



Students master nuts and bolts of eco-housing

MEREWETHER High students Claire Burgess, James McMurray, Nina Long and Macfarlane Amey – working as TTTK – recently won the Future Homes 2010 competition.

The competition was a NSW Department of Education and Training challenge for year 9 and 10 students in the Hunter and Central Coast regions in recognition of the Year of Learning for Sustainability.

The brief was to design a 20-square-metre home that generated renewable energy, harvested water, used sustainable materials, and had the ability to adapt to changing circumstances.

The competition was designed in partnership with Living Green Designer Homes, based on the Central Coast.

The judges said: the Merewether students “provided an interesting design solution through its orientation, performance and innovation, while being sensitive to the environment”.

Materials chosen included Hebel blocks, Bondor and MetecnoSpan panels, double-glazing and bamboo.

The students’ teacher, Andrew Donaldson, said TTTK won the competition because they considered multiple aspects like solar, water, and wind, whereas other groups weren’t as comprehensive.

Living Green boss and competition judge Craig Riddle said if students embraced sustainability principles from an early age they would have the potential to influence houses of the future.

Living Green Designer Homes will build the winning design offsite, with the students overseeing the build, and transport it to Merewether High in early October.

Easing the power load

THE NSW Department of Environment, Climate Change and Water is offering a free water- and energy-efficiency kit to pensioners and low-income households.

Called the Home Power Savings Program, eligible households can receive the free kit which comprises:

- ❑ A home assessment by an energy expert to identify power savings.
- ❑ An eco switch to easily turn off standby power.
- ❑ Four energy-efficient light bulbs.
- ❑ A low-flow showerhead.
- ❑ A shower timer.
- ❑ A tap aerator.
- ❑ Draught-proof strips for doors.
- ❑ A door snake.
- ❑ A personal power-saving action plan.

Find more information about the Home Power Savings Program at savepower.nsw.gov.au/households.

Electric car fleet docks

ELECTRIC cars are in the news with the arrival of Mitsubishi’s i-MiEV in Australia on August 5.

Twenty of the fully electric cars arrived in Melbourne as part of a 10-year federal and Victorian government study.

The study will involve about 60 vehicles (cars, light commercial vehicles and motorcycles) using 180 charging stations.

Some 180 households will get to participate in the trial that will begin later this year.

The i-MiEV has a lithium-ion, 88-cell battery that stores 16kWh of electricity. It can travel about 160 kilometres between charges and has a top speed of 130km/h.

It will retail for about \$68,000.

If that sounds a bit steep, you can buy a fully electric car for about \$48,000 from Blade Electric Vehicles, based in Victoria.

Blade produce the Electron, which is a converted Hyundai Getz.

It uses lithium iron phosphate (LiFePO4) batteries that also store 16kWh. The batteries take eight hours to fully charge but there is also a one-hour charge option that will take the battery to an 80 per cent charge.

The expected life of the batteries is 10 years.

The Electron can travel 100km between charges and has a top speed of 120km/h.

High-profile science writer Bernie Hobbs, perhaps best known for her appearances on the ABC’s *New Inventors* program, recently took delivery of an Electron after a six-month wait.

Hobbs says \$48,000 was a lot of money for her, but when seen as \$5000 a year over 10 years it is not so bad.

(Blade’s website, bev.com.au, shows how companies can depreciate the purchase through the tax system and, with other savings on things like maintenance costs, can theoretically turn a profit.)

Alternatively, you can buy components from Blade and build your own electric car.

But if everyone drove an electric car, wouldn’t that put an awful strain on our electricity supplies and cause more pollution through coal-fired power stations?

Not necessarily.

Most electric vehicles would be recharged at night when there is an oversupply of cheap electricity anyway.

Moreover, if using renewable electricity, the cars would be truly emissions free (putting their manufacturing emissions to one side).

The other plus is that, with lots of electric cars, their batteries could act as a giant virtual battery, storing excess electricity of a night and feeding it back into the grid of a day when demand is high.

In effect, you could buy electricity cheaply



STEPHEN WILLIAMS



at night to recharge the batteries, and sell it at a profit during the day (if you weren't using the car).

Many experts believe electric cars are the future of private transport and there could well be a big market in converting conventional cars to electric.

Electric vehicle do-it-yourself groups are sprouting on the internet.

Start by having a look at the electric-vehicle forum at the Alternative Technology Association website at ata.org.au.

Tillegra open to debate

THE Wilderness Society, as part of the Save the Williams River Coalition, will host a community forum on the proposed Tillegra Dam at Maitland Town Hall on Tuesday at 6pm.

Candidates for the federal seat of Paterson – Bob Baldwin (Liberal), Jim Arneman (Labor) and Jan Davis (The Greens) – will address the audience, as will other speakers.

Each political speaker will have six minutes to answer three set questions.

Phone 4929 4395 or visit wilderness.org.au/williams.

Morisset garden takes root

THE volunteers at Yunung Community Garden at Morisset are doing a fantastic job of creating a garden of great productivity and diversity.

Congratulations should go to Jack Thieme, who

did the original garden design based on permaculture principles, and Joy Edmonds, who is now co-ordinating the volunteers.

The garden is still in its infancy, but great progress has been achieved in the past six months.

The garden is a delightful mix of traditional fruit and vegetables with sections devoted to natives and bush tucker.

A water feature is working well, with ducks in attendance when I visited the site recently.

If you are in the Morisset vicinity you could do a lot worse than stop by the Multipurpose Centre in Dora Street, where the fairly large garden can be found.

The volunteers have a working bee on the second Sunday and fourth Saturday of the month from 9am to noon.

There are many lessons to be learned from such a garden, for both the beginner and experienced gardener.

Pulbah regeneration

THE next bush regeneration day on Pulbah Island will be held on August 29 from 8am to lunch.

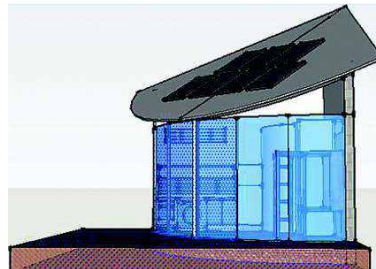
There will also be a celebration marking the 10th year of work there.

Boats will leave from Murrays Beach and Dobell Park, Wangi Wangi.

Phone 4972 9000 to RSVP.



ECO-NOMICAL: Craig Riddle, Claire Burgess, James McMurray, Macfarlane Amey and Nina Long. Below, the winning design.



PLUGGED IN: Bernie Hobbs with her Blade Electron and, below, the Mitsubishi i-MiEV.

BIODIVERSITY: A pond at the Yunung Community Garden at Morisset. The garden is a mix of traditional fruit and vegies, natives and bush tucker.



DIARY DATES

Phone 4979 5952 Email info to
swilliams@theherald.com.au

- **August 17:** Community forum on Tillegra Dam, Maitland Town Hall, 6pm-7.30pm, hosted by The Wilderness Society, 4929 4395, wilderness.org.au/williams.
- **August 18:** Permaculture Hunter Region meeting, Elderly Citizens Centre, Laing St, Newcastle, 6pm for 6.30pm-8.30pm. All welcome. Contact Liza, lizapezzano@hotmail.com, 4960 0325.
- **August 18:** Hunter Environmental Institute seminar by Gabriel Anderson from Ozgreen on Upper Hunter Valley projects, Customs House, Newcastle, 4pm, followed by drinks and conversation, hei.org.au.
- **August 19:** Family day, Fig Tree Community Garden, Albert Street, Wickham, from 9am, figtree.org.au.
- **August 19:** Cessnock community garden, meet 9.30am, Calvary Aged Care, cesscomgarden@gmail.com.
- **August 21:** Recycling and waste workshop (free), Windale Community Hall, 9.30am-12.30pm, book on 4921 0333
- **August 22:** Sustainable food workshop (free), Belmont Senior Citizens Centre, 10am-1pm, book on 4921 0333.
- **August 22:** Farmers market, Newcastle Showground, Griffiths Road entry, 8am-1pm.
- **August 28:** Working bee, Yunung Community Garden, Morisset Multipurpose Centre, Dora Street, 9am-noon. 0412 416 787.



FAST FACTS

Water storage

Grahamstown Dam	77.1%
Chichester Dam	100.0%
Tomago Sandbeds	93.7%
Anna Bay Sandbeds	62.8%
Total	81.5%

Electric dreams become a reality

- **Mitsubishi i-MiEV**
Battery: lithium-ion, 16kWh
Distance between charges: 160km.
Top speed: 130km/h. **Price:** \$62,000
- **Blade Electron**
Battery: lithium iron phosphate (LiFePO4), 16kWh
Charge time: 8 hours (or 1 hour quick charge to 80%)
Distance between charges: 100km
Top speed: 120km/h **Price:** \$48,000
- There are some 50 electric vehicle models under development globally. Electric vehicles are tipped to take between 10 and 20% of the market by 2020.