

**Vinyl Council of Australia**  
**Media Release**  
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**Study finds materials bans should be banned**

A US report has found material-based credits in building rating tools should be avoided.

The report, by the US Green Building Council's Technical and Scientific Advisory Committee (TSAC), called such credits "blunt instruments" that inadvertently steer decision makers to replace one high negative impact material with another.

Material based credits in rating tools typically provide points to building designers for reducing the use of, or substituting, a particular material. One example is the Green Building Council of Australia's (GBCA) PVC credit in its Green Star tools.

However, the US report, which arose out of a desire to identify how PVC applications and their alternatives impact the environment, highlights that merely substituting one material for another does not necessarily improve environmental outcomes, and in fact may worsen them.

Vinyl Council of Australia Chief Operating Officer Sophi MacMillan agrees.

"The report clearly shows that environmental impacts need to be measured over the whole lifecycle, and that a given material will not be the best, or the worst, in all applications. Simply banning a material produces no net gain for the environment."

This approach, Life Cycle Assessment (LCA), considers product systems through all stages, or various defined aspects, of the lifecycle, from raw material extraction, through product manufacture, to use and ultimate disposal or recycling.

The authors also used risk assessment to compare PVC and alternatives for flooring, window frames, pipe and cladding.

Impacts on both the environment and human health were identified including global climate change, fossil fuel depletion, smog formation, acidification and eutrophication, and mortality associated with cancer. Potential health impacts from the range of materials studied in the report included headaches, nausea, burning eyes and nasal tissues, respiratory diseases such as silicosis, and cancers of the lung and bladder.

The study found that of the materials looked at, "no single material shows up as the best across all the human health and environmental impact categories, nor as the worst".

Proponents of material bans say we don't need products that are associated with environmental contaminants, such as persistent organic compounds (POPs). But it is not this straight forward. The US report highlights that every product's life cycle is "associated with" undesirable POP (persistent organic pollutant) emissions, either directly or indirectly through its supply chain. So, the authors say, we are stuck with the need to ask "how much?".

UK based Architect John Gelder, writing on this issue<sup>1</sup>, says in addition to being simplistic, bans are unfair. He believes materials and components should be judged on their merits so that a given material such as PVC may be specified where it is the best alternative (in terms of cost, function, availability, health, environmental impact etc), but not where there are better alternatives.

This is also the position of the Australia PVC industry, which strongly supports the selection of all materials based on their merits in terms of performance, cost and environmental impact. Importantly, scientific opinion, where available, should form the basis for environmental comparisons.

Ms MacMillan says instead of negative credits, rating tools should reward development and use of improved materials.

“If rating tools award the products that are best of sector, not only do these manufacturers get rewarded but other manufacturers are motivated to produce better performing products.”

“As a result, the entire materials market is motivated to improve.” “This is far superior to merely banning a material. Improvement and innovation should be continual and encouraged.”

## Notes:

“Without comparing the performance of the materials, rating tools developers are at best guessing when using negative materials credits.”

Is it possible such points can be obtained where there was no intention to use a banned product in the first place?

The report provides lessons for all material groups. It identified potential increased health impacts from PVC products depending on the end-of-life treatment. In the US where backyard burning is commonplace, dangers from potential additional dioxins were identified. Also requiring additional clarification was the frequency of accidental landfill fires and any impact due to varying PVC concentrations. The authors note considerable uncertainty about these claims.

Ms MacMillan says the Australian situation is different to the US because backyard burning is banned here.

“Also, landfill fires are not commonplace in Australia. The Dioxin Inventory 2004 notes accidental landfill fires account for just 5.4% of total dioxin emissions on Australia<sup>2</sup>. The concentration of PVC in Australian landfill is less than 1 percent<sup>3</sup>. The Australian Government's dioxin action plan does not mention PVC.

“It appears that for the Australian situation, the health impacts of PVC are at the mid or low range as estimated in the report, and thus not the worse alternative with respect to health impacts.”

## The future of building rating tools

Ban the Ban, pg 5-6, NBS (National Building Specification) Journal, Issue 07, November 2005, UK, John Gelder

<sup>1</sup> Australian Government Department of Environment and Heritage, Inventory of Dioxin emissions in Australia, 2004 .

<sup>1</sup> National PVC Waste Audit, December 2005. Nolan ITU, Vinyl Council of Australia

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<sup>2</sup> Australian Government Department of Environment and Heritage, Inventory of Dioxin emissions in Australia, 2004 .

<sup>3</sup> National PVC Waste Audit, December 2005. Nolan ITU, Vinyl Council of Australia