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# FLOORS

*in Africa*

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Keystone Habitat

# Maple growers CHALLENGE bamboo 'green' claims

In a Press statement made during May this year and published on *FloorDaily.net*, the US-based Maple Flooring Manufacturers Association is urging the bamboo industry to back up its "green" claims regarding bamboo resource management and manufacturing practices and create a system regarding practices along the lines of the Forest Stewardship Council (FSC) for Northern hard maple.

FLOORS is showing the full text of the statement hereunder, and has asked the leading local bamboo suppliers for their views, which we have shown as an addendum to the statement:

The trade association said there is 82% more hardwood growing today than in 1952, approximately 9.5 billion cubic feet (1-billion square metres) of timber is added each year to the hardwood forest industry and more than 200 million acres of forestland in the US are certified as sustainable.

Unlike bamboo, Northern hard maple stands are seldom clear-cut and are not tilled to remove undergrowth; therefore erosion is seldom a concern as it is with bamboo growing practices.

Although wood consumption accounts for almost half of the total annual industrial raw material tonnage, lumber and wood product manufacturing processes account for only 4% of energy consumed by industrial raw material manufacturers.

Also, unlike bamboo, solid maple flooring does not incorporate the use of resins (urea-formaldehyde) nor are growing stands enhanced by chemicals such as pesticides, weed killers and fertilisers.

The association said that bamboo is planted and grown at the expense of other diversified species, even to the extent of clear-cutting rain forests to expand growing areas. It is not uncommon to cut down existing trees and replace them with bamboo.

It said that because there is no organisation governing bamboo, such as the Forest Stewardship Council (FSC), no one can ensure bamboo has been harvested in a sustainable fashion.

Most bamboo flooring sold in North America is produced in the southern Chinese province of Hunan, an area known as "the

bamboo sea" where the bamboo forests are owned by the government, and individuals or companies can obtain contracts to harvest with little or no control over environmental and worker safety issues.

Also, it said there is no Fair Trade Certification ensuring workers have appropriate working conditions and wages. Processing of bamboo is typically done in coal-fired plants, which emit significant pollution.

Manufacturers of bamboo flooring handle potentially toxic chemicals, including urea-formaldehyde binders and finishes, produce much solid waste, and run equipment that emits combustion gases.

The fossil fuels required to move bamboo products around the world constitute an environmental strike against bamboo, leaving a significant carbon footprint.

[www.FloorDaily.net](http://www.FloorDaily.net)

## RESPONSE FROM SOME OF THE LOCAL BAMBOO FLOORING SUPPLIERS:

**Scott Walton, HFF Architectural Finishes (exclusive distributors of Teragren Bamboo Flooring) and Traci Paulk of Teragren.**

The bamboo flooring industry is growing rapidly, in part because of the dwindling timber resources; this however does not include FSC timber such as maple which, as stated, is available in abundance.

Because maple is not everybody's first choice for flooring, other hardwoods are being used and this is where most abuse occurs. Large quantities of non-FSC South American and African hardwoods are imported into the US every year.

In South Africa, hardwoods such as teak, kiaat and mahogany are popular. Most are sourced from southern and central Africa and harvesting is often not done in a responsible manner. These timbers are not FSC-certified and short-term profits outweigh the long-term effects on the environment for these suppliers.

As one of the world's leading manufacturers of environmentally friendly bamboo flooring, panels and veneer, Teragren is committed to both environmentally responsible and sustainable business practices.

As an industry pioneer since 1994, Teragren has upheld its mission to help reduce dependence on dwindling timber resources by manufacturing bamboo flooring, panels and veneer from sustainably harvested bamboo grown in the Zhejiang and Jiangxi Provinces of China, taking special care to support farmers and their families by paying fair market value for raw materials and by encouraging proper stewardship of this valuable resource.

Bamboo is a wonderful alternative to hardwoods because, unlike hardwood trees requiring more than 60 years to mature, bamboo is a renewable grass that can be sustainably harvested over and over from the same plant.

Teragren bamboo is never clear-cut, and grows naturally within lush, biologically diverse native forests, which are harvested sustainably, and which have existed as they are today for thousands of years, to ensure that they continue to thrive.

Teragren bamboo products are manufactured with Optimum 5.5 Moso bamboo which is harvested at maturity (between 5½ and 6 years) to ensure a durable finished product and the sustainability of the plant's root system itself.

These practices support the long-term health of bamboo, the environment in which it lives, and the people whose livelihood depends on the ongoing harvest of these materials.

As the manufacturer, Teragren controls production from harvest to distribution, and specifies materials and processes that meet stringent European, Japanese and US environmental standards; the bar is set very high when it comes to the beauty and performance.

"Teragren products also qualify for LEED credits (Leadership in Energy and Environmental Design), the rating system of the

US Green Building Society, and are naturally friendly to the environment. Carbon sequestration is one of the most effective ways for reducing the build-up of greenhouse gases in the atmosphere," says Traci.

"As trees soak up carbon dioxide from the air, they produce clean oxygen in return. Bamboo releases 35% more oxygen than a comparable cluster of trees, thus sequestering – or "locking up" – more carbon dioxide. Bamboo flooring and panel products will last for generations if maintained properly, locking up carbon over the life of the product."

"Also, the steamship lines Teragren uses for ocean transport are also members of the Business for Social Responsibility Clean Cargo programme, dedicated to managing the environmental footprint of goods transported globally."

"Because bamboo is so efficient at sequestering carbon dioxide, our studies show that Teragren's products sequester significantly more carbon dioxide than is released during transportation."

"Additionally, all our products are manufactured in facilities that are ISO 14001 and ISO 9001-certified through the International Organisation for Standardisation, designed to promote standards that meet the requirements of business and the broader needs of society."

"A core component of the Teragren mission is to measure our company's environmental footprint and work toward mitigating – and ultimately neutralising – its environmental impact. This arduous process has been completed at our Bainbridge Island office, which is now carbon-neutral, and is underway at our factories in China."

Teragren supports sustainable forest management practices through organisations such as the Forest Stewardship Council (FSC), but its products are not FSC-certified. FSC certification is designed to provide sustainable alternatives to harmful forestry practices that contribute to habitat destruction, water pollution and harm to the wildlife that dwells there.

"While we are giving careful consideration to adding this certification to our products, we feel it is important to weigh the cost/benefit of doing so, since our existing sustainable management practices of our bamboo forests are already aligned with the guidelines provided by the FSC," says Traci.

"Regardless, we remain absolutely committed to manufacturing not only beautiful, durable and renewable products – but also those that are *truly* environmentally conscious and responsible," she says.

Let Scott Walton have the last word. "Like all businesses, we want to be successful, but our definition of success includes not only high-quality products and excellent customer service but also environmentally and socially responsible manufacturing and business practices. In conclusion, neither wood nor bamboo is good or bad – it is the environmental practices of the suppliers that are good or bad," he says.

#### **Response from Style Limited and its exclusive South African distributor Barry Doveston of Keystone Habitat:**

Although the wide spread use of bamboo in flooring, furniture and construction is a new trend that is growing rapidly, it is important to remember that its use in a variety of building applications is an ancient practice in Asia. Time has proven its sustainability in those countries where it is indigenously grown. With its rapid adoption as a sustainable material across the world it is important that FSC-type standards of cultivation, harvesting and manufacture are implemented to support the future sustainability of bamboo. Until the right standards are in place for bamboo it



elephant bamboo products

is essential that manufactures are assessed on the quality of the business and manufacturing approaches they use, with other certifications being good benchmarks for quality and sustainability.

Style Limited upholds this vision through its international patent on strand woven bamboo, worldwide distribution networks, LEED Certification, Australia's Good Environmental Choice Certification, and through its sustainable business practices.

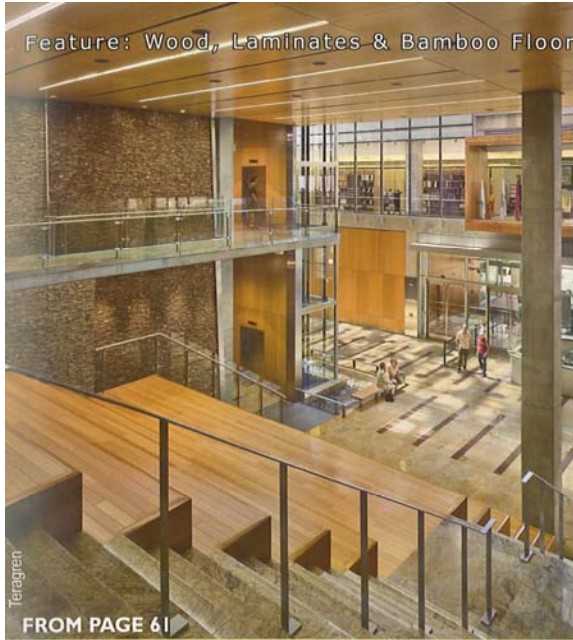
Although maple may be governed in certain regions through sustainable practices, it is the vast tracts of forest and natural resources in developing nations that are being threatened. The presence of bamboo in the market place offers consumers an alternative in the face of timber products that are sometimes sourced from illegal or damaging concessions on natural forests. Every year, 20 million hectares of rainforest are cut down, releasing millions of tonnes of carbon emissions into the atmosphere. The deforestation problem has made Brazil and Indonesia the world's 3rd and 4th largest CO<sub>2</sub> emission countries.

While it only takes five years or so for bamboo to mature, it takes hardwood over 60 years to grow. Once harvested, the hardwood species often never grow back due to the thin soil layers and lack of sunlight under the jungle canopies, and if they do grow back it can take up to 200 years! Also, bamboo is cut selectively, not clear cut.

Style Limited has extensive experience in the manufacture of strand woven bamboo, being the innovators of this patented strong and durable product. As Style Limited owns the entire manufacturing process from harvest to finishing, it is able to ensure that quality and sustainable practices are used throughout the process. Says Barry Doveston: "Once phases of the manufacturing process are outside your control it becomes challenging to ensure that the product and process meets the required level of quality. Distributors need to become aware of how their supply chain adheres to or breaks good sustainability practices. We have also noticed that some manufacturers claim to own the entire production process yet simply repackage other manufacturers' products under their own brand. Transparency in these kinds of cases would ensure that distributors can make informed choices."

Style Limited uses phenol-formaldehyde, not urea-formaldehyde in the production of its flooring and these bamboo products contribute to the certification under the LEED system: Indoor

## Feature: Wood, Laminates & Bamboo Flooring



### Environmental Quality Credit.

The establishment of a bamboo plantation does not destroy natural environments. The majority of commercial bamboo plantations originate from existing natural bamboo forests, and are subjected to scientific improvement and transformation. Only a very small percentage of bamboo forest is achieved from artificial planting, therefore its establishment does not break down the ecological balance or produce any damage to the natural environment.

The bamboo harvesting in China is strictly regulated and a cutting quota/license system applies. Every year, the Forestry Bureau sends staff to make in-situ surveys of new bamboo growth yield to identify the quota. After that, the state and provincial administration of forestry allocates a bamboo quota to farmers, which is posted for publication, and bamboo can only be cut within the allocated quota or license.

The Forestry Bureau is responsible for monitoring the illegal harvesting of bamboo, and has a forestry station located in each township throughout the country. There are also bamboo and wood checking stations on all main roads. Moreover, the China Bamboo Industry Association, which was formed in 1993, is making a strong contribution to the healthy development of the industry.

Style Limited is GECA (Good Environmental Choice Australia) audited, which includes the workers' standard labour contract of engagement, Insurance Card (Social Security) and pay slips being regularly inspected by GECA.

Currently, Style Limited uses the off-cuts from its production as fuel for the manufacturing facility's electricity. The sawdust from the manufacturing process is sent to a furnace to produce electricity, or is sold to a third party recycler. Tin and plastic waste components are sold for recycling.

Style is also working towards a carbon neutral situation in its offices and factories. As more and more wood product manufacturers are moving to Asia, many hardwood products are "double shipped" – raw blocks from North America to Asia, finished products from Asia to North America – greatly increasing the development of carbon dioxide.

According to Barry Doveston, "Bamboo is the new kid on the flooring and décor block and will obviously attract negativity from exotic timber suppliers who fear a reduction in their incomes.

What is needed is for consumers to start asking the question 'Where did this timber come from and how is it sustainable?'

Through this thought process consumers can start to equip themselves with the facts and make responsible decisions from there. Education is the key. Style Limited is very excited to be a leader in making this positive change in the flooring industry."

### **Felix Niemann, General Manager of Melchers Stucken SA (exclusive distributors of elephant bamboo products)**

Maple, as well as bamboo, is a resource the exploitation of which is considered not as damaging to the environment as certain tropical woods such as bongossi, bangkirai or teak.

Therefore it can be assumed that maple growers approach this topic not only for ecological but also for economical reasons, as the fast growing bamboo industry can be seen as a future competitor to timber wood as a raw material resource. There are other wood industries the focus should be drawn to.

The numbers mentioned by the maple growers are based on US forestry. A comparison to bamboo, which is grown in entirely different regions of the world, is difficult.

Bamboo, as a sort of large growing grass, is a permanently regenerating resource. There are more than 1 400 different sorts of bamboo, some of which can grow up to three feet per day to reach a total height of 60 to 100 feet.

One bamboo plant grows several stems at a time. Harvesting bamboo means cutting off only single stems and does not involve a clear-cut or the obliteration of the plant itself. When harvested, the bamboo plant regenerates and continues growing, unlike timber wood.

Due to the fast-growing character of the plant, bamboo plantations are often used to re-naturalise clear-cut areas, thereby helping to reduce or even prevent the effects of erosion, and so prepare the area for reforestation. This can be mistaken as "replacing the woods with bamboo", if reason and consequence are misplaced.

The growing of bamboo as a natural resource in southeast Asia has been a tradition over centuries. The bamboo is planted and fostered in rural areas, and harvested by hand.

The plantations often are small family enterprises which have no access to, or need for large quantities of pesticides or fertilisers. In addition to the environmentally agreeable way of growing, the farms provide employment and so help to fend off poverty in economically weak areas.

The Forest Stewardship Council was founded to survey the forest and timber industries in the first place. Since bamboo as a resource has entered the global market only short time ago, the FSC has not yet put its focus on the bamboo industry.

The still-developing bamboo industry is making many efforts and improvements to comply to FSC standards. There are already some FSC-certified bamboo growing areas and the number of them is growing continuously.

Bamboo contains a high proportion of lignine, a very effective natural adhesive. Taking advantage from it means that only a very small amount of artificial adhesives and other chemicals is used for the production of flooring or other materials made from bamboo. Certainly no larger amount of chemicals is used for processing of the materials than in other wood industries.

The same is for the amount of fossil fuels which are used for the processing, and the transport of the material around the world. The bamboo is carried by the same global infrastructure as timber and wood.

Coming back again to the fast growing rate of the bamboo plant, its persistency and regenerating capacities, the binding of CO<sub>2</sub> in the bamboo plant is several times higher compared to traditional wood, which significantly diminishes the "carbon footprint" mentioned by the maple growers.