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 joins 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 then 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 then 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