

Virido Concept House

Welcome



The Family of the Future

- We live in the Virido Concept House
- Built by house builder Hill to test new green technology
- Our usage is monitored as we test the technology and provide feedback
- Hill will be building 208 Virido homes in Cambridge



The House

- Built in December 2014
- Positioned over 3 floors:
 - 4 Bedrooms
 - 3 Bathrooms
 - Kitchen/Diner
 - Lounge
 - Laundry Cupboard
 - Drying Room



- Sustainable Homes Level 5...

‘High performance with high standards of energy and water efficiency’

- Most new build houses are now level 3 or 4.

Insulation and Warmth

Very warm with no drafts

- Airtight
- All joints are sealed with tape to prevent air leaks
- No traditional letter box
- Loses **20% less** heat than a typical new build

Construction:

- Timber frame
- SIPs panels ‘Structurally Insulated Panels’



Windows

Lots of natural light

- Big Windows
- Lots of sunlight

Less artificial lighting = less electricity used

- Triple glazed
- Lose **50% less** heat than double glazed
- Specially coated glass
- Heat is reflected into the building

Less artificial heating is needed

(we haven't turned our heating on yet – Autumn/Winter 2015)

- Timber frame with an aluminium cladding
- Life expectancy 80 years!

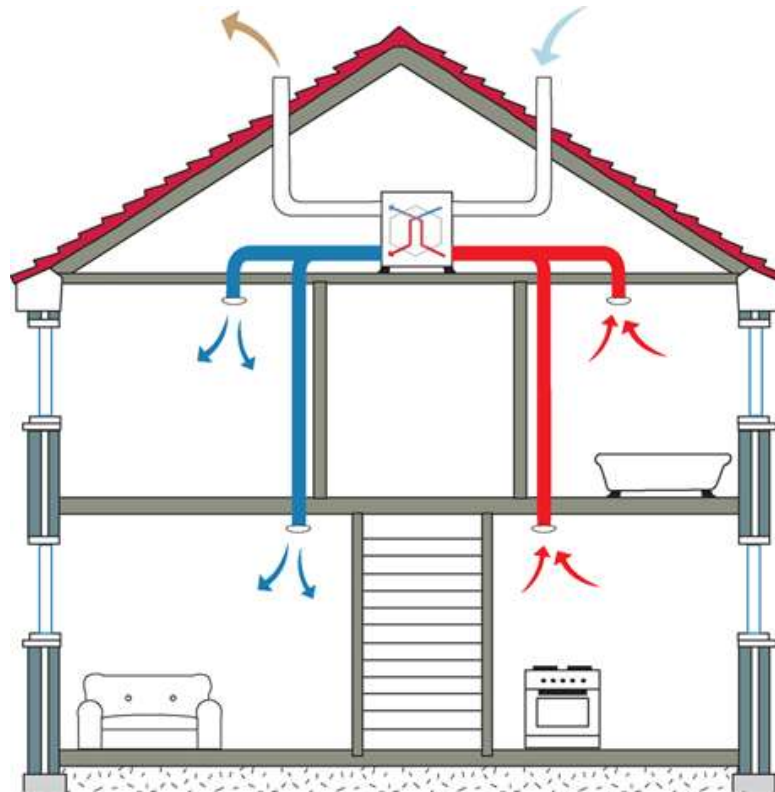


Air Quality

Airtight house needs an Air circulation system:

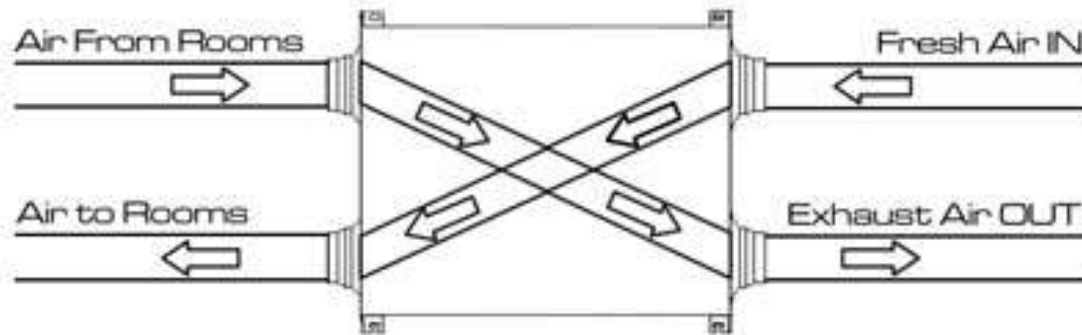
MVHR *Mechanical Ventilation Heat Recovery*

Stale air out / Fresh air in



MVHR

- Warm stale air is used to heat the cool fresh air
- Heat exchanger
- 90% of the heat is recovered



- Air is refreshed every 45 minutes.
- 'Boost' button increases circulation and refreshes the air quicker

Electricity

Bye Bye Economy 7!

- Photovoltaic panels
- Flat roof optimises sunlight capture
- Generate enough electricity to power all the utilities
- Excess electricity is sent to the national grid
- All carbon emissions are offset by PV panels



Water

Plenty of it?

- Uses water efficiently
- Aerated taps and showers
- Heat recovery shower tray
- Reduces energy to heat new water by **40%**

Rainwater Harvesting:

- Collected from the roof
- Stored in a tank underneath the garden
- Used to flush the toilets





Drying Cupboard

- For drying our clothes
- Fitted with a desiccant dehumidifier:
[Meaco DD8L](#)
- Clothes drying racks
- Like drying clothes outside
- Blows warm air out
- Collects excess water
- Washing dries in 2 – 4 hours
- More energy efficient than an A+ tumble dryer

Green Roof and Gardens

- Roof Garden: 27 varieties of plants
- Front Garden: 26 varieties
- Attract a large variety of insects to the area
- Sustainable design for back garden
- 2 vegetable plots
- Fruit trees and edible plants
- Drought resistant plants



What's it like living in a modern eco home...

Easy,

You don't have to do anything it's all done for you!

Questions

See: [Blog](#), [Case Study](#)

