



**Peter Downes' clever roof solution at the Lees home**

## Lateral thinking pays

**W**HEN Graham and Bronwyn Lees decided to demolish and rebuild a large proportion of their imposing but ageing house in Ruskin Rowe, Avalon, they knew they were taking on challenge.

The project involved the replacement and redesign of the existing top floor. While coming up with a new floor plan was fairly straightforward, this could not be said of the roof design because the existing house was curved in plan view for its entire length, thus making conventional roof geometry and construction impossible.

They also wanted to have a large and open living area with as much glass as possible to maximise their views with no internal support posts disrupting the space. The solution adopted by Avalon-based building designer Peter Downes was to tap into commercial building technology and design a lightweight steel roof supported on

steel posts small enough to be built into the walls, with the roof being constructed first.

In traditional house construction, where the walls are built first and then the roof, those walls are all horizontal on top, arranged in a rectangular pattern and support the roof. None of that applied to this project as the walls were all different angles, some straight, some curved, and their tops were all different heights and slopes.

By building a self-supporting roof first, the walls could then be fitted up to the underside, thus achieving a perfect fit. The other big advantage was that it provided shelter and shade for all the following trades, thus eliminating lost time on wet or excessively hot days.

This project is yet another feather in the cap for Peter whose lateral thinking netted him five design awards last year all for houses on the northern beaches area. He can be contacted on 9973 3312.