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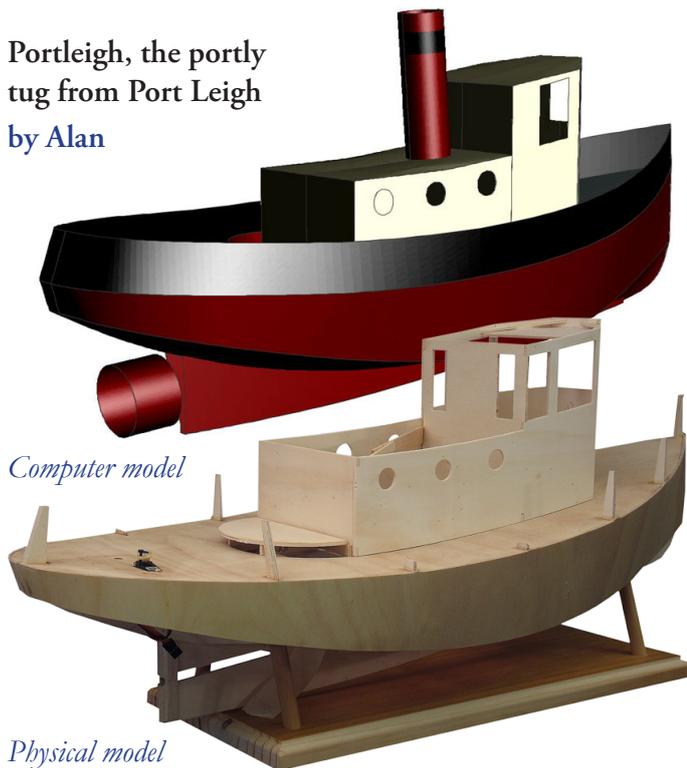
## NEWSLETTER

<http://www.bmbg.org.au/>

### *Ensign's report* 1st April 2014

*This month Alan provides the background on his latest tug, a good example of a 'simple' model as defined in the last issue. For those who haven't yet tried it, designing your own model, instead of having to be content with building one for which plans or a kit are available, can add a new dimension to your hobby. You don't have to do it on a computer - analogue pencils and flat-screen paper still work fine.*

### Portleigh, the portly tug from Port Leigh by Alan



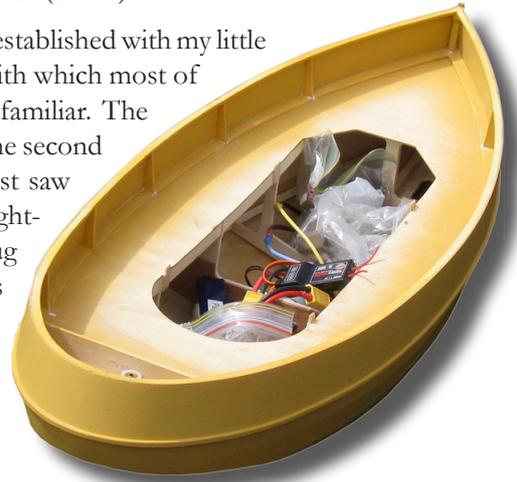
*Computer model*

*Physical model*

Portleigh is the result of my quest for modelling nirvana. My original goal was for two models, one nimble and capable of fast sweeping turns, the other slower and highly manoeuvrable, fun to sail and at the same time useful for honing my skills in precision steering. Ideally they would be small and light enough for easy transport, but still large enough to have real presence on the pond. In this Utopian world they would also be very low maintenance, run for ages on a single charge, and have no fragile rigging. Of course, they would be easy on the eye - a duo that I would be pleased to take to the lake.

### Portleigh by Alan (cont.)

The first is now established with my little police launch, with which most of you are already familiar. The inspiration for the second came when I first saw Allan W's delightful little green tug Amy, which has been a much-admired regular at our sailing days in recent times.



Unfortunately, this chubby little gem, the Harbour Master, is no longer in Midwest's range, so a few sketches were made using a photo of Amy as a basis, incorporating some design and cosmetic changes of my own. From there a basic CAD drawing was soon produced. The model was scaled up 20%, to overcome a battery placement problem with the original, and bring it close to my favourite scale of 1:12. Apart from the look of the model, I was also taken with the clever design of the original kit. Easily built from ply, the chined hull isn't very scale-like but unnoticeable once in the water and still looks more than acceptable on display.

With oodles of room in the hull, fit-out was a dream. Although brushless motors are hard to beat now, in this particular application, where fine low speed control is required, a low-current / high-torque brushed motor was chosen. Even at full 'steam' ahead well under 2 amps are drawn from the 2.2 Ah LiPo battery, giving a minimum runtime of 80 minutes. As I'm endlessly frustrated by models that won't steer in reverse, I decided to have a go at making a Kort nozzle. Using some 50mm plastic plumbing pipe the construction was easy, and combined with a low pitch propeller, it works a treat.

Although the hull was relatively simple to construct, adding some extra scale detail meant finishing the model took longer than planned, but I'm well pleased with the result. It fits all of my criteria and complements the little police launch perfectly. With very little displacement Portleigh tips the scales at only 1.8kg - very easy on the back for a tug. Portleigh seemed an appropriate name for this tubby little character, of course is pronounced 'portly'. Look out for her at the lake.

