

Pitfalls
when
building
and
renovating

Australians are building and renovating at greater rates than ever before.

The influx of lifestyle programmes has stimulated a growing interest in design. Yet the process is very complex requiring careful thought and guidance.

The following are a few points to help you traverse this path ...

NICHOLAS BROWN
DIRECTOR
STUDIO TWO ARCHITECTURE



1. Building Big

There is a temptation, driven largely by the property market, to make our homes over sized.⁽¹⁾ The desire seems to be not just for space, but also to have a specific room for every occasion.

Some new houses have 3 or 4 separate living spaces. While Aussie families have been getting smaller in recent decades, (an average density of 2.5 people per home⁽²⁾) our houses have evolved to have rooms for every imaginable function... For example, what once would be a passage has increased to be a children's retreat or study room, the home office, the rumpus room (which is increasingly replaced by the Home entertainment room).

People often think they need a four bedroom plus study residence for reasons of resale, but not because they have family members to fill them. Outdoor areas, while critical to our lifestyles, can also be over-sized, under-used spaces.

2. The Floor Plan

Anyone can put a bunch of rooms together and call it a house. Careful thought is critical to ensure that the spatial flow of the home is both logical and practical.

While there may be good reasons to locate all the spaces that require plumbing together, this may not result in a functional floor layout. Consideration is required to separate living and sleeping zones, to assist in controlling noise transmission.

Similarly, it may not always make sense to separate the master bedroom from the other bedrooms, if there are young children who need night-time attention.

(1) "According to some data we're leading the world in floor space per capita. In fact, the average size of a new Australian house increased from 162.2 square metres to 227.6 square metres between 1984 and 2003, that's a jump of 40%." Source: <http://www.realestate.com.au/blog/is-bigger-better>

(2) Source: Australian Bureau of Statistics <http://www.abs.gov.au/AUSSTATS/abs@.nsf>



3. View versus solar control

While sometimes the best view may be to the west of the site, in all buildings it is a serious mistake to orientate the building's main elevations towards the view, and ignore the need to face the glazed portions of walls to the direction that receives desirable sun.

That is, for buildings located on the southerly side of the equator our windows should receive northern sun all year round, but with effective solar control, via shading, double glazing or landscaping, for the warmer months.

While a great view can help give a home a wonderful outlook, if the glazing facing the view is not well designed the comfort, thermal efficiency and energy usage may be greatly compromised. The ongoing costs of heating or cooling a building that has not been correctly orientated are enormous.

4. The "Fat" Plan

The nature of many subdivisions, with typically a 20m frontage, combined with our desire for as much internal space and rooms as can be squeezed into the floor plan, has led to fat, squarish floor plans with a low proportion of exterior wall to overall area.

The roofs of these homes are oversized and dominating, wide spanning and are also wasteful in terms of materials. The long side elevations, generally facing the boundary fence and a similar house on the adjacent site, offer poorly conceived privacy and orientation as well as a very limited outlook.

More-over, unless there is clever placement of skylights or clerestorwindows, such houses often have internal rooms and spaces that receive little or no natural light, which then results in a greater reliance on energy for heating, cooling and ventilation.



5. Respecting the “lie of the land”

The design of homes is often plan driven, developed in two dimensions only, without much concern or thought for the fall of the land over the area of the building. This often results in heavy-handed siteworks, with large areas of cut and fill, requiring significant re-shaping of the landscape and potential drainage problems.

Designs that step with the gradient of the land can allow for a stronger connection between the internal and external spaces, lower roof lines that relate to their context, and a more sensitive handling of landscaping. The context of a delicate existing site ecology necessitates a lighter connection between the built and the natural.

This award winning house by Australian architect Peter Stutchbury is named ‘The Invisible House’ for the way it nestles into it’s site.

6. Insufficient care with design of heating and cooling systems

While we have a love affair with refrigerated air conditioning, we also love our outside to blend and connect to the inside, - best achieved with opening large doors to allow the outside to integrate with the inside. This means that already energy intensive air conditioners are churning up even more power trying to keep the occupants comfortable while they transition to the “Al fresco” or pool terrace.

Other people are fixated on being able to sleep under a dooner, so they waste energy and money by keeping their cooling system on over night. Similarly, their pets need to sleep inside during hot days, even though they could be sleeping outside in a shady location.

Similarly, for winter, flick-a-switch systems that take some time and energy to heat large areas are seen as convenient in favour of better care with glazing design, materials that can store and slowly release the heat and sufficient insulation of walls, floor and ceiling.



7. Landscape Design

As our climate changes and the planet warms, it has never been more important to maintain and encourage the growth of shade trees that will assist in carbon capture as well as blocking the intense summer heat.

There is a tendency for new housing estates to limit the type and size of new trees on the basis that they create maintenance demands plus added risks of injury or damage during storms.

While tree maintenance is like any other type of maintenance in that it needs to be regularly checked and controlled, the advantages of shade creating trees to a new home has both psychological and physical gains. Similarly the use of suitable lower plants and shrubs can assist in the absorption of heat.

8. Over emphasis on “wow factor”

A kitchen in a new home I recently inspected had very attractive, clean lines and finishes. However the designer chose to locate the fridge in a walk in pantry, quite a distance away from the island bench, where the school lunches would be prepared.

Similarly, the current trend in splashback as a “splash of colour” can give a kitchen or bathroom a “wow factor”. Yet sometimes products are selected and installed that are not well suited to the maintenance or durability required in such an intensively used area.

9. Inadequate advice.

In all these areas (and others only touched on here) good professional advice will ensure that buildings work for their inhabitants. The feel and function of spaces needs to be carefully considered and resolved.

Every project, whether large or small, will benefit from having the right professional knowledge, with the best education and experience. The adage 'You don't know what you don't know' has big consequences when spending valuable time and money on your project.

Finding the right Architect will ensure the best results possible.



StudioTwo Architecture

Studio Two Architecture
and Design Pty Ltd.

Ph (02) 6766 8134

104 Brisbane Street,
(cnr of Carthage and Brisbane Sts)
Tamworth NSW 2340

info@studiotwoarchitecture.com.au
www.studiotwoarchitecture.com.au

Nominated Architect
Nicholas Brown No. 6027
ABN 12 566 261 618

