



# SUNNY SIDE UP

**Lee Penson**, of London-based Penson Architects, gets hot under the collar about commercial architects' lack of joined-up thinking in relation to sustainability.

I have become concerned over the past few years about the abuse of this industry buzz word "sustainability". Like a last minute scramble for wedding speech inspiration, I do a Google search, looking for some clues as to how the commercial sector might view its importance. Page one offers me links to the Dow Jones, the usual Wikipedia reference, a management consultancy called SustainAbility and, of course, eBay. The rest of the results aren't much better.

This lack of visibility speaks volumes. Many professionals have made a good job of pushing the idea of sustainability forwards, but many more have not. At present designers often think it's merely a case of selecting items from the standard off-the-peg menu. "We'll have a bit of a timber frame here, ermm, some cladding here, oooo, and some solar shading bolted on over here, then the token solar panel on here and one of those fan things that spins in the wind strapped on here." Sustainability has to be deeper and more inherent, a whole integrated package rather than, dare I say, a collection of strap-ons.

It's amazing how few designers fully understand the importance of solar heat gain, natural passive venting and natural sources of heat and cooling. We should all take steps to learn these basics on a compulsory Continuing Professional Development course. Then we need to push ourselves to imaginatively develop our thoughts and designs. I hope there would follow a flurry of new ideas, new creative architectural forms and styles that people have invented, rather than resorting to these off-the-shelf items.

Manufacturers don't help either. Carpets, suspended ceilings, paints, coatings and all the pre-formed items that make up office interiors are frequently manufactured using harmful processes. We should all be thinking about providing modern interiors with organic, water-based products.

We need to invent new ways of using organic forms and new ways of cooling, heating and servicing our buildings. It's amazing how few people fully understand how to maximise natural passive venting. I would hope in time, as this technology



becomes enhanced, that more buildings will rely purely on this method. Many people still get heat gain, glare and sunlight strategies wrong. There is no excuse for this any more, so perhaps it should be made illegal to get it wrong.

At architecture school in London in the late Nineties, I had the idea to use a mass of sea water to cool a coastal building in southern Spain. Air from the building would be passed through a matrix of pipes submerged in the sea and the cooled air would be returned back through the building. I was, amazingly, "advised" by my tutor that my idea would never work. We agreed to disagree, but I really hope tutors are now allowing more inventive study.

The landscape surrounding our buildings provides the best opportunities for healthy ideas. I am currently designing a public building in Shanghai that uses natural processes of heating and cooling using a large volume of water and a slab of dark stone. At night the water cools and stores that coolness during the day. The stone absorbs sunlight during the day and stores that heat at night. The idea is that the building, which can rest either over the water or over the stone, will slide according to its temperature needs. To cool itself during the day, it will use the water's mass of reduced temperature to cool internal areas, whilst by night, when the building needs to be warmed, it will slowly creep over the dark mass of stone, which disperses the heat absorbed during sunlight hours. It's visually incredibly dynamic and sits like an organic sculpture within the landscape. I can't think of anything more graceful than a building that slowly moves in accordance with daylight.

Over the last couple of weeks, I've managed to swing around to talking about this article with various commercial clients over the odd drink. I was surprised to see how excited they were about the subject, and how engrossed they became as we talked about new ideas. I no longer believe that the commercial sector sees sustainability as unnecessary expenditure. Judging by their reactions, they now visualise sustainable design as something that can be used to save money and make buildings more exciting and imaginative, as well as helping to gain planning consents. We have to ensure now that we use the commercialism of sustainability properly. We only get one chance at this as an industry, and the moment is here to set ourselves the correct standards and methods. ☒

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