In the Media

BlueScope Steel and Caroline Pidcock win Insurance Council of Australia Resilience Award for resilient housing design

On May 3 2011 BlueScope Steel won the Insurance Council of Australia Resilience Award Competition with an innovative home design, by Caroline Pidcock of Pidcock Architects, aimed at improving Australian extreme weather conditions and natural disaster affected families to remain in their own homes post-disaster.

We met with Robert Scott (Building Applications and Product Durability Manager) and Hayley Janik (Sustainability Analyst) from BlueScope Steel to find out a little more about the project.

1. Robert, what is all this about? What inspired you to enter this competition?

The floods in Queensland, which affected many of our clients and staff, inspired us. We then wanted to design a home that would have broad community appeal. In working with Pidcock Architects and Sustainability, we formed design elements and materials that were the market accepted. Since we had Queensland on our minds, we chose a modern idea on the Queensland architecture.

BlueScope Steel has a range of products and innovations that perform well in extreme conditions, which was well a product in this competition. This competition was a great opportunity to leverage awareness in the resilience of our products and services to potential buyers.

2. Hayley, being the sustainability analyst for BlueScope Steel, what can you tell me about sustainability concerns about using building materials with a high environmental impact versus building a disaster-resistant house?

When designing sustainable buildings it is always important to balance environmental, economic, and social needs. When evaluating the environmental benefits of design and materials it is critical to include both the environmental benefits and the potential to reduce future building and maintenance costs. This award recognizes the benefits of good design and appropriate materials during the construction phase of a building as it is required to respond to specific predicted climate conditions. Housing on the elevated areas of a town experiences fewer issues during severe weather and if the materials selected for the building are appropriate, the building is well suited for this type of environment.

3. Robert, I notice you chose to use elements of your existing product range, how are these materials being tested in extreme weather conditions?

Testing has been performed in BlueScope Steel laboratories, those of independent assessment organizations, and in the field for a range of natural events. For example, the winning design incorporated learnings from work performed by the National Association of Self-Framed Housing (NASFH) and the CSIRO around housing in simulated hurricane conditions. We’ve been testing, developing, and manufacturing COLORBOND steel for over 40 years. Every day, we’re testing over 20,000 COLORBOND steel panels from different plate types and different directions around the country, subjecting them to harsher conditions Australia’s unique climate can muster.

It’s important to note that, in addition to our learning on bushfire, the house was designed as a ‘concept house’, and did incorporate new products that BlueScope Steel is currently developing. We continue to explore the benefits that can be provided by these developments.

4. What are some of your next steps in taking this project forward? For example, are you thinking about doing an energy model for the house or a life cycle assessment?

Robert: This house was designed to meet the national resilience requirements, covering specific levels of fire, wind, and earthquake. Working with Pidcock Architects, we also focused on cost, aesthetics, air flow, comfort, daylighting, sheds and other aspects of good design — we didn’t want to develop an expensive, unbuildable, energy intensive wasted box.

Hayley: It is important to ensure that design elements and materials are used appropriately across Australia’s varied climate. Rather than attempt to extend this research to other designs or other purposes we are likely to learn from the research from this design to specific regional climate requirements. This will bring developers and the community to the challenge.

5. Hayley do you think this type of resilient housing will reduce risks from extreme weather events and improve insurance premiums?

The insurance industry has demonstrated their need to incorporate resilience in its risk assessment process at sustainability conferences across Australia. This is another example of their desire to address the impact of extreme weather events by looking at the other side of the equation. This is the resilience of a house, as it reduces the barriers to the upgrade of damaged housing to more resilient standards after an extreme weather event has occurred.

6. Robert, you attended the ABC workshop. What did you think about it?

The 100 attendees of the ABC workshop presented sustainable building innovation. The broad stakeholder engagement from government, not for profit organizations, environment partners, architects, builders, insurers, material manufacturers and sustainability professionals demonstrated the need for a cross-sectoral platform to maintain the momentum of the Sustainable Housing Initiative towards achieving the goals of the White Paper on sustainable building.

7. Hayley, do you think this type of resilient housing will reduce risks from extreme weather events and improve insurance premiums?

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