



L-R Dallas, Ella and Chris regularly track natural resource savings at Horsham House through the Grow Me The Money website.

HORSHAM HOUSE Heritage looks meet eco values

A SENSE OF PERSONAL RESPONSIBILITY TOWARDS THE ENVIRONMENT AND AN ENTHUSIASM FOR TECHNOLOGY HAVE ENABLED HORSHAM HOUSE'S NEW OWNERS TO CUT WATER AND ELECTRICITY USE BY 34% AND 40% RESPECTIVELY IN THE LAST 18 MONTHS, WHILE MAINTAINING A HERITAGE GUESTHOUSE AND GARDEN.

When Chris Pittock and Dallas ScottPittock took over the restored Federation-era house in mid 2007, they set out to examine every aspect of the property's impact on the environment. Having come from an environmentally aware family that includes a climate change researcher (his father) and World Wildlife Fund International campaigner (his brother), Chris recalls his initial reaction of horror.

"I reeled at the inefficiencies, but I also saw that it could be significantly improved with concerted effort," he says.

The property's special charms presented challenges. Solar-powered electricity was ruled out both by heritage concerns for the property's appearance from the street and its aspect, while its visual appeal depended on maintaining the traditional water-demanding garden.

"Having come from an almost exclusively native garden to a large English-style garden with extensive lawns, hedges and a council heritage-listed 100-year-old London Plane Tree, we saw that water was always going to be a major issue." →

HOW HORSHAM HOUSE ACHIEVED PLATINUM

ENERGY EFFICIENCY

40% reduction in electricity use in the last 18 months - saving 9427.54kWh and avoiding greenhouse gas emissions equivalent to over 12 tonnes carbon dioxide (CO2) (247,000 black balloons)

- Heat recovery ventilation system minimises air conditioning energy requirements. Sliding shutters built into the gables enable fine-tuning of temperature control
- Heat pump system minimises energy requirements for hot water
- Laundry appliances replaced with energy-efficient models
- External and internal lighting professionally assessed and optimised for energy savings and automatic off switches fitted to guest TVs, DVD players and stereos.

WATER SAVINGS

34% reduction in water consumption in first 12 months of ownership - saving 118kL compared to previous 12 months

- Water-efficient laundry appliances installed -saving over 150kL/Year
- Temperature-sensitive valves installed to reduce water wasted before guest showers run hot
- Use of non-toxic environmentally safe cleaning products minimises water requirements for cleaning in bathrooms and kitchen.

WASTE MINIMISATION

Landfill waste reduced to less than one 240 L wheelie bin per fortnight

- All recyclable materials delivered to recycling facility (including those not accepted for kerbside collection)
- Insulated composting system efficiently processes all compostable food and landscaping wastes for use in kitchen vegetable garden and grounds
- Guest bathroom soaps replaced with liquid purchased in bulk to minimise packaging and wastage.

PLATINUM CLUB CASE STUDY



Running your business doesn't have to cost the earth

SMARTER ENERGY USE

In the face of rising electricity tariffs, Chris and Dallas approached the energy efficiency challenge with a combination of thoughtful observation, careful research and well-judged use of technology. Noticing that newly arrived guests tended to over-react to the ambient temperature of their room by selecting an unnecessarily extreme air conditioning setting, they effectively encouraged power-saving by pre-conditioning rooms to a moderate, yet comfortable, setting.

A heat recovery ventilation system maintains a comfortable 17 degrees room temperature in Winter

They also installed a heat recovery ventilation system (HRV Australia) to recover passively heated warm air from the roof space, reducing heating requirements in Winter and circulating air to keep rooms cool in Summer. The system maintains a comfortable 17 degrees Celsius in rooms that previously dropped to a chilly 12 degrees, without running the reverse-cycle heating. Chris estimates a return on investment within 2-3 years. A highly energy-efficient heat pump system (Quantum energy technologies) was recently added to cut power consumption even further.

Old hot water services were replaced with this heat pump system which reduces energy consumption and CO₂ emissions by acting like a reverse refrigerator to harness ambient heat. The modular units can be selectively shut down over low-demand periods. Laundry is done on the premises, using a super-efficient front-loading washing machine and humidity sensing dryer to keep up guests' demand for fluffy towels without wasting energy.

MAKING EVERY DROP COUNT

Horsham House has bettered the industry benchmark for water efficiency, with a yearly consumption of only 44 kL per bed for the period August 2007 to August 2008 – coming well under the 'best' performance indicator for the accommodation sector as set by Victorian water authorities (Yarra Valley Water Limited, City West Water Limited, South East Water Limited). This was achieved through a range of cunning strategies embraced by Chris and Dallas with their characteristic enthusiasm for environment-sparing technologies.

Determined to overcome the problem of guests running the shower hot tap while waiting for warm water, they installed a set of temperature-sensitive valves linking the hot and cold water pipelines at their distal end. A pressure pump controlled by a time switch maintains slight over-pressurisation in the hot water line, pushing cooled hot water back into the hot water service tank. The system ensures that water arrives at 28 degrees Celsius at even the most distant taps.

An ingenious do-it-yourself system was also installed to collect grey water for use in the extensive gardens. Watering requirements were also reduced by replacing a third of the front lawn with an indigenous groundcover.

"Creeping boobialla has a negligible water requirement, requires no mowing, and looks more-or-less like grass from a short distance," explains Chris.

"It provides a habitat for native insects, including the endangered Golden-rayed Blue Butterfly, removes the need for grey water on grass, and reduces mowing costs, noise and emissions."

Chris is also a keen champion of environmental sustainability within the community, and was co-organiser of the Horsham Sustainable Land and Living Expo 2008.



Chris monitoring the newly installed integrated hot water system and pressure pump.



Chris cleaning and repositioning solar panel for landscape lighting.

Grow Me The Money is a free program for Victorian small- to medium-sized businesses to help them to reduce their impact on the environment and save money doing it.

We guide participating businesses through the process of measuring and reducing their energy use, water consumption and waste output.

For more information on how we can help your business, visit www.growmethemoney.com.au