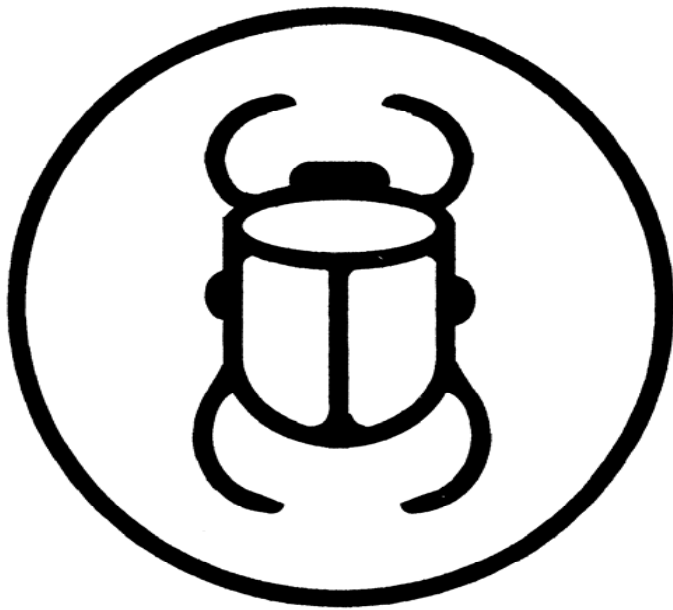


Scarab Solutions

*Social Housing: Playing our part
in tackling climate change*

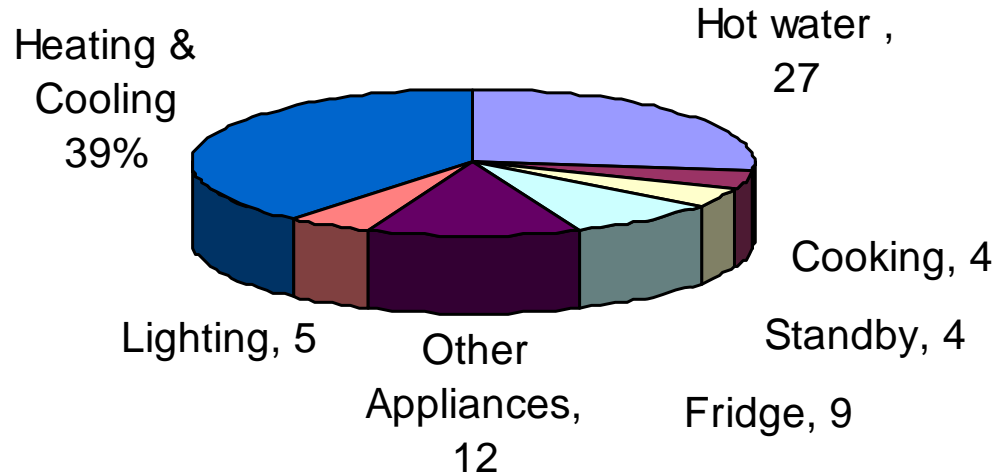
Scarab solutions



- Bill Pemberton - Director
- Est. 1999
- Providing advice on environmentally sustainable technology to suit your home and budget
- 03 9877 4854
- scarabsolutions@optusnet.com.au

Average Residential Energy Usage for Australia

Source: AGO 1999

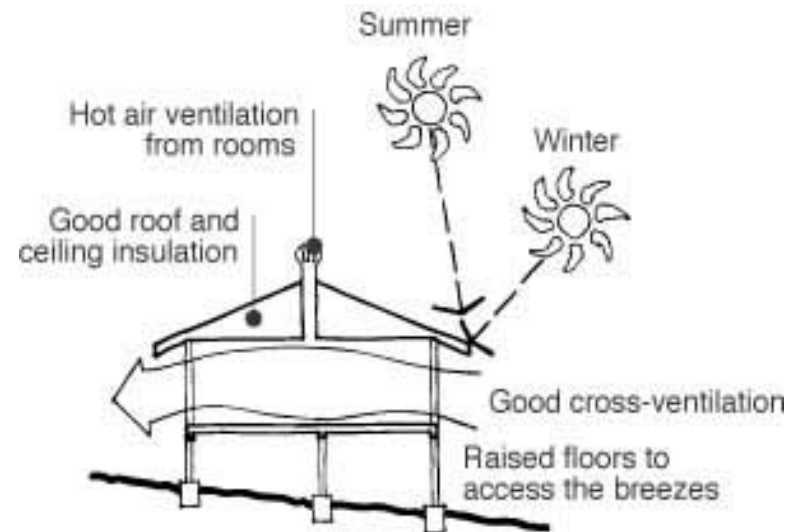
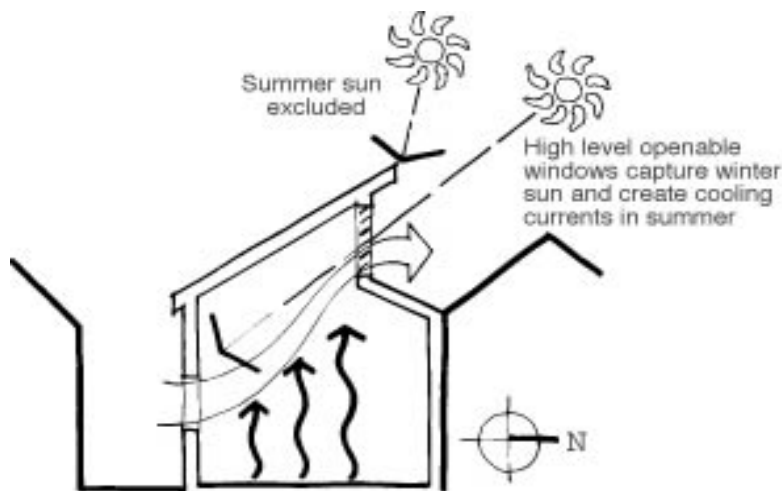


Building Basics

- Orientation
- Construction materials
- Insulation
- Lighting
- Solar hot water
- Solar PV
- Water efficiency

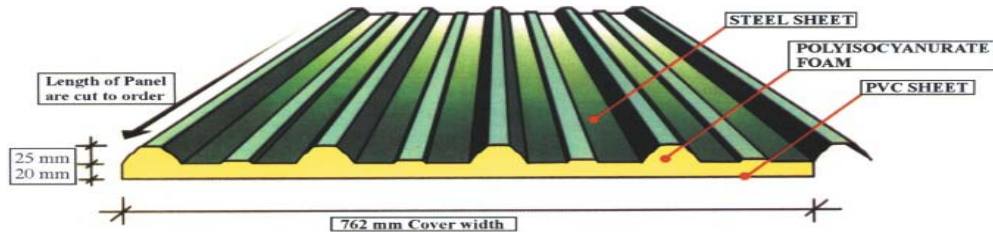
Orientation

- North facing living areas (Temperate areas)
- Air movement (hot humid) pictures from AGO Yourhome



Building Materials

- Thermaspan_ - www.paneltech.com.au
- - walls and roof, lightweight and strong



Building Materials

- Siloxo geopolymer_ - www.siloxo.com
- - *A concrete alternative without cement*
- *Products include Roof tiles, building panels , bricks & pavers*

Cement manufacturing releases 10% of global Greenhouse gas emissions



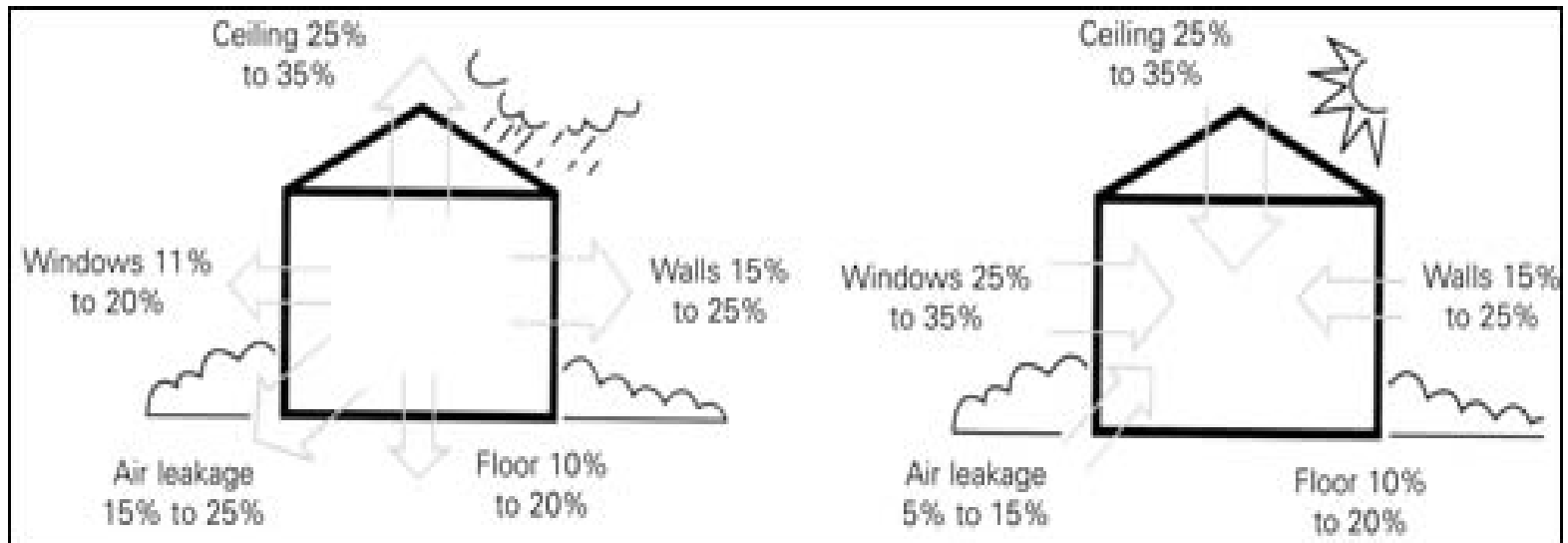
Building Materials

- Timbercrete_ - www.timbercrete.com.au
- *single skin load bearing wall with good insulation properties*
- *Products made from cellulous, cement, sand and a binder*
- *Can be nailed screwed and cut like timber*
- *Termite resistant and has a high fire rating*



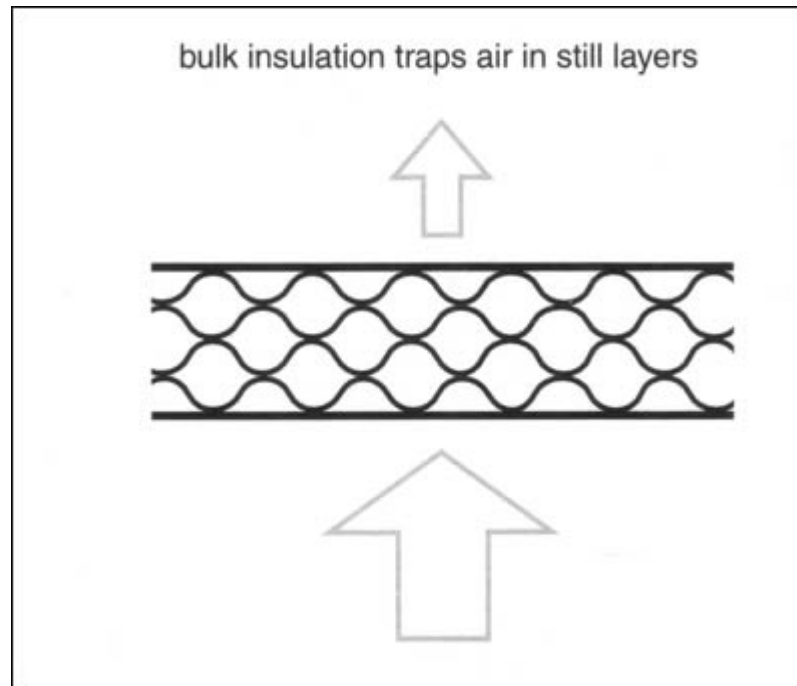
Insulation

- Insulation_ - www.yourhome.gov.au
- *R value = resistance of heat transfer through the material*
- *Bulk and reflective insulation*



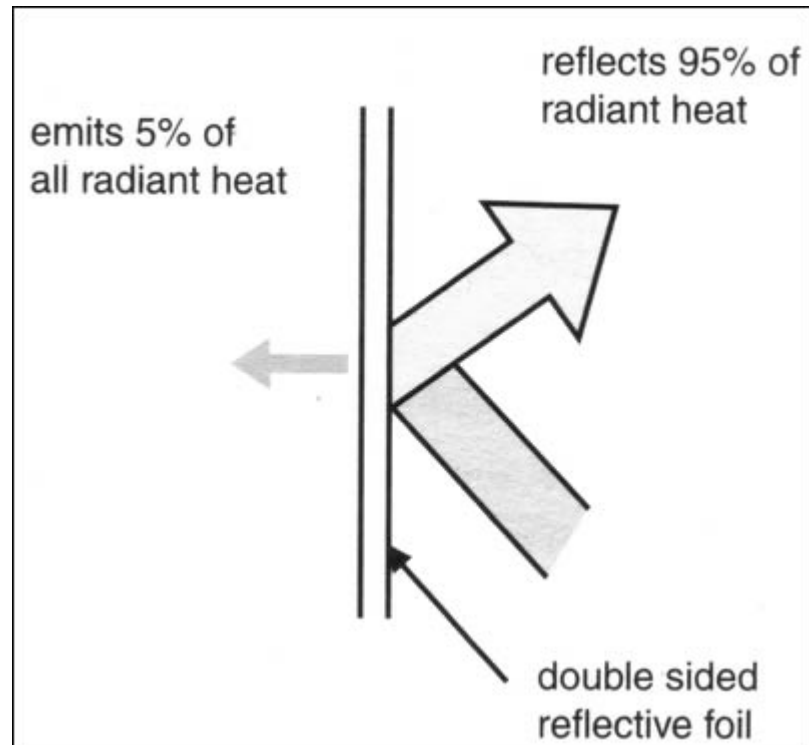
Insulation

- Bulk insulation polyester, wool, fiberglass and cellulose fibre



Insulation

- Reflective insulation Foil products such as Air-cell or concertina foil batts



Insulation

- Reflective Air-cell insulation www.air-cell.com.au



Insulation

- Reflective concertina foil batt insulation
www.conertinafoilbatts.com



Lighting

- Must have fittings that take compact fluorescent globes.
- Use 80% less than a standard incandescent globe



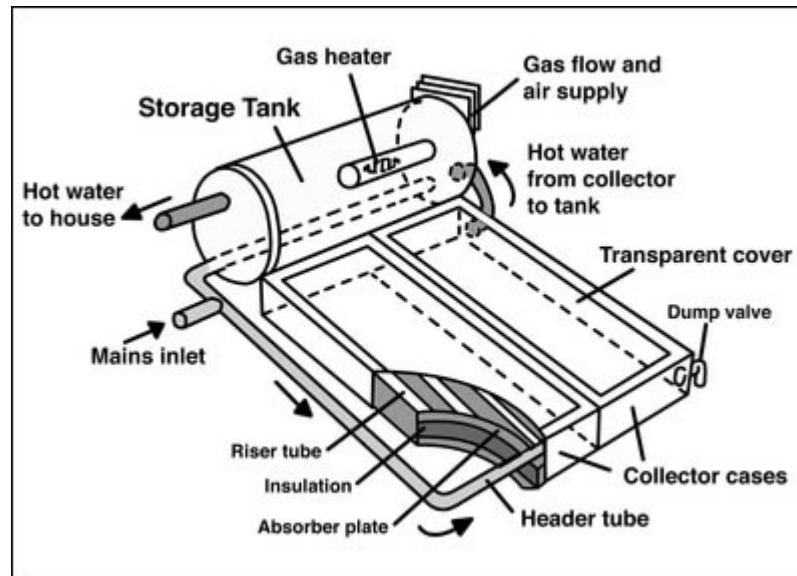
Lighting

- Low voltage does not mean low energy
- Avoid the use of halogen down lights



Solar Hot Water

- Energy savings for the resident
- Flat plate or evacuated tube
- Tank on roof or on ground



Solar electricity

- PV (photovoltaic) arrays of 1 Kw
- Can be as low as \$5000 if Fed rebate applicable
- Greatly benefits the occupier
- Reduces greenhouse gas emissions
- Cheaper when bought in bulk
- Long life
- Energy will become more expensive



Water efficiency

- Low flow shower heads
- Front loading washing machine
- 5 star dishwasher
- Water saving washers in taps
- Greywater to garden – sub surface
- Rainwater tank to toilet & washing machine

Handy web sites for information

- For info an appliances and garden plants
www.savewater.com.au
- For how to information go to the technical manual at
www.yourhome.gov.au

The End



Questions welcome!