

A clean sweep

Environmentally-friendly floors can also provide the foundations for a healthy home

Flooring and floor covering options are many and varied and so are the environmental considerations. From plush wool carpets to concrete floors, the right solution depends on your individual tastes and circumstances. Where you live, the purpose of the room, cleaning routine, ventilation and who uses the room are all factors. No one solution fits all.

Environmental factors

As the old adage goes, reduce, reuse, recycle. The first question you need to ask is do you need a floor covering at all? Polished concrete, wooden and bamboo floors can not only help with the environmental performance of a house—concrete floors are excellent for trapping and releasing heat—but can look spectacular. Whatever the surface is, it needs to be durable to reduce the need for replacement.

Can you buy secondhand materials or does the flooring product contain recycled content? Some enterprising companies now supply heavy-duty wool carpets that are reclaimed from office renovations, cleaned and their condition graded. There is also a range of carpet underlays that are made from old carpets, textile off-cuts or even recycled plastic bottles.

The raw material that the flooring is made of needs to be considered. As with most products it is better if it is made from natural, renewable materials that can be replaced in a relatively short time. The actual manufacturing process also has an impact on the environment with some processes requiring large amounts of water and energy, contributing to greenhouse gas emissions. Also check whether the manufacturer participates in recycling programs that reduce waste during the production process.

Health and toxicity

As we spend over 90 per cent of our lives indoors, our internal environments have a large impact on our health and wellbeing. Not only can floors contain toxic products such as volatile organic compounds (VOCs), which can 'offgas' into the surrounding air, but they can harbour dirt, mould and dust mites. Dust mites feed on skin flakes and produce airborne particles that can trigger allergic reactions or asthmatic episodes when inhaled by children or adults who are sensitive to them.

The best way to reduce dust levels and dust mites is to keep surfaces clean. Smooth floors such as ceramic tiles, linoleum or polished wood and bamboo are easy to clean. Look for carpets that are easy to clean and washable. Cleaning methods will vary depending on the type of carpet, its backing and any underlay present, and the level of traffic and use. Whatever the floor covering, care needs to be taken during installation as VOCs from glues and sealants may be released.

Natural flooring options

Natural carpets and fabrics

Carpets made from natural products such as wool, silk, cotton, coir, sisal or seagrass can look great and bring warmth to a room. They offer a rapid renewable and non-toxic alternative to synthetic carpets and are more likely to be recyclable or biodegradable. However, as with all carpets, care needs to be taken to ensure that they are well-maintained so they do not collect dust and dirt. They consume large amounts of water and energy during steam cleaning and toxic chemicals may be used to treat the carpet against moisture and insects.

Carpet tiles are a good option as they reduce the need to replace all of the carpet in a room. Even just one panel can be replaced and they reduce the amount of waste during installation.



Natural linoleum

Natural lino products are made of mostly linseed oil in conjunction with natural pigments, rosin from pine trees and wood flours. Lino is a durable, long-lasting floor covering made from a renewable resource that is biodegradable. It can be swept, reducing the need for water, power or chemicals for cleaning. Lino can be dried easily and is great for wet areas, preventing the build-up of mould and mildew.



Polished concrete floors

Concrete floors can be finished to create different visual effects and colours and are a strong, easy to clean, long-term floor option. They can also play a part in keeping the house at a comfortable temperature by storing and slowly releasing heat. Some sealants may contain toxic components but natural wax alternatives can be used that are safer for your health and the environment.



Ceramic tiles

Ceramic tiles are another tough and easy to clean option. Like concrete floors they have very good thermal qualities and the base product can be locally sourced, is easily recycled and contains no VOCs. However, as they are produced from clay fired at high temperatures they use a lot of energy during the manufacturing process.



Wood flooring

Wooden floors have been used and loved for many years. Compared to other building materials wood has a low embodied energy, is easily reused and recycled, and is completely biodegradable. However, to maintain its eco-credentials, wood needs to be recycled or sourced from sustainably-managed forest or plantations. Look out for independent labelling such as from the Forestry Stewardship Council (FSC). Once again check that no toxic sealants have been used during manufacturing or installation. While wood is renewable, it has a long growing period.

Bamboo flooring

Bamboo is actually not a wood but a grass and is growing in popularity as a strong, durable flooring option. As bamboo is a fast-growing plant with a harvest time of three to five years, as opposed to 10 to 20 years for most timbers, it is a readily renewable resource. Check with your supplier to ensure that the bamboo is sourced from sustainably-managed plantations.

Backings and underlays

One of the main sources of VOCs that is often overlooked is carpet backings and underlays. Make sure that what you have underneath your natural flooring option is also non-toxic and comes from a sustainable, renewable source.

Whatever flooring option you choose, what you do in the home can make the single biggest difference to the health of the indoor environment. Avoid smoking indoors, don't let dust build up, keep surfaces dry and well-ventilated and avoid cleaning products that use fragranced ingredients as they may include VOCs. There is variation not only between the flooring types but also products used within the flooring types, so make sure you do your homework and look for products that have been independently assessed and certified by an eco-label.

For more information:

Forestry Stewardship Council
www.fsc.org

Ecospecifier
www.ecospecifier.org

Australian Ecolabelling Association
www.aela.org.au

Your Home
www.yourhome.gov.au

Flooring tips

- Choose a flooring option suitable for your climate and needs.
- Check that any wood products are from a sustainably-managed source.
- Be careful of the off-gassing of VOCs from glues and adhesives and sealants during the installation of floor coverings and underlays.
- Check to see if the product has been independently certified with an eco-label.
- Avoid smoking indoors, don't let dust build-up, keep surfaces dry and well-ventilated and avoid cleaning products that may include VOCs.