



It's all about loo

It has taken 20 years, much planning and many hours of seated reflection in all weathers, but the hand-built holiday house now has an indoor toilet.

Words Doug Anderson
Photos Fiona Morris

There's no shortage of truth in the observation that when dunnies began to move inside the home, kitchens began to move outdoors.

There aren't too many houses these days without a barbecue of some sort and/or a terrace that connects to the kitchen area via folding or sliding doors. (And you don't find too many outdoor loos these days.)

Up at Matron's Charm School, a curious 20-year experiment in bad design and ineptitude, we've enjoyed some success with outdoor cooking but not an equal measure of enjoyment – if that's the word – with outside brascos.

Two rather swish constructions, both combining a drop toilet and storage shed have succumbed to bushfire flames – one of them before it could even be christened.

I have pledged to avoid cloacal humour in this story but I must confess the earlier makeshift dunny that preceded those ill-fated structures was a bit of a joke in wet weather. It didn't have a roof and you can envisage the difficulties of using it on a rainy day – trying to stay dry and relatively serene while juggling an umbrella, toilet paper and various garments. The phrase *Don't go there!* probably had its origin in this contrivance.

The current outside dunny has a composting toilet using a solar panel that drives a fan and reduces waste to an odourless

material, not unlike sawdust, which can be dug in around trees as mulch.

It's a basic Nature Loo with interchangeable black plastic bins. Liquids drain into a gravel-filled pit while the solids dry out and compost.

Under normal conditions it needs to be emptied about three times a year – the filled bin placed out of the way to further "cook" in the sun and the empty replacement receptacle connected to two lines – one an air vent, the other a hose via which fluids travel to the sullage pit.

It has a roof, the mandatory picture of Her Majesty above the throne and a hand basin with gravity-fed water but no door.

We don't have a problem with monar-





chists – or severe gales – and most guests quickly adapt to the prospect of not having a door to close. It's convenient, cheap, environmentally sensible and agreeable to use on a warm morning when the vision splendid assists in nature's necessity.

*If it comes it comes – if it don't, it don't
It will if it will, it won't if it won't.*

But on a winter's night when the frosts descend and you can see every breath departing, it's a less than enticing experience. As a consequence, matron recently began to agitate for a "real" indoor toilet in the ensuite.

We aren't getting any younger ... if you get my drift ... and she advanced her case by going online to suss out the options.

The best of these from our point of view for price, capacity, facility, maintenance and environmental responsibility, was the Centrex 2000 – which may sound like a hair-tinting product, but is an aerating three-chamber unit made by a Canadian firm, Sun-Mar Corp.

Coupled with a Sealand 510 series china toilet suite – a one-pint, pedal flushing unit made by Dometic Corp in Big Prairie, Ohio – it seemed to be the go and didn't require any specialised knowledge to install.

We ordered through Nature Loo in Brisbane and a carton about the size of a large fridge arrived with an operating manual, sensible installation instructions, vent kit, elbows, straps, bags of peat moss, composting enzyme (a process accelerant) and microbe mix for inoculating waste. Sadly, no sign of a partridge for the pear tree.

It's crucial to work out your venting system carefully before contemplating installation because, although some fumes are inevitable, they need not be a problem provided no bend in the flue line is more than 45 degrees and the total of all bends doesn't exceed 270 degrees.

The three-metre length of 25mm hose supplied to drain liquid to the gravel bed was too short by half but we luckily had plenty of irrigation black poly.

Some of the included fittings, such as the venting system, are American and don't conform to pipe sizes readily available here. Try finding 75mm diameter PVC pipe locally.

Step-down rubber connectors with ring clamps for the larger pipes (75/90mm) are provided and I substituted 50mm PVC pipe and fittings for the 45mm venting pipes that were supplied with the unit –

stepping up via a swimming pool adaptor socket to attach the breather cap at the top of the vent above the roofline.

Step 1: Read the instructions.

Step 2: Read again with greater care.

This we did but not meticulously enough – each of us relying blindly on the other's misunderstanding of the specifications. And, with the miscommunication that often attends shared tasks by people who like to be right, we consequently misunderstood the alignment of the pipe that connects the toilet pedestal to the revolving drum where the waste is converted into compost. With this system, if the drum unit is to be situated directly beneath the pedestal, the entry pipe must connect at an angle of about 45 degrees – not vertically.

When the unit is mounted away from the pedestal (up to six metres is feasible) the waste pipe is supposed to run at an angle of between two and three degrees from horizontal (9mm to 18mm a metre), so that solids travel with the flushing water.

The highly idiosyncratic Charm School is built on poles over sloping ground. From the floor to ground level beneath the bathroom is about 1.2 metres at the highest point, so with adequate headroom and easy maintenance in mind, we opted to site the drum unit about four metres downhill from the toilet bowl, where there is reasonable clearance. By the time I had paused to re-read the fateful instructions, I had unnecessarily removed about two tonnes of soil from beneath the house.

Still! This created a nice space to cast an attractive concrete slab and retaining wall. It also created a decent situation for the connection of power to the fan and heater units as well as allowing the correct geometry for the vent pipes, via which fumes are drawn from the chamber.

The slope ensured easy run-off of the fluid wastes to a sullage pit. Good old gravity.

It sounds simple enough writing this now but there was no shortage of cursing and frustration – not to mention repeated smashing of the skull on the sub-floor bearers and beams. My phrenologist, Ms Domino Nutcracker-Sweet, was duly appalled.

Dana from next door lent me her concrete mixer and various muscular chaps – El Greco, Alexis the Chap and Tony Clunes (reigning Yango Creek snooker champion) – were on hand to drink beer and pour the first batches of concrete.

Matron even abandoned her sudoku to fetch sand and to shovel gravel into the sullage pit. Astonishing!

She also showed enthusiasm for tiling and grouting around the pedestal, situated where a storage cupboard had stood previously. From cabinet to cabinetto.

You can see from the photographs that it's a reasonably good job – the smiling face of Her Majesty signifying approval and a warm welcome.

Connecting water from roof run-off tanks to the bowl, gravity-fed via 25mm poly pipe, should have been a doddle but it was one of the most vexatious elements of the job.

By this stage I'd spent a week on the job – up and down ladders, in and out of man-holes and crawling about in confined spaces amid wombat droppings. It was giving me the shits. But finally it was done and working. Say goodbye to frozen winter bums and wet ugg boots.

Water economy is always a major concern and, happily, there's no noise in the flushing process which uses about half a litre of water and is actuated by a foot pump similar to those on motor cruisers.

It (and other similar models) can also be flushed manually with half a bucket of water. Solids flow down a 90mm pipe to the drum which is turned manually once a week – or more depending on the frequency of use – via a handle through a geared mechanism. Liquids drain away down the overflow hose to the sullage pit and over a period of weeks the composted matter is delivered in solid form to a drawer which is emptied as required.

All very sensible.

The next step is to run the fan and heater from a solar collector.

The all-up cost of the drum unit and pedestal was about \$3000 (plus delivery). All extra plumbing components, tiles, grout, fixatives, hardware, gravel, cement and sundries – much of which was recycled from scrap – came to another \$250.

OK, you have to spend a dollar to spend a penny but the dividends, apart from the winter warmth, include that glow of environmental virtue that attends every, er ... passing moment.

For more information, see Nature Loo www.nature-loo.com.au.

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