

More information

Pebble Crescent, The Ponds.

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Our home helps you breathe easier



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 **net-zero emissions home**


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DISPLAY HOMES



Our home helps you breathe easier

A home that lives up to its name, the Net-zero Emissions Home is set to challenge the way we think about home construction.

The Net-zero Emissions Home is designed to produce net-zero energy and carbon emissions and be water self-sufficient whilst minimising waste. It may be modest in proportions but it's ambitious in its intent.

This clever little home is a reverse brick veneer construction. This means the thermal mass (bricks),

that stabilises temperature variations and aides thermal comfort, is on the inside with light weight cladding on the outside. When combined with insulation, heat and cold from the outdoors are not transferred into the home as the bricks are protected from the external weather conditions. This means you'll save on your heating and cooling bills.

So you can breathe easy knowing the Net-zero Emissions Home is good for you and good for the environment.

How does your garden grow?

The Net-zero Emissions Home's garden is not only productive but edible too! With large areas filled with orchards, raised vegetables and herb gardens, this oasis was designed to provide a healthy home-grown food source for the whole family. Rainwater is captured

in a large underground tank, which helps to sustain the garden regardless of the season. All biodegradable leftovers from the garden and kitchen are recycled in a series of on-site composting bins and fed back to the garden to replenish and revitalise it.

8 star thermal performance

To comply with BASIX rating of 40% for energy, a home in NSW must achieve a thermal performance equivalent to approximately 5 stars. The Net-zero Emissions Home achieves an impressive 8 stars through clever orientation and design features that stabilise temperature fluctuations to keep the home cooler in summer and warmer in winter. The reverse brick veneer makes better use of the thermal mass properties of brick to stabilise temperature fluctuations.

- (1) Thermal mass (concrete floors and tiles)
- (2) Thermal mass (reverse brick veneer construction)
- (3) Light coloured metal roof
- (4) Double glazing with Low-E coating

Net-zero energy use and emissions

- (5) 4.56kW grid connected photovoltaic system which reduces electricity drawn from the mains that uses coal for generating electricity
- (6) Energy monitor that displays photovoltaic output, electricity use and cost (not visible on this diagram)

Economic

- (7) The Net-zero Emissions Home is a smaller home with improved space efficiency, liveability and aesthetics and fits a smaller lot. Because of this, it reduces operational energy and water use

Sustainable Materials

The Net-zero Emissions Home is made from a variety of healthy materials that are recyclable, contain recycled matter or reduce greenhouse gas emissions.

- (8) Low VOC exterior and interior paints
- (9) Austral light weight boxer bricks that emit less greenhouse gas emissions during manufacture
- (10) Door frame made from fast growing pine
- (11) Decking made from ModWood, 90% of which is made from recycled plastic milk bottles and reclaimed timber (pine waste)

Net-zero water use

The Net-zero Home Emissions captures all of its water onsite and also has a grey water recycling unit connected to the laundry, garden and toilet.

- (12) 10,000L underground water tanks connected to the garden, and potable water and hot water
- (13) The grey water recycling tank (not visible on this diagram)

Good neighbour

A good neighbour is aware of their home's shape and size and the impact it has to the surrounding homes. Good neighbours also provide passive street surveillance.

- (14) Translucent garage door reduces the bulk and dominance of the garage
- (15) Bedroom two/study faces the street which improves surveillance of the street



Adaptable housing

The Net-zero Emissions Home is a fully adaptable house meaning it has been designed to be flexible and meet the changing needs of people of different ages and abilities over time.

- (16) Kitchen design and layout compliant with the adaptable code
- (17) Level access to entry door, outdoor living areas and garage internal access minimising the risk of trips and falls for elderly occupants
- (18) Lower height of kitchen benches and 1.5m between benches
- (19) Wider internal and external doors for those people in wheelchairs

Lifestyle

The home has been designed for indoor and outdoor living with indoor living areas flowing to the outside.

- (20) All living and sleeping areas with a good aspect providing light and warmth during the winter months

Waste minimisation

- (21) On site organic waste recycling and productive gardens which minimises the waste that is sent to landfill and instead uses it as a free and useful resource in the garden (not visible on this diagram)

Asthma friendly

- (22) Tiled flooring throughout reduces settling of dust and dust mites that can trigger allergies
- (23) Asthma friendly landscaping minimising pollen in the garden that can trigger allergies

Net-zero Emissions Home Garden

- (24) The Net-zero garden is a productive and edible garden. Extensive areas of orchards and raised vegetable and herb gardens have been built to provide a healthy home grown source of food throughout the year (not visible on this diagram)





■ Floor plan



■ Zero, the hero

The old saying 'good things come in small packages' perfectly describes the Net-zero Emissions Home.

The Net-zero Emissions Home showcases leading-edge design and technologies that will bring innovation into the mainstream housing market and challenge the current perception of a truly sustainable home.

This compact two-bedroom, one-bathroom feature-packed home includes on-site grey water recycling, reverse brick veneer walls and a photovoltaic system to generate energy from the sun.

The Net-zero Emissions Home also boasts a productive and edible garden that will provide you with a natural home-grown food source and reduce your trips to the supermarket.

The use of sustainable timber instead of MDF for skirting boards and architraves as well as low-toxin paint on internal and external walls, means the home is low in

VOCs (Volatile Organic Compounds), which can harm the environment and human health.

You'll be comfortable all year round in this unique home, which has been designed with excellent orientation that allows for good cross-flow ventilation to help cool and heat the house naturally.

The Net-zero Emissions Home is a leader in design and technology but is also a comfortable home that is designed to grow with your family even when the kids have flown the coop.

The Net-zero Emissions Home proves that sustainability and style can go hand in hand.

On the following pages you'll find just some of environmentally-friendly and sustainable design features and products built into the Net-zero Emissions Home. A full list of these can be downloaded at www.ecolivingdisplayhomes.com.au

■ From the ground up

As the NSW Government's land and property developer, it was important for Landcom to lead the way and showcase a home that was designed with sustainable features. Our aim was to challenge the building industry's perception of a sustainable home by creating a house that is not only sustainable but innovative, creative and adaptable to mainstream builders.

That's why we chose to work with Clarendon Homes, a respected name in the building industry. Clarendon Homes has a strong commitment to the ever-changing needs of buyers, especially when it comes to environmentally-friendly homes. In collaboration with Clarendon Homes and other architects and professionals, we created the Net-zero Emissions Home.

