

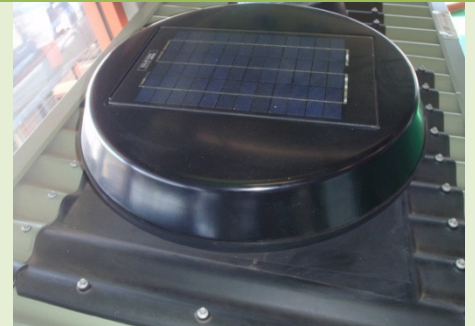
Sustainable House Day:

7 Songlark St, Bakewell

COOLmob

Household Temperature Control:

- The roof has a solar exhaust fan that draws air from inside the house through 5 ceiling vents, keeping the house cool. This air movement also works to minimise mould growth when humidity is high (NB: one solar exhaust produces the equivalent air movement to 20 solar whirlies)
- The roof is insulated
- The walls, front door and side windows are very well shaded so there is minimal direct sunlight entering the living room and heating the building.
- The building is surrounded by an envelope of cool air. There is also a large pond on the western side of the house, which indirectly acts as another cooling agent to the western side of the house.
- The sliding doors are surrounded by louvers and are opened in the evening, allowing good cross ventilation
- The pet dogs use a 'dog flap', so the main back door isn't continually opened & closed.
- The walls are painted light aqua to enhance the psychological 'feeling' that it is cool inside, and the floor is tiled.



Solar exhaust as it sits on your roof



The fan draws hot air from the roof of the house

The home has no air-conditioning. The solar exhaust removing hot air from the roof, combined with the insulation, well shaded western and northern faces and having the front door closed during the day, keeps the house significantly cooler inside than out.

Household Lighting:

- There is a lot of natural lighting in the living room, laundry and study, with 2 solar tube skylights. These capture light in a dome and redirects light throughout the rooms.
- There are large windows in the living room, giving plenty of light into this area of the house.
- At night, they use cute solar garden lamps (which are solar-charged daily in the garden) in the kitchen and bathroom, and LED lamps with rechargeable batteries in the living room.



The skylights provide sufficient lighting throughout the day, and solar lamps are used during the night. The Goodfellow's use their main lighting minimally, significantly reducing electricity costs from lighting

Household Appliances

- Hot water is heated with a solar hot water system, with an electric/gas booster. When no one is home for an extended time, the booster is switched off.
- There is a separate fridge and freezer to prevent the same door opening both sections at the same time
- All batteries in the house are charged with a solar pack battery charger (purchased in the U.S)



Solar pack battery charger.

Energy/Water saving behaviours

- The front door is kept closed during the day to prevent the cool air escaping
- When there is no fire-ban the outside fire is used for cooking, instead of the inside electric cooker. This is fed with wood/branches grown on the property
- Instead of continually boiling water for tea/coffee, 3L is boiled at the beginning of the day and kept in a thermos. This keeps the water very hot all day
- Appliances and power-points are turned off at the wall when not in use
- Laundry powder and hair conditioner is homemade. The aloe vera for the conditioner is grown in the garden

A common laundry soap recipe:

1 part washing soda

1/2 part velvet soap

1/2 part borax

1 x tbs for light loads

2 x tbs for heavy loads

Outside in the garden

- The vegetable garden contains banana trees, chilli plants, tomatoes, green vegetables, Barbados cherries, passion fruit vines, paw paw and native herbs for cooking.
- The water from a small pond with native nitrogen producing fish is used to water and fertilize the plants in the vegetable garden (and the thirsty dogs!). The large pond on the western side of the house also has native fish species
- Food waste is composted in the garden, directly beneath the banana plants. There is very little green waste going to landfill from the property, as other plant matter (branches, leaves, wood) is used in the outside fire
- The dense vegetation also minimises water run-off in the wet season. This means that less water reaches the storm water drain in heavy downpours
- The front and western side gardens are made up of mostly native species meaning that this part of the garden is 'dry season tolerant'. There is no grass either, so there is no need for constant irrigation in the garden (except for the fruits and veggies).
- The abundance of flowering plants and bird baths throughout the garden attract lots of native birds to the property



We are actually living a lifestyle that saves energy and reduces waste. Everything we do or own, we think, 'how can this be done differently, re-used or operated more efficiently?'