

Designed for comfort

The Concrete and Concrete Association of New Zealand (CCANZ) has recently completed nearly seven years of research into the benefits of building concrete homes.

High mass construction has been studied extensively in other parts of the world, but this latest research confirms that the benefits extend to New Zealand conditions.

With a concrete frame, you don't have to sacrifice the view to be comfortable. The study found that

having extensive areas of glazing is a key ingredient. Glazing maximises free solar energy and hence thermal gain, and improves the cooling effect in summer.

The results showed:

- the amount of glazing and its orientation to the sun has a big impact on energy performance.
- A concrete building used over 15% less energy compared to an identical timber one.
- Adding a large window made the

concrete home more comfortable but the timber house overheat.

- On a 30°C summer's day the temperature inside the timber house was 1.5 times as hot as the concrete house was more than 1°C cooler.
- The minimum temperature for the timber house was 19°C but the 1°C for the concrete home.
- The timber home required four times more shading than the concrete home in order to prevent overheating.



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Environmentally Sustainable Design Issues

In the last decade, terms such as green and sustainable design have become a growing awareness of the need for better building and construction practices. Sustainability is a growing awareness of environmental and social issues. It is a growing awareness of environmental and social issues.

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1. Reducing energy use.
2. Reducing water use.
3. Choosing materials wisely.
4. Reducing waste during construction.
5. Using green materials.
6. Choosing local materials.

produced by the building's occupants. Research into energy efficiency, such as the use of passive solar design, is a growing awareness of the need for better building and construction practices. Sustainability is a growing awareness of environmental and social issues.

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- Concrete frame construction is a growing awareness of the need for better building and construction practices. Sustainability is a growing awareness of environmental and social issues.
- Concrete has a number of important health benefits.
- High thermal mass provides a natural air conditioning system, as well as a natural air conditioning system, as well as a natural air conditioning system.
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