

# Home Renovations

Energy Efficient Building Saves Money

Cape Cod has added an average of 2% to the price of a typical renovation and clients are delighted because the increase pays for an innovative, market leading insulation package that research has shown can reduce heating and cooling costs by as much as 26.2%.

There is no single piece of technology responsible for the reduction; rather it's a combination of building techniques and products.

The Energy Efficiency package is the result of research and a long held passion for doing things better on the part of Managing Director, Robert Moerman. The idea had its genesis some years ago as the market first became conscious of rising power costs.

"We'd just gained our HIA Green Smart Certification and that course prompted me to look for cost effective ways to value-add for our clients.

"We started by looking at the prevention of draughts. We looked at overseas building techniques, did a lot of research, examined lot of products and then sat down as a team to use our collective experience, going over a range of ideas and techniques to come up with a package and process.

"Ultimately there were some nine areas that we thought we could handle.

"Once the package was developed we had it tested and found it achieved a 6 star rating."

It is common sense that draughts involve cold air coming into premises and warm air escaping. Ironically the building code only really specifies sealing around window frames – something Robert says few builders bother with.

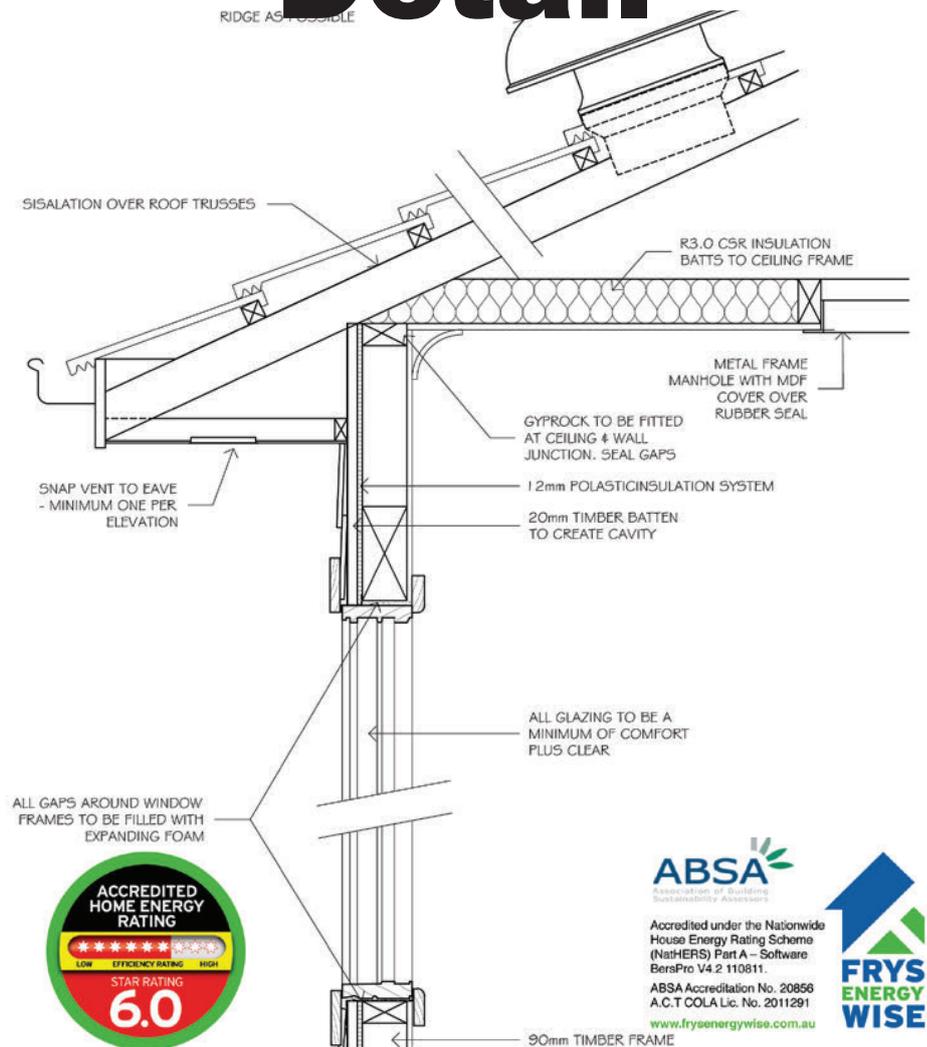
"We took it much further, deciding to make rooms virtually air tight. We spent some time finding a suitable expandable foam, one that retained its elasticity to allow for building movement, and then wrote a policy for our plasterers that made it compulsory to butt fit wallboard at the wall prior to cornices being fitted. We also seal around all external window and door openings.

"Next we looked at the cavity between cladding and walls.

"In the first instance we now install extractor fans to draw the heat from these cavities and subsequently expel the hot air from the roof-ceiling space. The fans are thermostatically controlled and cost next to nothing to run."

When Cape Cod began to address the actual wall construction techniques, Robert had a stroke of luck. Cape Cod built an extension for an innovator who happened

## Attention to Detail



to be developing a bendable polystyrene style membrane with sisalation on both sides.

Robert kept in touch and became a customer when the product was eventually finalised.

On Cape Cod projects today, this membrane is attached from the top plate to the bottom plate in 2700x1200 sheets. The joints are taped and then 20mm battens are nailed over the top to create a new cavity.

At this stage the renovation already has an impressive R-rating of 2.4

Adding insulation batts will take the external walls rating to a normally difficult to achieve 3.5.

Applying 50mm polystyrene cladding is an option that can see a rating of 4.5 to 4.7 for the external walls.

Despite the layers, the weight is negligible and the thickness just 175mm, compared to

250mm for brick veneer.

As a final measure, the Company specifies Comfort Plus for all external glass surfaces except south-facing walls. The glass not only minimises internal temperature variations, but is reported to reduce sound by 24%.

Robert's customers are telling him that, thanks to Cape Cod's innovative approach, their fears that they would be building a first floor hot box are proving ill-founded.

The Energy Efficiency package is now standard on all projects and the average 2% price investment has not been an issue.

"In the first instance the financial benefits of the reduction in heating and cooling costs more than outweigh a cost that is minimal in the overall scheme of things.

"Plus, we are already very, very price competitive and offer a whole range of additional benefits such as a fixed price contract," Robert said.