



THE TREE-HOUSE, RAILWAY ESTATE SUSTAINABILITY FEATURES

Compiled by www.ecoSAVVY.com.au in April 2007 for sale of property

Overview: 1920's highset Queenslander with detached treehouse (bedroom) and outdoor dining amongst the trees. House renovated in 2006 to improve cross ventilation and overall sustainability performance.

1. **Prevailing Breeze** in Townsville is from N through NE (afternoon), E to SE (morning).
 - o This house has lots of openings in these directions. (House faces East)
2. **Interior** of house **opened up** for **excellent cross ventilation** – aim throughout is to maximise airflow into all spaces. LOTS of Louvres and Casement windows.

In a recent renovation:

- ◆ walls on three sides of one room removed (now lounge)
- ◆ tall louvre doors added to both sides of guest bedroom, plus kept doorway into side room and additional fanlight opening to lounge
- ◆ Did not partition or add doors to other spaces

3. **Air-movement** assisted by **ceiling fans**
4. **Shading of windows** – shade along front, trees at rear (though being open all the time, not so important)
5. **Light coloured roof** – foil and polyester **insulation**
6. **Treehouse** – an excellent example of how to achieve comfort and coolness through **cross ventilation**.
 - ◆ Openings on 4 sides
 - ◆ Gauze at height
 - ◆ Light weight construction with low thermal mass responds quickly to changes in outside temperature
 - ◆ Shaded by trees around
7. **Outdoor living** – deck
8. **Landscaping** makes this house, having a **strong relationship to trees/nature** and the things that live in them butterflies, birds, possums! Gives this home a very relaxing feel.
9. The trees also create a **cool microclimate** around the house through shade and evapotranspiration – approx 3 degrees cooler.



10. **Garden**

- ◆ Some **produce** – lemon, lime, chilli, bananas, passionfruit, herbs
- ◆ **Established larger Northern Queensland trees**
- ◆ Side bed and along front fence – **locally indigenous plants** (grow naturally in Townsville Thuringowa area)



11. **Flooring** – oiled (natural oils, non-toxic) floor in kitchen, dining area, one-pac polyurethane in lounge, front section

12. **Non Toxic Paint** - Watty! ID low odour, low VOC paint.

13. **Large format light switches** – easier to use

14. **Lighting** throughout is energy efficient – look closely to see a variety of fluorescent lighting types including the track-lighting which can also be used as recessed down-lighting.

15. **4-star energy efficient refrigerator**

16. Clipsal **Energy Monitor** – monitors energy use in kWh, cents per hour, also temperature and humidity meter.

17. **Clean Energy from Ergon Energy** – Pay \$160 a year to have all our energy use (indirectly) sourced from renewable energy sources.

18. **Hot water heater** is electric storage – very energy guzzling, almost new when we bought the house, will replace with a more greenhouse friendly heat pump at some point.

19. **3-star water efficient shower**

20. **4-star toilet (3 L half flush, 4.5 L full flush)**

21. **Grey water** from shower and basin reused to water garden bed

22. **Irrigation** – timed, twice a week for lawns – large droplet sprays; garden beds once a week with shrubblers.

23. **Low fences** – so can talk over and minimise blocking of breezes

24. **Recovered timber** for louvre doors and kitchen benches

25. **Preloved furniture** in a number of locations

26. **Bokashi Bin** – bacterial composting of all food scraps – under back stairs.

27. **Cleaning** – *biodegradable, 'almost edible' cleaning products*

- warm water and vinegar for floors
- bicarb for tough cleaning
- sugar soap for walls
- orange spray for bath
- VRM biocleaners for toilet
- Water and sabco cleaning cloths generally
- Vinegar and newspaper for windows
- Aware Laundry powder for clothes washing (in cold water and line dried)
- Earth choice dishwashing liquid
- *Totally avoid bleach.*

