

One with the land

Architect of a sustainable future

The land behaves in cycles, and woe betides the architect or developer who fails to read its natural history, says Australian sustainability architect, Peter Stutchbury. “For example, how can you think of constructing dozens of nuclear power stations along a known fault line?” he asks.

It is hard not to be deeply impressed by Stutchbury, a quietly spoken man who nonetheless exudes a confidence in his work in tune, as it were, with the ultimate forces of nature in handling mankind’s destructive habitat.

He has emerged over the past decades at the forefront of original thinking in sustainable design – both in his native country and around the world, notably and including Japan, Germany, France, Luxembourg, New Zealand, Russia, the United States, South Africa and Namibia. His firm, Peter Stutchbury Architecture (PSA), has won 41 Australian Institute of Architecture Awards since 1995.

The award-winning architect is in South Africa at the invitation of BlueScope Steel Southern Africa to conduct a series of lectures to built environment practitioners as part of a drive to educate and inform the market about sustainable building technologies and the role of steel.

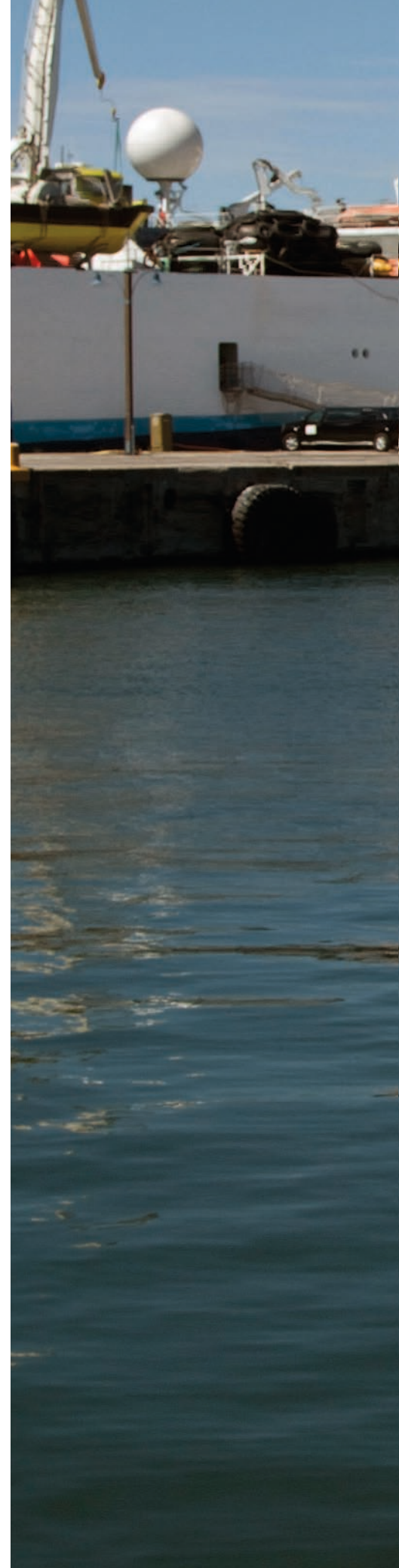
From where the interview is conducted at a fashionable Alfred & Victoria Waterfront hotel, Stutchbury casts his gaze toward Table Mountain and asks why Cape Town’s planners placed two motorway bridges between the city and the water. “It should be about a natural flow – building to light, building to people, building to nature. The right place at the right time,” he explains.

You got that right, I agree with him. Cape Town’s unfinished hanging bridges have been the subject of many a dinner-table discussion for many years.

Indeed, these principles seem to have underpinned most of Stutchbury’s work in Australia and elsewhere on the globe.

Famous for his living architecture lectures and memorable designs, he is not scared of breaking boundaries. He speaks of using available materials, recycling, and cites the African hut and Papua New Guinea turtleback roof buildings as outstanding examples of practical buildings “constructed and deconstructed by nature”.

Stutchbury speaks from a base of experience: During his formative years as an architect, he spent time in the desert country of New South Wales, studying the Aboriginal lifestyles and building a church in Papua New Guinea, during which time he studied the Long House design.



PETER STUTCHBURY

Leadership

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Later, he spent several months on scholarship in Africa where he “went walkabout” through the sub-Saharan part of the continent, studying indigenous buildings and design.

Stutchbury delivered a lecture at Wits University at the end of this tour and subsequently fell in love with southern Africa and its peoples. He has become a regular visiting lecturer and has many students, who have become friends, in this country. This was very apparent at his BlueScope Steel lecture series, judging by the rapt attention of the audience.

According to him, buildings should be expressions of responsibility toward nature and toward people. He famously uses inexpensive materials, particularly those available on site, as well as recycling.

South Africa’s informal housing settlements quite interest him: “They speak a lot about the mobility of people and are very liveable,” says Stutchbury.

What are his favourite South Africa designs, I ask? He likes West Coast-style fishermen’s cottages, thatched roof/Cape Dutch classic buildings for best location and protection from the elements and, of course, township shacks for their mobility!

Referring to the recent devastating Japanese earthquakes and tsunami, Stutchbury questions the advisability of building power stations along a fault line – a recent map published in the daily press showing a multitude of red dots depicting reactors along the fault line.

Classically, his designs make optimal use of the sun’s rays, which are collected to provide energy when required

During 1974, southeast Australia was lashed by devastating storms and flooding. Subsequent developers ignored those lessons of devastation and built on affected land – driven, as they were, by short-range planning.

In Cape Town to deliver his guest lecture to architects, Stutchbury has his audience sitting on the edge of their seat when he tells them:

“Design your buildings like you are camping. Most people enjoy camping, right? So why do we not design our living spaces just like we would when setting up a campsite?” It is that simple, he assures his audience.

But for the advent of air conditioning and high-rise lifts, buildings would have been constructed differently. These innovations have made a profound change to the way things are done.

Stutchbury assures me it is about going back to nature. He is hesitant of the invasion of electronic technologies such as *Google* and the cellphone, which are indispensable, but he believes they can stifle original thought.

That is not to say he is retro in thinking. His architectural designs are commanded by pre-eminent citizens of the globe – such as a recent project done for a bespoke Japanese fashion designer. Stutchbury is quick to pass the credit to the Japanese master builder and his team who, he says, were consummate professionals, down to a man who took great pride in their work as an art form in addition to being a building.

As proof of this, he shares with his audience of professionals the original sketches of some of his well-publicised projects.

Sketching roughly in pencil on a simple notepad, Stutchbury likes to sit on site long enough to contemplate the behaviour of nature on the landscape. He watches things such as the movement of the sun, wave action near the beach, notes high-water marks and studies the natural course of the river.

“Leave insects alone,” he says. “You can learn a lot about natural cycles by following the behaviour of the ants. They regularly march through our home in season. It normally means it’s going to rain.

“They don’t bother us and we don’t bother them. They are a much more highly ordered society than humans.

“What can architects learn from them? Study them; they have embedded behaviour as a consequence of the environment. Designers are losing their understanding of natural cycles,” he suggests.

Stutchbury is a great proponent of original knowledge too. “People are what they are today as a result of 400 years of ancestral memory,” he explains. We need to tap into that collective memory when planning our developments.

“How did traditional cultures deal with the environment? This is the real source of collective wisdom for sustainable design,” he adds.

Stutchbury believes that students spend too much time on the computer and not enough time out in the field. His Master classes are periodically held in breathtakingly unspoilt environments including the Cradle of Humankind (along with fellow Australian architect Richard Leplastrier) and the Australian Outback.

Putting his thoughts into practice is where the proof of the recipe is found. Very few of his clients have sold their Stutchbury-designed homes.

His own home was built at Pittwater, north of Sydney, and is a fascinating example of attention paid to three dominant forces: connection with light, connection with landscape and connection with people.

Stutchbury believes in designing large areas for living space. He shows a preference for steel structures with a solid inner core such as concrete or even rock. Steel provides a lightweight yet strong means of spanning large areas with minimum support, while concrete provides “thermal mass”. This term describes the ability of a solid surface to act as a repository or sink to manage heat.

Classically, his designs make optimal use of the sun’s rays, which are collected to provide energy when required. He specifies no air conditioning or integrated heating, other than the use of naturally available sources with necessary back up.

Such sources have included geothermal energy and even a cliff face incorporated into his 2011 “Cliff Face House”, which provides thermal mass. Hence, temperature is controlled using passive design methods.

This approach is applied to utility buildings as well. At his bespoke “Bull Run Woolshed” built at Wagga Wagga, inland New South Wales, the heat generated by the bodies of scores of corralled sheep awaiting the shearers is collected by means of a drop ceiling and



transferred across to the part of the building where the shearers are working – sometimes under icy ambient temperature conditions. This was only one design measure taken to handle major temperature change.

The orientation and location of the woolshed was to be a complete deviation from conventional thinking to optimise operating outcomes, including quality and working conditions. In addition, the sloping steel roof made with the latest materials assists with controlling the rays of the sun, preventing buildup of heat around the building during daylight hours.

Another utility case study is the Archery Park Building, built for the Sydney Olympics 2000 on a stringent budget. The concept is highly minimalistic yet functional, and widely acclaimed. The dynamic nature of the bow and arrow is metaphorically embodied in the design and provided inspiration to Stutchbury as an aesthetic.

Stutchbury has built many contemporary homes around the world. His “Outcrop House”, found along the beaches north of Sydney, represents a total integration of place: high above beaches that form a natural amphitheatre below, with ancient exposed sandstone cliffs, a watercourse and excellent natural lighting – all in an established suburban area.

Another home at Avalon, on the northern beaches of New South Wales, uses a basic steel-designed house – prefabricated off site – with wide-sloping skillion roof, taking only two days to assemble the frame.

The design was time-intensive, and exquisitely planned to conserve cost and optimise space. The result was a great home, with an office and a grand entrance that reveals both the site beyond and the life within. Stutchbury says this project shows the true value of an architect-designed home.

PSA won the International Iron and Steel Institute’s Living Steel Award in 2008 for Stutchbury’s extreme-climate house in Cherepovets, Russia. In this design, the entire house may be dismantled and moved, hence recyclable to the ultimate degree. The house is part of a low-cost housing development and is designed to be replicated, as it is practical and functional.

At the beginning of each project, Stutchbury believes in briefing the builders – from principal contractor to individual artisan. He shares with them his vision for the building and explains the reason for each feature, in context.

The sharing of knowledge seems to be a cornerstone of the Stutchbury approach to the profession. ▲

Gareth Griffiths