with Gas Boosters - it is the most efficient.
- Generate your own electricity from PV Solar arrays, wind generators, Micro-hydro generators, etc. There are healthy rebates from Government for home installed systems.

## Air Toxics

Air Toxics are gaseous, aerosol or particulate pollutants which are present in the air in low concentrations with characteristics such as toxicity or persistence so as to be a hazard to human, plant or animal life. The terms 'air toxics' and 'hazardous air pollutants' (HAPs) are used interchangeably.

Air toxics include the following general categories of compounds: volatile and semi volatile organic compounds, polycyclic aromatic hydrocarbons, heavy metals and aldehydes.

Air toxics are emitted into ambient air from a wide range of sources. The exposure of the Australian population to these substances is dependent on individual lifestyle and places of work and residence.

Thus it is desirable to reduce the exposure of the Australian population to these substances where possible.

## Healthy Indoor Air Quality

According to [Asthma](#) Organisations, you need to change the air in a room 1.5 times every hour, so that people with asthma don't have problems. Also the choices you make for furniture, heating, flooring, building materials and paints may make a difference to the Asthma suffer.

Reduce or don't use formaldehyde resin based products - chipboards, MDF, plywoods, composite wood products, fibreglass batts, etc. If you have it, paint or laminate all exposed surfaces to seal them up so that off gassing does not

occur inside your house, vent roof spaces so that it doesn't build up in the roof cavity. There are other products that can be substituted like plantation timbers and "Formaldehyde Free" MDFs and composite wood products.

## What Next?

McKiernan Design Drafting is willing to work through your requirements and guide you through the process. Please call today to make an appointment. Phone 07 54298186 or 041 777 9562.



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