

Everything but the kitchen sink:  
mywaterwisehome.com  
A case study in water sensitive urban design



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Ian White, ARCSA 2007, Hawaii



# Rainwater Harvesting

- What do you get if you cross a plumbing apprenticeship, a PhD in rainwater harvesting and an owner builder's license?
- Local annual rainfall is 33" (850mm)
- Catchment area is 1450 sq ft (135m<sup>2</sup>)
- Annual yield is 30,313 gallons (115kLPA)
- Starting from scratch . . .
- Collection . . . replaced the roof and gutters
- Conveyance . . . rainhead leaf diverters, no first flush diverter
- Storage . . . 15kL PE storage tank



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# Rainwater Harvesting

- Treatment . . . 25 micron disc filter,  
no disinfection on cold water  
30-tube solar hot water service  
heating to 194°F (90 °C)
- Delivery . . . variable speed pump  
metered usage  
Bianco Rainsaver  
PE-X water service
- End uses . . . water efficient fixtures / fittings  
toilet, dishdrawer, front-loader,  
flow restrictors @ 9L/minute  
Everything but the kitchen sink
- Problems and resolutions



# On-site Recycling

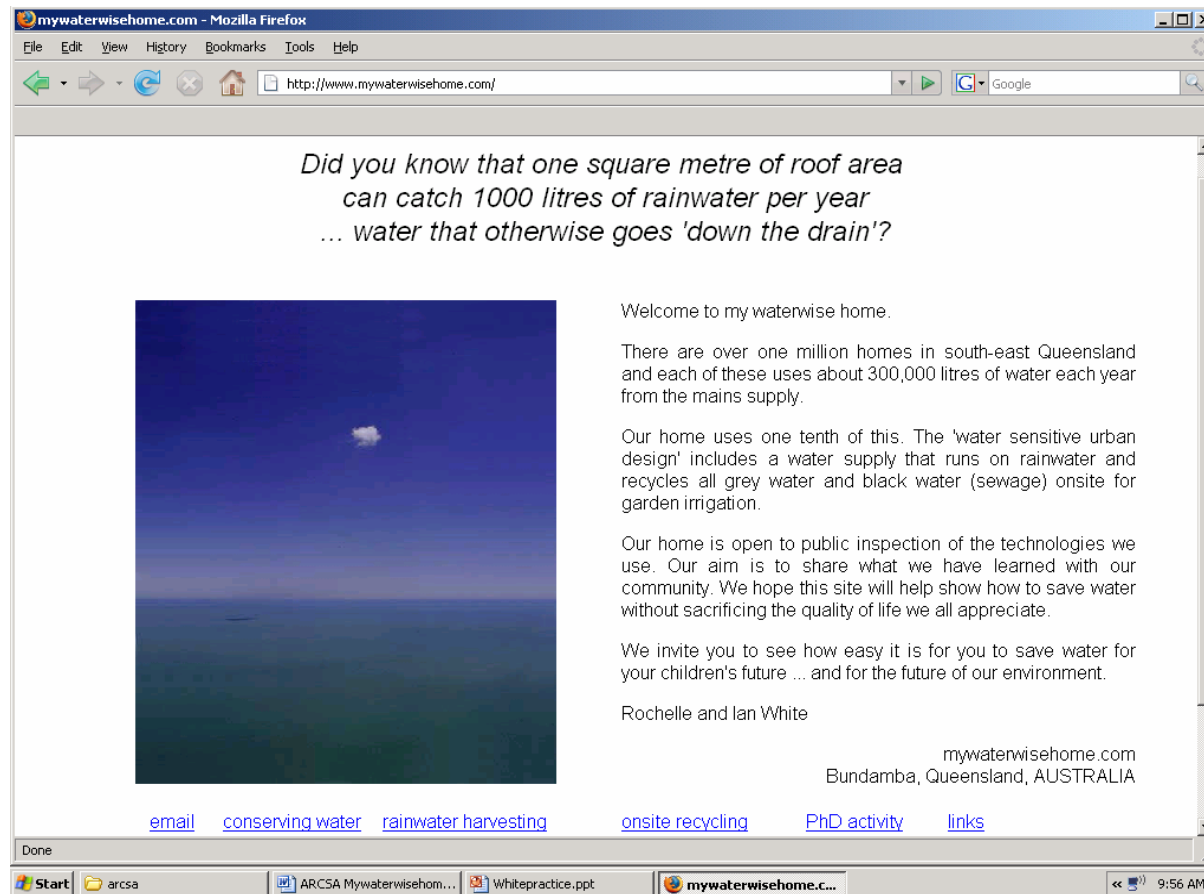
- Site conditions
- Test-site installation permission obtained under s4 of the State Government Plumbing and Wastewater Code 2006
- All waste water (black and grey) is processed on-site in an OzziKleen RP10A, which treats to 'advanced secondary' level
- Minimise BOD, TSS, TCC, Cl, N, P
- Problems and resolutions



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- Pushing the envelope . . . what comes next ?



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