



Women's  
Environmental  
Network

# briefing

Working for  
environmental  
justice through  
feminist  
principles

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# Guide To Healthy & Environmental Flooring

*This briefing aims to take consumers through the different available flooring options for their homes, giving an impartial view of the characteristics, benefits, and flaws of materials, and therefore helping to make appropriate choices. Information is given with regards to potential health impacts, lifecycle (including manufacture, transportation and installation), relative cost, and to which rooms different types of floors are best suited.*

## Unbiased Research

Research into healthy flooring is often undertaken by asthma and allergy organisations or by companies within the flooring industry. It can be contradictory and therefore confusing for consumers wishing to make the right decisions about how to furnish and decorate their homes in a healthy (both personal health and the health of the wider environment), ethical and affordable way. This briefing focuses, in an unbiased way, on what are healthy choices for you, your environment and the planet.

## Life Indoors

Most people spend more than 90 per cent of their lives indoors nowadays.<sup>1</sup> The home environment has changed dramatically over the last 30 years with the influx of soft furnishings, fitted carpets, and central heating. Indoor ventilation has decreased; fresh air is exchanged at a rate 10 times lower than it was 30 years ago, which means that humidity, (good for the dust mites) as well as concentrations of pollutants and allergens, has increased.<sup>2</sup>

## Fitted carpets

Fitted carpets still predominate in the UK despite trends for and against it over the years. 98 per cent of UK homes have wall-to-wall carpeting, whereas the figure is only 16 per cent in France and 2 per cent in Italy.<sup>4</sup> It is recognised that, although there are perceived and superficial advantages of comfort, insulation and noise reduction, the negative impacts, such as exposure to toxic fumes and house dust mites living and breeding in carpets causing allergies and asthma, cannot be discounted. The high use of fitted carpets in the UK correlates with high rates of childhood asthma, more so than any other European country.<sup>5</sup>

On average, the UK consumer replaces carpets every six years.<sup>6</sup> Many carpets contain non-biodegradable materials, and will clog up landfills for around 20,000 years.<sup>7</sup>

### Toxic for Babies

Babies, children, pregnant women and the elderly are particularly vulnerable to pollutants and toxins found in certain types of flooring, especially carpets. One national newspaper dubbed carpets "toxic sponges, sucking up dangerous amounts of chemicals".<sup>8</sup> Ott and Roberts, two highly respected scientists working in the field of indoor toxic pollutants, have now estimated that the average urban infant could ingest 110 nanograms of benzo(a)pyrene, the most toxic PAH (polycyclic aromatic hydrocarbon) per day.

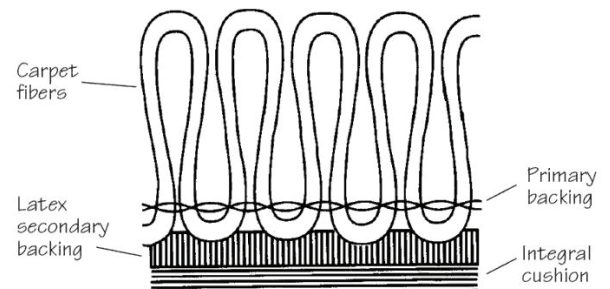


Fig 1. Carpet section<sup>3</sup>

This amount equals what a child would get from smoking three cigarettes.<sup>9</sup> The Healthy Flooring Network and Greenpeace UK published a report in 2001 showing that house dust is a major source of exposure to cadmium, lead and other heavy metals, as well as PCBs (polychlorinated biphenyls) and other persistent organic pollutants.<sup>10</sup> These chemicals are associated with damage to the nervous system, asthma, allergies and cancer.

Vacuuming carpets regularly with a high efficiency particulate air (HEPA) filter is essential to keep dust to a minimum. However, dust mites are not removed as they can cling to the fibres, as well as the chemicals, continuing to "off-gas" a long time.<sup>11</sup> It is better to remove the carpet altogether and replace it with smooth flooring if at all possible.

## House Dust Mites



Fig 2. House dust mite

Dust mites are tiny creatures that make their homes in warm, humid, dusty areas such as carpets, mattresses, pillows, and other soft furnishings. Mite allergens can be found throughout the home environment although the greatest numbers of mites are found in carpets, while the highest concentration is in bedding.<sup>12</sup>

These creatures have adapted themselves to exist alongside us. They don't bite or live on people, but many asthmatics are allergic to an enzyme found in the dust mite faeces, known as mite allergens, and each mite produces about 20 faecal pellets per day. One square metre of carpet can contain up to 100,000 dust mites.<sup>13</sup>

They feed on the skin scales we shed and the fungi that grow on that skin. They have a life cycle of up to three months, and the female dust mite lays up to 300 eggs over this time period. No amount of vacuuming or cleaning can remove the mites, as they have suckers on their legs and grip tightly onto carpet fibres when threatened with a vacuum cleaner!

Dust mites like humid conditions and damp areas. In order to destroy mite populations, relative humidity (RH) should be kept below 50 per cent (RH) on a continuous basis. To check the humidity in your home, you can buy a hygrometer from your local DIY shop.

*TIP: Choose washable, non-allergenic bedding, curtains and soft toys, and wash regularly in hot water (at least 55°C). Tumble-drying will also kill dust mites. Freezing your pillows and soft toys for a day works, but you also need to clean them after freezing, as residues stay on the fibres.*

## Summary Table

*A table showing in detail the positive and negative attributes of various types of flooring is shown on the following pages.*

| Favourable option   | Avoid  |
|---|--|
| FSC Certified: Solid or Engineered Wood<br>"FSC Pure" and "FSC Mixed Sources" | Any wood with any of five these certifications:<br>SFI / CSA / PEFC / ISO / IBAMA (see Glossary) |
| Reclaimed Hardwood, Salvaged Wood   | Laminates  |
| Solid or Woven Bamboo   | Engineered Bamboo  |
| Plain Cork Tiles or Click-together Cork Tiles                                 | Self-adhesive Cork Tiles   |
| Linoleum or Marmoleum   | Vinyl  |
| NR Natural Rubber   | SBR Synthetic Rubber   |
| Polyolefin Flooring   | PVC  |
| UK Ceramic Tiles  | Imported Ceramic Tiles   |
| Local Stone, Reclaimed Natural Stone  | Marble, Limestone, Travertine specifically if<br>travelled long distance                         |
| Rugs made of Coir, Jute, Seagrass, Sisal, Sisool,<br>Wool                     | Wall-to-Wall Carpeting   |

## Smooth Flooring

*Smooth flooring, also known as hard flooring, describes wood, bamboo, laminates, natural linoleum, rubber, vinyl, and many different types of tiles, including cork, ceramic and stone.*

*The arguments for and against carpets and smooth flooring are manifold. The issues surrounding flooring may be more affected by affordability than health, or by environmental considerations, and ultimately determined by your personal situation. Whilst carpets may be problematic for asthmatics and those with Multiple Chemical Sensitivity (MCS), certain types of smooth flooring, such as laminates, contain toxic chemicals, often in the form of adhesives, which off-gas for a long time after installation and can cause health problems too.*

### Wood

Although wood is often seen as the most sustainable choice of floor, there are many pitfalls to be aware, such as if it comes from ecologically well-managed forests, whether it is certified and what kind of certification it has, whether sealants are used during the installation process, and so on.

Solid wood is generally more expensive than engineered wood as it comes from a single species, and is single plank. Engineered wood is considered by some to be a more environmentally friendly choice, as it is a more efficient use of resources - the high-quality wood is on top only so it can go further. However, when taking into account the glues and sealants (usually containing formaldehyde - a known carcinogen) that make up the various layers (see Fig.3), it is actually a poor choice, both from a manufacturing point of view as well as from a health point of view.

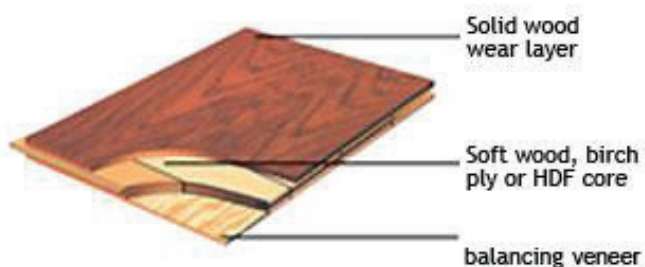


Fig 3. Engineered wood section

### Bamboo

Bamboo floors have been heralded lately as the ‘greenest’ of floors due to them being rapidly renewable; the grass grows to maturity in 5 to 7 years, compared to 50 to 150 years for hardwoods.

On the plus side, it is considered that bamboo plantations sequester more carbon than hardwood forests, but on the negative side, the rate at which bamboo plantations are multiplying throughout Asia for economic gains raises concerns over loss of biodiversity, while over-harvesting produces inferior quality products.<sup>14</sup>

Certification is slow within the bamboo flooring industry, so it is hard to verify the manufacturers’ processes until it gets to the shop floor.



Fig 4. Bamboo species

**TIP:** Consider smooth flooring at entrances where dust and dirt is tracked in from outside and in ‘wet’ areas such as the kitchen and bathroom.

## Types of Flooring

| Type of Flooring   | Eco Positives  | Eco Negatives   | Other Considerations  |
|--|--|---|---|
| FSC Certified Solid Wood                                       | Recyclable and reusable  | Sealants, if used, can produce harmful VOCs   | Suitable for kitchen, lounge, dining room,  |
|  | Low embodied energy if sourced                                   |   | Prices vary wildly  |
|  | Renewable source   | Adhesives, if used for installation, can produce harmful VOCs   | Can be combined with underfloor heating   |
|  | Biodegradable  |   | If sanding floorboards yourself, protect yourself from exposure to wood dust  |
|  | Non-toxic  |   | Requires sanding and re-oiling, depending on traffic and use, every 8-10 years  |
|  | Durable  |   |   |
| FSC Certified Engineered Wood                                  | Limited recyclability and reusability                            | Sealants, if used, can produce harmful VOCs   | Suitable for kitchen, lounge, dining room, bedroom, study   |
|  | Low embodied energy if manufactured in the UK                    | Toxins to seal engineered wood together may off-gas for years.  | Prices vary   |
|  | Renewable resource   |   | Can be combined with underfloor heating   |
|  | Durable  | Adhesives, if used for installation, can produce harmful VOCs   | If sanding floorboards yourself, protect yourself from exposure to wood dust<br>Requires sanding and re-oiling, depending on traffic and use, every 8-10 years. |
| Ceramic Tiles  | Can have recycled content and be recyclable                      | Low embodied energy as far as extraction and processing are concerned, but energy-intensive to transport and often over large distances | Suitable for kitchen, dining room, bathroom   |
|  | Abundant natural resource  |   | Low thermal resistance therefore ideal when combined with underfloor heating  |
|  | Non-toxic  | Be wary of importing tiles, as this adds to embodied energy   | Huge choice of colours, shapes and styles... can have matt/glazed/textured/embossed for anti-slip   |
|  | Extremely durable  | Check adhesives for VOCs  | Required skilled tiler so large areas can work out to be costly   |
| Local, Reclaimed, Natural Stone, Marble, Limestone, Travertine | Recyclable and reusable  | Imported stone adds to embodied energy  | Easy maintenance  |
|  | Abundant natural resource  |   | Suitable for kitchen, lounge, dining room, bathroom   |
|  | Non-toxic  | Stone quarrying can degrade the landscape   | Low thermal resistance therefore ideal when combined with underfloor heating  |
|  | Extremely durable  | Sealants and adhesives can produce harmful VOCs   | Can be time-consuming to source and limited to what's available at the time   |
| PVC / Vinyl  | Durable  | Long-term emissions to soil if committed to landfill at end of life   | Very cheap, but not recommended as substitute to carpets due to phthalates leaking out of floors and being linked to asthma and allergies                       |
|  |  | Made from non-renewable fossil fuels  |   |
|  |  | Petrochemicals refining is major source of GHGs, acid rain and toxins   |   |
|  |  | Use of chlorine in manufacturing process presents risk to health  |   |
|  | Easy maintenance   | Phthalate and tributyltin content present serious risks to health <sup>16</sup>   |   |
|  |  | Difficult to reuse. More phthalates are released as it degrades   |   |
|  | Difficult to recycle. Incredibly toxic due to release of dioxins |   |   |
|  | PVC does not biodegrade for hundreds of years                    |   |   |

## Types of Flooring

| Type of Flooring  | Eco Positives                                  | Eco Negatives  | Other Considerations   |
|---|--|--|--|
| Laminates   | Durable  | Laminates are made up of 4 synthetic layers. The bottom layer contains aluminium oxide to give it its stability and resist moisture, and has been linked to respiratory illnesses                | Underlay is usually needed which contain a variety of toxic chemicals that are used for insulation or water resistance and off-gas   |
|   |  | The core layer is made of HDF - high density fibreboard - a pressed wood product with toxic glues, often saturated in resin and can off-gas for a long time                                      |  |
|   |  | The pattern layer uses thin paper printed with wood grain design and most often originates in China, adding to the embodied energy of the overall product  |  |
|   | Easy maintenance                               | The top layer is made from melamine resin (melamine mixed with formaldehyde). Chronic exposure may cause cancer or reproductive damage. Also an eye, skin and respiratory irritant <sup>17</sup> |  |
| Not recyclable or reusable                                |  |  |  |
| Carpeting   | Could be recyclable and / or reusable          | Wall-to-wall carpeting can harbour dust mites and trigger asthma and allergies   | Not recommended for underfloor heating due to thermal properties of textiles   |
|   |  |  | Unsuitable for kitchens, bathrooms and dining rooms  |
|   |  |  | Wool carpets, if jute-backed, natural dyed, installed without adhesives and cleaned with plant-based cleaners are good eco option (except for asthma sufferers)                  |
|   | Abundant natural resource (IF USING 100% WOOL) | Chemicals impact throughout lifecycle - including 'off-gassing' toxic fumes in the home  | 100% wool carpets are preferable from environmental perspective but harbour more dust mites and are more expensive than acrylic, nylon, polyester and polypropylene counterparts |
|   |  | Carpets often treated with toxic cocktail for anti-static, anti-stain, anti-microbial, and moth-proofing   | Carpet tiles are often made from recycled fibres and can be recycled at end of life. Good choice, as can rotate worn tiles or replace small sections that get damaged            |
|   |  | Carpet backing and underlay can be equally environmentally damaging and toxic  | Chose felt, recycled polymer or recycled rubber underlay. Polyurethane should be avoided   |
| Polyolefin Flooring (e.g. polyethylene and polypropylene) | Theoretically recyclable                       | Made from non-renewable fossil fuels   | Used more often in commercial settings than domestic   |
|   | Low emissions in the manufacturing process     | Off-gases harmful VOCs   |  |
|   | Good sound absorption                          | Petrochemicals refining is a major source of greenhouse gases, acid rain and toxins  | Easy maintenance   |
|   | Odour-free                                     |  |  |
|   | Durable  | Non-biodegradable  |  |

## Types of Flooring

| Type of Flooring      | Eco Positives   | Eco Negatives   | Other Considerations  |
|-----------------------|---|---|---|
| Solid or Woven Bamboo | Recyclable and reusable   | High embodied energy due to transport   | Suitable for kitchen, lounge, dining room, bedroom, study   |
|                       | Renewable resource  | Low quality adhesives used often contain formaldehyde. Binders and finishers often contain toxic chemicals  |   |
|                       | Biodegradable   | Equipment in factories often emit combustion gases  |   |
|                       | Durable   | Mould visible on inferior products indicates processing not carried out fast enough   | Less expensive than hardwoods and just as easy to install   |
|                       |   |   | Most commonly grown and manufactured in China. Hard to follow manufacturers' processes and establish credibility  |
| Cork Tiles            | Low embodied energy as far as extraction and processing are concerned                     | Cork is produced primarily in Portugal and has to be imported to UK, increasing its embodied energy moderately  | Huge variety of colours   |
|                       | Non toxic   |   | Suitable for family rooms, bedrooms, kitchen, home office. To avoid potential problems with humidity and abrasive dirt, cork is not recommended for bathrooms, basements and hallways |
|                       | Durable   |   | Represents good value in terms of product cost and installation   |
|                       | Thermal and insulation properties   | Self-adhesive tiles often include formaldehyde  | Not ideal to combine with underfloor heating, as thickness must NOT exceed 10mm as it is an efficient insulator   |
|                       | Biodegradable   | All cork tiles need to be sealed. Sealants need to be selected carefully, as many produce harmful VOCs, which can off-gas for a long time                               | Prone to scratches and yellowing. Protect floor from direct sun, and big changes in temperature and humidity.   |
|                       | Renewable resource  |   | Has more limited lifespan than wood. Need to add new top-coat fairly regularly to prolong lifespan  |
|                       | Can use own water-based glues for plain tiles and no glue at all for click-together tiles |   |   |
|                       |   |   |   |
| Linoleum or Marmoleum | Can have recycled content and be recyclable   | CH <sub>4</sub> (methane) emissions from fertiliser used in linseed production <sup>15</sup>  | Suitable for kitchen, bathroom, dining room, stairs, kids rooms   |
|                       | Durable   | Off-gassing from adhesives  | Some natural linoleum can be around 20% cheaper than marmoleum, but is unlikely to be as 'green'  |
|                       | Non toxic   |   | Can be combined with underfloor heating   |
|                       | Renewable resource  |   | Huge range of colours and styles  |
|                       | Biodegradable   |   | Extremely easy to clean and maintain  |
|                       |   |   | Mineral pigments used for the rich colours can stain over time if used in bathroom  |
|                       |   | True linoleum is made by oxidising linseed oil, and the resulting paste is mixed with pine resin and wood flour, then heated, run through rollers, and backed with jute |   |
|                       |   |   | Vinyl is often called lino but is synthetic and toxic. Be wary of fakes   |
|                       |   |   | Marmoleum is the first floor covering to receive the Asthma & Allergy Friendly™ certification   |

## Types of Flooring

| Type of Flooring    | Eco Positives                      | Eco Negatives  | Other Considerations  |
|---------------------|------------------------------------|--|---|
| 100% Natural Rubber | Down-cyclable and reusable         | Non 100% rubber floors can include PVC, chlorine-based ingredients, plasticisers or halogens - check contents! | Suitable for kitchen, bathroom, dining room, stairs, kids rooms   |
|                     | Renewable resource                 |  | Prices are similar to lino and marmoleum  |
|                     | Non-toxic                          | Incineration generates toxic fumes   | Can be combined with underfloor heating   |
|                     | Very durable                       |  | Huge choice of colours and textures   |
|                     | Sound absorption properties        |  | Extremely easy to clean and maintain  |
|                     |                                    | Professional installation can be expensive, and DIY installation requires some skill                           |   |
| Rugs                | Recyclable and reusable            | Vulnerable to moisture, so may be unsuitable for certain rooms in the house                                    | Tight-weave rugs are preferable   |
|                     | Abundant natural resource          |  |   |
|                     | Non-toxic                          |  |   |
|                     | Easy to wash or clean and maintain | May involve child labour - research companies before purchasing  | Natural grass or vegetable fibre rugs, such as sisal, coir, seagrass or jute, are obtainable from sustainable sources |
|                     | Naturally anti-static              |  |   |
|                     | Extremely durable                  |  |   |

## Ask Suppliers These Questions

When specifying your new eco-friendly floor, be sure to get answers to these important questions:

- Was the extraction of the raw materials done in such a way that natural habitats were not degraded in the process?
- Was there as little ecological damage as possible caused in manufacturing and transporting the product?
- Are the workers working under healthy and humane conditions and being paid fairly?
- Have the waste materials been reclaimed, re-used or recycled?
- Once installed, does the product release any harmful chemicals into the air in your home?

## What You Can Do At Home

Here are some things you can do to help reduce the allergens in your home. This may help to relieve allergy sufferers of their symptoms and substantially reduce the risk of infants becoming sensitised in the first place.

- Wipe your feet. A good doormat will eliminate some of the outside dust from being tracked inside. Consider removing your shoes before you enter the house.
- Use the sun to air soft furnishings and bedding and floor mats. Dust mites will perish when exposed to two hours of ultraviolet light.
- If you have pets, consider keeping them outside or confined to just one room. As much as we love them, they can exacerbate asthma by shedding an asthma triggering dander, so keep them off soft furnishings and out of the bedroom.
- Strong odours, fumes and perfumes at home or in the workplace may make asthma worse. Use environmentally friendly products; contact WEN for details. Encourage asthma sufferers to avoid areas being painted or cleaned until the smell is gone.
- Ventilation is important to prevent the build up of toxins.
- If you can't remove carpet, try and clean it often and thoroughly using a good quality HEPA filtration vacuum - although it won't remove dust mites, it will effectively tackle animal allergens and other dust particles. Traditional vacuum cleaners may just re-circulate the smaller dust particles back into the atmosphere.
- Dispose of wet carpet that has been wet for over a day, as it is likely to have mould and mildew contamination that is very difficult to control. Rather than risk breeding these allergens or exposing people to toxic treatments, most experts recommend removing the wet carpet.
- Clean old carpet before removal as it will contain dust and dirt that can be released back into the building when it is pulled up. After removal, clean the space underneath, as dust and contaminants may be trapped.
- Choose plants that can clean the air for you: look at Wolverton's 'Eco-Friendly Houseplants' and 'How To Grow Fresh Air' for recommendations of 50 plants that purify air from 25 years of research by Nasa.

## Glossary of Terms

**Certification:** SFI - Sustainable Forestry Initiative

CSA - Canadian Standards Association

PEFC - Program for the Endorsement of Forest Certification.

ISO - International Standards Organisation

IBAMA - Program of the Brazilian government

All of the above certifications are questionable. Most do not have meaningful environmental standards, enforcement mechanisms, or methods of tracking wood through supply chain to keep out illegally logged material.

**Downcycling:** The process of converting materials into new materials of a lesser quality, e.g. office paper into toilet paper. Most recycling is in fact downcycling.

**Embodied Energy:** All the energy invested in a product lifecycle including extraction, processing, manufacturing and transportation.

**Engineered Wood:** Made up of multiple layers pressed together with toxic glues and sealants.

**FSC:** Forest Stewardship Council. The 'Gold Standard' certification label for sustainably harvested wood products. Can be FSC Pure or FSC Mixed Sources. Product MUST have FSC logo on. The only certification that is supported by environmental groups worldwide.

**Formaldehyde:** Used as adhesive, bonding agent and solvent. Colourless strong-smelling gas that can cause watery eyes, burning sensation in eyes and throat, nausea, fatigue and respiratory damage, disturb menstrual cycle above 0.1 parts per million. Asthma sufferers, children, the elderly, and pregnant women are particularly vulnerable to exposure. Known to cause several types of cancer.

**Harvested Wood:** Clear-cutting land from traditional industrial forestry destroys forests, although the practice has somewhat lessened from 20 years ago. Wood should be harvested sustainably so as not to cause habitat damage or reduce biodiversity and release carbon into the atmosphere.

**IAQ:** Indoor Air Quality. Term referring to the air quality within buildings as it relates to the health and well being of its occupants. Measuring IAQ measures the amount compounds released into the space by different materials, particulates, mould and microbial contaminants.

**MCS:** Multiple Chemical Sensitivity is severe allergy-like reaction to many different kinds of pollutants including solvents, VOC's, perfumes, smoke, pollen, dust mites, and dander.

**Off-gas:** Off-gassing is the tendency of many chemicals to volatilize, or let off molecules in a gas form into the air.

**Pressed Wood:** Particleboard, plywood, OSB (oriented strand board), MDF and HDF.

**Reclaimed Wood:** Manufactured wood that is remanufactured into new wood products e.g. timbers from old buildings that need to be remilled.

**Salvaged Wood:** Direct reuse of wood products e.g. salvaged doors.

**Solid Wood:** Solid Wood flooring is milled from timber and each plank is a single species and a single piece of wood throughout its thickness and width. It is commonly available unfinished and factory pre-finished and the standard thickness is 19mm.

**Upcycling:** Converting materials from one use to another use of higher environmental quality, e.g. wooden pallets into furniture.

**VOCs:** Volatile Organic Compounds. Chemicals that become gas at room temperature. Harmful to health. Formaldehyde is a common VOC.

**Woven Bamboo:** Shredded into fibres and mixed with resin and compressed into solid blocks. Harder and denser than solid bamboo.

## Stockists

### Wood and Bamboo

[www.timbernatural.com/](http://www.timbernatural.com/)

[www.ewtimber.co.uk/](http://www.ewtimber.co.uk/) [English woodlands timber]

[www.plyboo.com/](http://www.plyboo.com/) [formaldehyde-free bamboo flooring, and only company to obtain FSC certified bamboo]

[www.reclaimedfloorboardsuk.co.uk/](http://www.reclaimedfloorboardsuk.co.uk/)

[www.reclaimed.uk.com/](http://www.reclaimed.uk.com/)

[/www.admonter.at/en/home.html](http://www.admonter.at/en/home.html)

[www.kahrs.com/uk/Consumer/AboutKahrs/commitments/Pages/Certifications.aspx](http://www.kahrs.com/uk/Consumer/AboutKahrs/commitments/Pages/Certifications.aspx)

[www.junckers.co.uk/?pageid=H3210](http://www.junckers.co.uk/?pageid=H3210)

### Cork

[www.corkfloor.co.uk/](http://www.corkfloor.co.uk/)

### Linoleum/Marmoleum

[www.forbo-flooring.co.uk/](http://www.forbo-flooring.co.uk/)

### Rubber

[www.nora.com/uk](http://www.nora.com/uk) [100% NR]

[www.dalsouple.com/](http://www.dalsouple.com/) [100% NR]

[www.the-rubber-flooring-company.co.uk/](http://www.the-rubber-flooring-company.co.uk/) [Part synthetic SBR, part natural NR, and part recycled rubber]

### Tiles and Natural Stone

[www.firedearth.co.uk/](http://www.firedearth.co.uk/)

### Natural Carpets and Rugs

[www.alternativeflooring.com/](http://www.alternativeflooring.com/)

[www.crucial-trading.com/en/default.aspx](http://www.crucial-trading.com/en/default.aspx)

[www.thenaturalflooringcompany.com/](http://www.thenaturalflooringcompany.com/)

[www.millikencarpet.com](http://www.millikencarpet.com) [recycled carpet tiles]

### Multiple Flooring Types

[www.eco-flooringltd.co.uk/](http://www.eco-flooringltd.co.uk/) [bamboo, Marmoleum, carpet, cork]

[www.urbaneliving.co.uk/](http://www.urbaneliving.co.uk/) [wood, bamboo, Marmoleum, cork, natural carpets & rugs]

[www.ecora.co.uk/](http://www.ecora.co.uk/) [natural stone & wood]

### Underfloor Heating

[www.variotherm.at/en/](http://www.variotherm.at/en/)

[www.jupiterunderfloorheating.com/system\\_ideal\\_eco.php](http://www.jupiterunderfloorheating.com/system_ideal_eco.php)

### Carpet Underlay

[www.texfelt.co.uk/product\\_envirolay.html](http://www.texfelt.co.uk/product_envirolay.html) [Envirolay 100% recycled fibres]

Companies researched by the author may change after going to press and therefore no responsibility is taken by WEN for stockists and services recommended

## Useful Contacts

### Allergy Information

[www.actionagainstallergy.co.uk/](http://www.actionagainstallergy.co.uk/)

[www.healthy-house.co.uk/](http://www.healthy-house.co.uk/)

<http://multiplechemicalsensitivity.org/>

### Campaigning Organisations, Certification Bodies, Health and Safety

[www.greenpeace.org.uk/](http://www.greenpeace.org.uk/) - Greenpeace

[www.foe.co.uk/](http://www.foe.co.uk/) - Friends of the Earth

[www.fsc-uk.org/](http://www.fsc-uk.org/) - Forest Stewardship Council

[www.lhc.org.uk/](http://www.lhc.org.uk/) - London Hazards Centre

### Sustainable Building Products & Resources

[www.constructionresources.com](http://www.constructionresources.com) - materials and systems for sustainable building

[www.material-lab.co.uk/](http://www.material-lab.co.uk/) - Place to source materials and discuss projects

[www.greenspec.co.uk/](http://www.greenspec.co.uk/) - Comparison of environmental impact of materials

[www.aecb.net/](http://www.aecb.net/) - Association of Environmentally Conscious Builders

[www.ethical-junction.org](http://www.ethical-junction.org) - Directory of ethical suppliers

[www.livingethically.co.uk/](http://www.livingethically.co.uk/) - Shopping directory promoting organic and ethical lifestyles

### About WEN

Women's Environmental Network is a registered charity educating, informing and empowering women and men who care about the environment. It researches and campaigns on environmental and health issues from a female perspective.

### Individual membership (women & men)

£20 ordinary

£12 unwaged

£40 supporting Affiliate membership (organisations)

£35-150 depending on size.