

# Looking beyond design

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A truly sustainable design means considering the environmental impact of all construction materials right down to the paints and finishes.

Architects, designers, trades people and home owners should investigate the many options available for healthy, environmentally responsible living. We all know, and data confirms, that we spend most of our time indoors. This unfortunately seems to be an ever-increasing trend especially with the younger generation. If this is the case, is it not more important to consider what we incorporate in a build or renovation?

Preliminary decisions are made early in the design and construction phases of a building. Often though, and as the finishing stage is towards the end of the build, the actual analysis of the paints and coatings is often overlooked. This can be due to many factors including delays and variations in schedule, builders not being informed or trades reluctant to use anything but what they know.

Your choice of building materials and coatings will have long-term ramifications on many levels. These are some of the points to consider.

## Health

A sustainable home is not necessarily a healthy one. While the building design may take into account the orientation, use of earth walls for thermal mass, consider the water supply and be self-sufficient in energy, to name but a few, that does not mean the indoor air quality has been considered.

This is a separate topic that requires further investigation. Consider that some paints do not smell as strongly as they used to. This is because they are produced differently with VOC (volatile organic compounds) in mind. But is this enough; what other additives are being used to mask this smell? They smell less but are more scrubbable and have an increased range of colours. Why are homeowners still reacting to products that have low VOC? Many synthetic products continue to off gas for weeks and some, many months after the coating has dried.

## Embodied energy

This is the total sum of energy of a product's life cycle. The more natural a product is, the less it is processed, which means less energy and water usage in

its manufacture. If a product is made from renewable raw materials, not only is the product of no harm to the environment, but the substrate that it is used on can also be safely reused, recycled or composted. The choices of materials can significantly change the amount of embodied energy of a project. This is not occupant dependent, but rather the energy built into the materials.

## Maintenance

Whatever the surface and whatever the product, keep in mind long term use. How is the surface to be kept looking as optimal as possible? Does one need to redo the whole process again e.g. sanding back varnished floors? Are the maintenance products safe for man, child and the environment? By investing in quality and correctly maintaining a product, the reuse and recycle aspect in the object's lifecycle is greatly improved.

Products manufactured using renewable raw materials are designed to help people reduce their environmental footprint. There should be less issues with using something found in nature rather than something that is man made and processed. Always check for the full ingredient listing.

In short, buildings should be designed and built with as many sustainable features as possible. Consider not only the construction of the building, but also – very importantly – the choice of products and furnishings used inside the home. Choose wisely, and not only will your health thank you for it, but also your hip pocket. A win-win situation. ♦

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