

# Double Glaze Matters

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## *Sustainable Living Festival*

*Visit me at the Sustainable Living Festival at Federation Square on Feb 17th-19th.*

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## Double Glazing —It Works!

I wanted to just share with you the photo below taken by Denny in Hoppers Crossing. He has been busily installing some double glazed units and borrowed a thermal camera to check the results.

Even though it was not very cold outside, there is a significant difference in the inside temperature of the glass. The chairs shows the room temperature is 17 Degrees, the single glazed window on the right is 14-15 degrees and the double glazed unit on the left is 15-16 Degrees.

If anyone is interested in getting quotes on double glazing over summer, send me an email. I may even be able to help you install the first couple of windows.

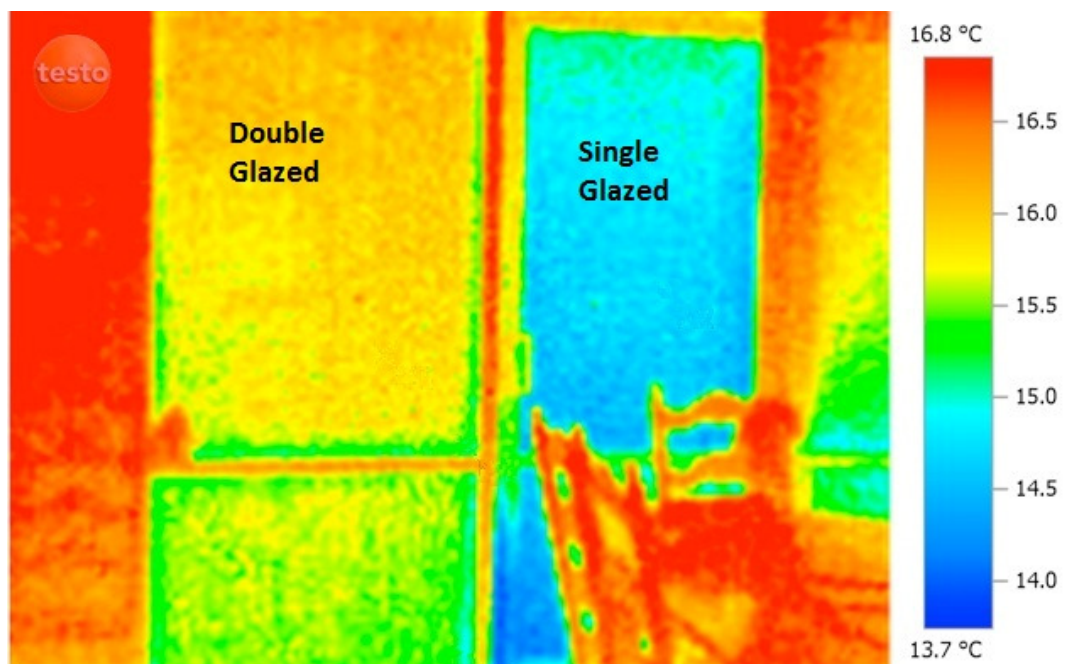


**Franciscus Henri's contribution.**

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## Improve your Evaporative Cooler

The most efficient cooler for use in Victoria is the evaporative cooler.

The way it works is to spray water into the air flowing past. As the water evaporates, it draws heat from the air.

*DIY Double Glazing  
Course*

*Sat Mar 21st*

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The problem with evaporative coolers is that they do not work well if the air is humid, as is the case in Queensland. Once the air reaches 100% relative humidity it cannot evaporate any more water and so cannot cool any further.

So, how cool can an evaporative cooler get? Technically, it cannot reduce the temperature below the Dew point for the given absolute humidity. This is the temperature at which dew starts forming. Normally, the evenings get sufficiently cool each night for dew to form, so your evaporative cooler can usually not reduce the temperature below last night's minimum temperature.

If you turn up the cooler, you use more water and power, and produce more air, but it doesn't get much cooler. Thus keeping the air flow as low as is needed to cool the house is more efficient.

Some people say that it is good to turn on the air conditioner early "to get the house cool". This generally isn't worth while. While refrigerative air conditioners are slightly more efficient when it is colder, evaporative coolers are not much different. With evaporative coolers you need to leave the windows open, so any "coldness" saved early in the day is soon lost.

However there is a way that you can improve your evaporative cooler efficiency at no cost. This follows on from last month's article on pushing cool air back through the insulation

Typically an evaporative air conditioner delivers air close to the overnight minimum temperature, say 17 degrees. As it cools the room, it warms up to say 22 degrees then passes out the window.

A much more efficient way to use the air is to pass it out through the roof. This could be done simply by opening your man hole. This has two effects.

Firstly the warm air at the ceiling level in the room is pushed out through the manhole, so that the 30 degree air at ceiling level is replaced by the 25 degree air that would otherwise have gone out through the window.

Secondly, the air passing through the manhole mixes with the hot air in the roof space cooling down the roof space. Typically this air is at 40 degrees and the 30 degree air being forced through the manhole will cool it significantly.

This is exactly the same effect as installing a whirly bird in the roof, except that the volume of air being forced through your roof space is much greater than a whirly bird will ever push.

So, by pushing your air out through the ceiling rather than a window, you cool your ceiling and your roof space at no additional cost.