

Sustainable House Day 2013

Sunday 8th September 2013 from 10am 4 pm

Find out what's happening in sustainable living near you...

ENRTY IS FREE

List of 8 Places to visit in Far North Queensland

All street No's. will be released 7 days before the event.



SUSTAINABLEHOUSEDAY

www.sustainablehouseday.com

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Thank you to the Far North Queensland members of the Building Designers Association of Queensland and the Alternative Technology Association who will have knowledgeable people at each place to answer your questions.

Place 1: Chester Road, Wondecla (Southern end of Atherton Tablelands)

Our house is a 2 level 2 bedroom structure build on the bank of a small creek in a 1.79 ha forested block. It is off the ground on mostly steel stumps (plus 2 wooden poles in stirrups) and is constructed of recycled timber and timber milled by John as the owner/builder.

The house is clad in Weathertex which is a board derived from wood residues, and is fire and termite resistant.

Electricity is supplied by a 1.3 kw stand alone PV system which was sourced mostly second-hand and installed by John. There are also some new panels purchased under the Green loan scheme. This supports a 12v fridge/freezer, a 240v 1601 upright freezer, laptop, TV, sound equipment, washing machine etc with the aid of a 1500w inverter. Lighting is 12v with mostly LED globes with still a couple of dichroic down lights in low use situations.

Water is trapped on a 90sq mt shed roof and fed into 3 water tanks for a total capacity of 7300 gallons, 2 of these tanks are directly plumbed into the house. Toilet is a Naturloo composting unit, which could probably benefit from the installation of a heater, however, our power system is not large enough to support this. Grey water is caught in a small concrete tank and pumped out and used for irrigation of the native vegetation.

Our home has been built with coolness in the hot weather our main priority, so with wide eaves, high ceilings and good cross flow ventilation we have achieved this and have no fans or air conditioners. For the relatively short cold season we have a wood heater and abundant source of firewood on the block.



Place 2: Black Mountain Road, Julatten (near Mossman)

1. Construction:

- Floor concrete slab
- Wall construction materials solid 200 – 250mm hardwood logs.
- Fully insulated zinc alum roof with ceilings throughout including two open 3m verandas facing East and West running full length of the house.
- Large eaves over Northern and Southern end of building.
- Natural cross flow ventilation by seven casement windows adjustable to catch prevailing breezes. North & South dark transparent window shades.

2. Energy:

- Stand alone solar system, 10 X 85W solar modules
- Storage 1500 Amp gell cell battery bank
- 1500 Watt 240V DC/AC inverter
- Lights low consumption high efficiency globes
- Refrigeration Gas/Electric
- Gas cooker
- Hot water, custom built wood fired donkey system with high level insulation (requires firing only once every 48 hours)

3. Water and wastewater.

- General household water is river water pumped to Gravity tank
- Drinking and cooking water rainwater
- Sewage sceptic system
- Grey water discharge through filter system and used for tree watering

NOTE: The construction of the building offers a very high level stable internal temperature through its insulation, ventilation and design feature. In winter (in particular) after a cold night, the following morning, the internal temperature can still be as high as 12 ° above outside temperature. No heating system is required.



Place 3: Atoll Close, Port Douglas

I live in a solar powered townhouse in Port Douglas. The complex is retrofitted with 2 grid connect systems and the community solar that powers our pool pump. All systems are proven to be giving positive investment value and paid off within two and a half years.

I also have a solar hot water system and solar oven.

I have a roof garden over the carport with a rainwater tank behind my carport.

As a community, we have a strong sense of sustainability, and are growing more fruits and veges in our organic community garden. There is talk of a community water tank as well.

I have 40 years' experience in renewable energy systems including motor vehicle energy systems and will enjoy sharing this on Sustainable House Day.



**Place 4: EcoSplash Living Waters by Placid Pools,
2-4 Mt Koolman Street, Smithfield**

We have built our business around EcoSplash Living Water swimming pools . EcoSplash swimming pools are a natural alternative to conventional chemical swimming pools.

Having a s swimming pool at home is common in tropical Queensland to cool off from the long hot days. Conventional swimming pools are run with a substantial amounts of chemical additives and can use a lot of electricity. This is not necessary in a natural EcoSplash pool.

The organic self-cleaning process together with regular maintenance provides you with trouble free swimming pleasure. EcoSplash Living Water Pools replicate a natural system to maintain healthy water balance.

A swimming area of up to 90% is combined with shallow planted filter beds – the biological filter zone. Aided by high technology the EcoSplash System relies on natural Bio-Film cultivation, a layered arrangement of natural stones, specific flow rates and aquatic plants to produce crystal clean pure water.

Economically & environmentally sustainable, there is:

- * 80 % less running costs to a chemical pool
- * Power efficient through eco-friendly technology
- * Water saving through storage and recycling
- * Pays for itself within 2-3 years
- * Existing pools can be retro-fitted.

To date, the patented EcoSplash System is the only natural pool filtration system of its kind that is specifically adapted to work even in the harsh conditions of the Tropics.



Place 5: 22 Kippin Close, Redlynch Valley

A 9.6 star energy rated new home designed for the mainstream project home market. Built by Kenlck Constructions, designed by Green at Heart and packed with products and services from Tropical Green Building Network members; this home is pleased to showcase the best in local expertise for building cool, comfortable, affordable and energy efficient homes in the tropics.

Future proof design includes NO FUEL BILLS, accessible design to adapt to the occupants changing needs over their lifetime, water saving devices and appliances, good inherent passive design to maximise natural cooling breezes and minimise summer solar gain, low/no VOC components including paint, recycled materials, reducing waste, LED lighting throughout, minimised footprint so maximise use of useable space and maximise garden areas, a veggie garden, a native pond, some native planting and a gro-wall.

This well insulated and ventilated timber frame home, has so many clever design features, yet they are all executed in a discreet manner, to create a contemporary home which is cool, comfortable, funky and affordable to anyone considering building a new home.

Build costs are around \$265,000 to incorporate all the features displayed in the home. But as well as showcasing this as a new build home, there are many features that will appeal to those considering renovating to improve their existing homes energy efficiency. Features such as the LED lights, water saving devices and many other products used are just suitable for existing homes.

Our award winning team are passionate about building better homes in our unique region, and this home epitomises this ethos.

Assistance of our regular suppliers and contractors, as well as the Tropical Green Building Network and its wonderful members must be mentioned. Dedicated and inspirational people, with great ideas, products and services that we have used extensively in the home and which are readily available in the market place. This home will also serve as a display home to showcase their products for 12 months.



**Place 6: Freshwater Christine College, Brinsmead Road, Brinsmead:
Aquaponics System.**

Aquaponics is a unique method of growing vegetables in areas that have issue with available land or a shortage of water. The process uses the water from fish tanks to provide the nutrient to grow beds where the plants are grown.

The plants use these nutrients and in the process filter the water giving the fish clean water to live in. With Aquaponics, both the fish and the plants not only grow well, they flourish.

The process of Aquaponics produces no toxic waste, and does not use any chemical fertilisers.

We have achieved phenomenal plant growth with no need for chemical fertilizers! It is organic by nature. It uses less water than conventional vegetable gardening (as little as 10% of the water when compared to conventional farming methods).

The students plant the seeds in trays, and after 3 weeks in the greenhouse the seedlings are transferred into the aquaponics system, and maintain the system through water chemistry, taking care of the fish, and harvest the vegetables,

We have been successful in growing six type's lettuces, kale, tomatoes, chives and strawberries. The students harvest their crop every 4 weeks, and then have a choice of taking some produce home or packaging it into 200g resealable bags.

One of our regular customers is our tuckshop who benefit tremendously by having a regular supply of freshly harvested organic lettuces and tomatoes.

Any spoiled vegetables are recycled through the worm farm or compost bin. The worms are also a very good source of natural food for the fish.

In ten months we were able to grow Jade Perch from fingerling size to 400 grams in size.



Place 7: Fogarty Street, Whitfield

Fogarty Street Whitfield is a unique modern Queenslander. The custom design for the owner builders utilizes the design principles of a Queenslander, yet uses materials that both keep maintenance to a minimum and adds character to the building.

Primarily of Steel construction, the house features a clestory roof with windows, large open plan design, extensive use of louvres for cross ventilation and other innovative features to reduce maintenance and make it more user friendly.

Clad in materials like zincalume, scyon linea weatherboard and panels of rusty steel, complete with an orange glass front door, this is a house that was designed to be noticed.

The owners Brendan and Natalie embraced the principles of building an environmentally sustainable house, because for them it was a practical and logical solution. The designers, Beachcomber Building Solutions were able to bring together Brendan and Natalie's 20 years of idea gathering with their own expertise to create a home that met all of the criteria and fully utilised the strengths of their block of land.

Features include:

- Solar panels generating 6KW grid connect power
- Passive design for natural cross ventilation •
- 900mm eaves
- Large abundance of natural light
- Solar light tube in the bathroom
- LED lights.
- Etherm insulation of ceiling and walls.
- Light weight materials for cladding reducing thermal mass
- House on piers above ground for air flow
- NO Airconditioning
- Water based paints on walls.
- Copper piping for all water pipes.
- Cynortic water filter for whole house (www.cynortic.com.au)
- Onsite recycling of building materials and packing



Place 8: Kidston Street, Bungalow

Len and Wendy have actively been engaged in sustainable food production using aquaponics, wicking and more conventional in-ground gardening methods. Their passion is in sharing the knowledge accumulated along the way.

They form a complimentary partnership with Len contributing the practical know-how of the construction of the fish tanks and grow beds as well as ensuring good healthy fish, while Wendy propagates, grows and tends the plants.

A ready supply of barramundi, jade perch and red claw and an assortment of the freshest vegetables and herbs are available in their inner suburban backyard.



For more information about Sustainable House Day nationally visit www.sustainablehouseday.com

Official social network for the event GreenD www.greend.com.au

For information about local houses visit www.GreenBuild.com.au

NATIONAL INQUIRIES: Pia Vogrin or pia@evesolutions.com.au or 1300 301 585

LOCAL INQUIRIES: Emma Thirkell or admin@tgbn.org.au or 40531274