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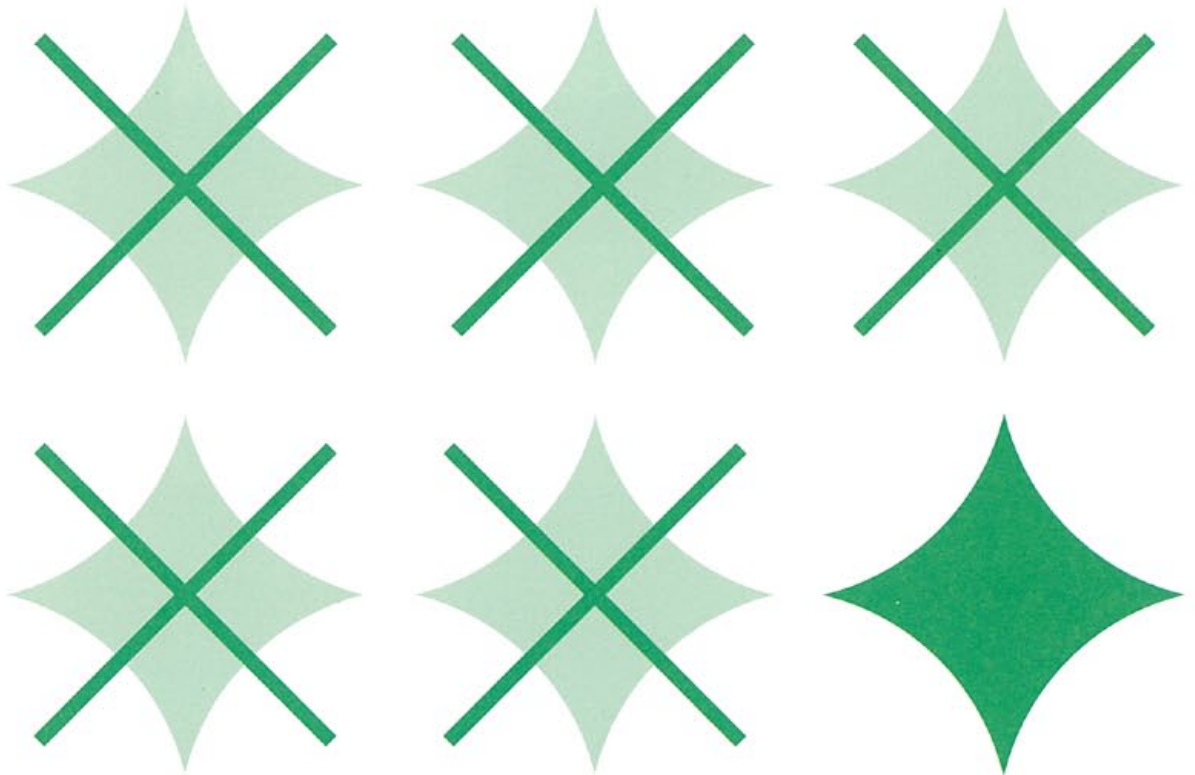


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Green Design's Twin Evils

Part 1: 'You Can't Always Get What You Want'



Every architect on commercial projects knows the story. You sweat blood to achieve good design with the client; go to war with council's extraordinary and often inane requirements; pour long hours into intense documentation ... only for the final building to barely resemble the idea, the approval or the documentation. So what happened? Tone Wheeler investigates.

In this two-part column, I intend to look at the 'twin evils' of green design and what can be done to steer the path back towards more sustainable buildings. In this issue I'll begin with the problem of 'value engineering' and then in AR 127 I'll address poor workmanship.

When buildings fail, there is no single catastrophic moment in the process; it's more like death by a thousand cuts. Somehow the design got dumbed down, many details are a pale imitation and the overall quality is, well, ordinary at best. The consequences, however, spread far wider than disgruntled architects and clients. At the very least it reduces the quality of the streetscape, degrading the city fabric. At worst the building may be dangerous, as it won't comply with the Building Code of Australia (BCA).

Two recent cases in New South Wales highlight the pressures that developers can exert on building certifiers to change a building's design and construction. In one, local residents complained that the final building looked nothing like the quality they had sought from council in the design process. In the other, an apartment building lacked the basic fire-safety requirements for a high-rise building. In both cases the certifiers were struck off but the buildings have not been remediated.

Moreover, with lower commitments to energy and water performance, such buildings will require more maintenance and replacement and greater ongoing costs to occupants for the life of the structure. In other words, the failure to build in accordance with the original design is often a sustainability issue (the ESD column in AR 111 addresses 'churn' in internal fitouts and the 'three Ls': Long life, Loose fit and Low-impact materials).

Management speak contains many linguistic gems – such as 'blue-sky thinking', 'outside the box' and KPIs ('key performance indicators', the first five of which always seem to be cost) – but 'value engineering' is my favourite. It has become the catchcry of the project manager, an arriviste in the design process, whom cynics would say are the living embodiment of Oscar Wilde's observation that they know the price of everything but the value of nothing. The phrase is clearly oxymoronic, and ironic because it has nothing to do with the detail science that lies at the heart of real engineering and it hardly delivers 'value', rather just plain old cost cutting.

The rise of the project manager (PM) dates from an early 70s push for more efficiency and accountability in construction. Traditionally an architect would control the entire design and building process, but as modern buildings became more complex they often lost control of costs, and with it, the confidence of their clients.

Added to this was the architect's desire for innovation, but their adventurousness in design was often not matched by technology or by client patience. The increasing lack of coordination, together with untested ideas, led to 'holes' in the documentation, requiring builders to raise variations to cover cost overruns and forcing disgruntled clients to search for a better way to 'manage the process'.

Early on this gave rise to the construction manager (CM), whose very use of the modern word 'manager' struck back at the perception of architects as 'artisans/artists' from an outdated guild. CMs often recommended to clients that they could better control costs if they used contractors to 'design and construct' rather than use traditional independent consultants. In so doing, they wanted to intervene earlier in the process, and gradually the architect's control of design was whittled away. Encouraged by the better control of construction costs, clients wanted 'better' control over the whole building delivery process. Thus, the fully blown project manager (PM) was born. Given that builders and Quantity Surveyors (QS) have more proficiency at cost control, it is no wonder that most PMs come not from design but from a construction or QS background.

Architects loudly protested that the builders, whom they accused of profiteering, were shafting them and that the PMs did nothing that they couldn't do. However, their supplanting by this new 'super consultant' lay mostly in their inability to handle increasingly complex structures and services, and the consequent increase in consultants. Architects viewed PMs in much the same way as they saw consultants: as 'someone you hire to tell you the time, who borrows your watch ... and returns it broken' to extend Robert L Townsend's famous maxim. By the time the bicentennial projects of 1988 were being rolled out, the battle for control of the design process was lost.

The issues of complexity and untested technology integral to the rise of the PM also lie at the heart of much new green design: chilled beams, natural ventilation, wind

turbines etc. Even though the green agenda is strong, many clients are being encouraged by their PMs to be cautious about such innovation and apply 'value engineering'. Simply put, it is easier to say you are going to deliver a brown building, and do it, than to promise an 'ultra green' building and fall a few stars short.

Even if the client can be persuaded to follow a green agenda, the process may be fraught. The number of 'expert' sustainability consultants has rapidly increased in the last 10 years: mechanical, hydraulic and electrical consultants offer specialist services; energy and green assessors offer advice and star ratings; and there are some architectural practices that specialise in 'green'. All of which can be confusing and conflicting and offers lots of opportunities for PMs to divide and rule, and 'value manage' out some of the initiatives.

Given that most commercial buildings have traditionally been leased out to tenants that pay the ongoing costs, it has not been in the interest of developers/owners to undertake green innovation. It is not insignificant that all the prominent early five- and six-star Green Star buildings were developer or owner occupied: think Lend Lease at 30 The Bond and Stockland's HQ in Sydney, or CH2 and NAB in Melbourne or SA Water in Adelaide. Despite the championing by the Green Building Council of such bright green buildings as 1 Bligh Street, Sydney (AR 123), far more 'brown' buildings than green are being built, and we can trace the cause back to corporate clients, whose PM advisers are making them nervous about costs.

What this means for sustainability is critical: green initiatives in design are being 'value managed' out, or, if they survive the management process to be included, are sometimes so poorly installed as to be worthless, with no QA or certification to ensure that the insulation, double glazing, heat exchangers etc have been installed correctly, or at all. Clients for green buildings, that could soon be eligible for carbon credits, may not be getting what they are promised, or what they want. And that could end up being a form of carbon tax avoidance. **ar**

See the forthcoming AR 127 (October–November) for Part 2 of this column, 'Once Were Crafts, Then Were Tradies, Now Are Subbies', addressing the inexorable rise of bad workmanship and what it means for green design.