

# Steel industry speaks as one on green credentials

The Australian Steel Industry through the ASI Board has resourced a steel 'Environmental Credentials for Steel' Sustainability Committee to address 'green' issues impacting across the industry and to develop a united position and plan.

This initiative comes at a time when there is growing pressure from state and local governments, rating tool developers, eco-labeling organisations, specifiers and others within the building industry on how steel as a building product impacts the environment.

There has also been some recognition at this time that the rating systems used for environmental impact statements (EIS) and the like are based on markedly differing means of assessments, leading to a plethora of approaches.

The new ASI committee aims to tackle some of these issues and put the steel industry firmly and positively into the debate as a supplier of sustainable building materials.

Across the membership of the Building Products Innovation Council (BPIC), a council of building material suppliers of which the ASI is member, there is extensive support for true life-cycle based assessment tools to enable decision-making.

## The ASI Committee is seeking to address issues like:

- Performance-based criterion based on whole-of-life/life-cycle analysis regarding environmental impacts.
- Superficial information being promoted about embodied energy without taking into account whole-of-life (recycling and reuse criterion and relative efficiency).
- Materials performance verses operational energy demands of buildings. For example, a typical commercial building's operational energy and water consumption represents about 60 percent of impacts, whilst material for construction accounts for approximately five percent of the full life-cycle impact. (Source: BRANZ)

The ASI has commissioned **Nigel Howard** of BRANZ as an advisor to the Sustainability Committee.



# One-on-one with green guru Nigel Howard (Sustainable Built Environment, BRANZ Limited)



Steel Australia met recently with **Nigel Howard** from building and construction consultancy BRANZ to talk frankly about the environmental opportunities facing the Australian steel industry. Mr Howard is recognised as a pre-eminent authority on sustainable building issues. He is currently a key adviser to the ASI Sustainability Committee.

**SA: Nigel you have had experience with environmental assessment consortium BREEAM in the UK and the LEED system in the USA with scorecard measurement of environmental impact on new buildings. Can you detail your involvement?**

**NH:** I was formerly Director of the Centre for Sustainable Construction at the Building Research Establishment (BRE) in the UK. I then moved to the US to take up the position of Vice President of the US Green Building Council (USGBC) in 2001, responsible in particular for the development and implementation of LEED. LEED was very successful, growing over 30-fold financially in just three years. USGBC grew from six staff to over 60 during my tenure.

**SA: You have worked with (metals group) Corus in the UK in putting together a picture on the environmental credentials for steel. What was the effect of this work and how did the specifiers view steel at the end of it?**

**NH:** Yes, this work pre-dated my work at BRE, while I was working for Davis Langdon consultants in London. The work was done for the Steel Construction Institute in conjunction with British Steel (now Corus). Initially, the steel industry was very wary of investigating

the environmental credentials of steel and the concrete industry was talking about the embodied energy of concrete being about one-thirtieth of that for steel. What our work showed was that the mass of steel used for the same structural load in a building frame was about one-thirtieth that of concrete. It also showed that there was not a lot more steel in a steel framed building than there was in a concrete framed building (because of all the rebar) and that the impacts of the frame were relatively insignificant compared to the impacts of the floor slab. Moreover, all of the material impacts for the building were only 10 to 20 percent the impacts of the whole building over its life. Finally, where the concrete framed building was marginally better in impact in embodied energy, it was marginally worse in impact in embodied CO<sub>2</sub> terms. All this work has been subsequently refined by BRE in its development of the Green Guides to specification. At the end of this work, 87 percent of UK architects viewed the environmental credentials of steel favourably.

**SA: At our last ASI Board meeting, you painted a picture of the four decisions a person concerned with sustainability can make. Can you elaborate for our readers?**

**NH:** It turns out that there are only four types of decision that they can make. Firstly, they can choose the products and services that they want to buy. So if you want to promote sustainable products to the public, then you need measurement metrics and labels that simplify the complexity of environmental decision-making for the buying public. The second decision the public can take is to choose where they want to invest their money (either directly or through their pension funds, etc). It has become very clear in recent years that the public want to invest in ethical and environmentally responsible enterprises. **Bob Willard** in his book, *The Sustainability Advantage* has investigated the value of companies on the stock markets compared to the value of their assets. The intangible proportion of a company's value is very strongly linked to the company's environmental and ethical profile. Hence,

annual reports and listing in social reporting index funds is becoming progressively more important for major corporations. They can choose where they want to work. Companies with a strong environmental ethic can easier attract and retain the best staff which gives them a competitive edge and helps them to out-perform competitors that do not embrace this ethic. In addition, if these companies provide comfortable and healthy environments in which to work and treat their staff well, then this further enhances their productivity and profitability. Finally, the public can vote at local, State and Federal levels, and a strong record on the environment is becoming more essential for electability. This in turn translates into policy, incentives, regulations and the purchasing choices made by the public sector. The public sector has huge buying power.

**SA: You are now acting in the capacity of an adviser for the ASI Sustainability Committee. How do you feel about working with the Australian steel industry?**

**NH:** I am very happy to work with any industry to help it progress toward sustainability and if my experience with the UK industry is anything to go by, the Australian steel industry need not fear this path. Equally though, not all steel products in all circumstances are going to be winners. In taking this path, the industry is assuring its long term future and it needs to tell its story effectively to the public. This is challenging because the story is not a simple 'sound-bite'. The industry needs to know where it stands, it needs to promote its sustainability strengths effectively now and it needs to understand its liabilities, especially in a carbon constrained future. But the liabilities only remain liabilities if you stand still. The industry needs to see its liabilities as opportunities for continuous improvement and innovation in establishing a research agenda to mitigate any weaknesses. The UK industry has embraced this challenge and provides a good model for success. Australia can do the same, and probably better, just look at the cricket.