



The design and construction of the new Sustainable House is based on research from CSIRO on Sustainable Ecosystem designs. It maximises modern energy efficient techniques and provides students with a real life, environmentally conscious residential home to learn and work with.

The goal is for a home that is 'carbon neutral', which does not release any CO² or other greenhouse gas into the atmosphere as a result of producing or consuming energy on the site.

The first step is to reduce energy consumption to the lowest possible level through careful building design; considering the climate, the hot water system, how the building is heated and cooled, as well as the appliances which will be used.

An ecosystem sustainable house is expected to use up to 70% less energy than a traditional house of similar size.

Some of the sustainable inclusions within the house are:



DESIGN

- > Main living areas face north to maximise the natural warmth of the sun
- > Windows are double glazed to offer added protection from the elements
- > Extensive use of insulation throughout including under floor slab



MATERIALS

- > Reverse brick veneer walls have been strategically placed boosting thermal mass properties
- > Plantation grown timber has been utilised throughout the home
- > Low VOC paints have been used in the home lowering carbon emissions



ENERGY

- > In-slab hydronic heating pipes connected to natural gas fired boiler which also supplies domestic hot water
- > Energy efficient lighting used throughout the home with a digital controller system
- > Appliances used within the home have been chosen based on their energy rating



WATER

- > Water is housed in an 800 litre insulated storage tank with domestic hot water coil and solar exchange coil
- > An alternative rainwater tank supply has been installed for toilet, laundry and garden use
- > Appliances and fittings throughout the home are water saving devices where possible

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