

LIVEWIRE PERSONAL SPACE

True brews

Microbrewer Marcus Cox talks tech with **Katie Cincotta**.

How did the 3 Ravens micro-brewery begin?

It was started four years ago by five engineers. As a joke, one of the staff members they were about to hire said, "I'll come and work for you if you build me a brewery". Being a new company they had a lot of overhead time waiting for clients so to keep the guys entertained they put together a 300-litre pilot plant out the back of their office in Thornbury.

I hear dwindling English ale supplies was also a motivation?

Yes, there was a pub down in North Carlton called the Brandon and they were taking English-style beers from the fledgling microbreweries and putting them on cask hand-pumped service. The guys used to spend a lot of time down there before it closed so that gave impetus to the project.

Did their engineering skills come in handy?

They built the plant from second-hand equipment as they do design work for the food and pharmaceutical industry. It was great marketing for their engin-

eer company to show that they'd formed an exciting small brewery and were a little bit more dynamic. The brewery employs a lot of their design techniques that they'd use on much larger jobs, such as valves, so there's a showcase aspect to the brewery. A lot of the engineers work off-site so once a month they catch up at a private bar on-site where they drink their own beer. We've used that bar to offer public tastings on a Friday over summer.

How big is the plant now?

A couple of years ago we put in a 1200-litre plant so now instead of a couple of hundred litres we can make a couple of thousand litres a week, which we distribute to about 150 stockists.

What kind of beers do you brew?

We make five ales. They tend to have fruitier flavours and are more assertive and old-fashioned, as a bit of a reaction against the macro lagers all tasting the same. We have a blanket policy of using at least 50 per cent domestic ingredients. My favourite is the Blond, a German-style pale ale.



PICTURE: EDDIE JIM

How long does the brewing take?

From the time that we manufacture the sugary water that is the base of the product to pulling the top off a bottle of beer is about four weeks. And while you can monitor along the way, you don't really know how good or bad things are until you taste the finished product. The best indicator of fermentation is as the

Five Favourite Things:

1. Microsoft Outlook
2. Nokia E65 mobile
3. 12" Mac PowerBook
4. German CO₂ meter
5. pH meter

sugars are eaten up by the yeast, the density of the liquid decreases. So you float a calibrated instrument and the higher it floats, the more dense the liquid is.

What is the story behind the brewery's name?

3 Ravens is some sort of nerdy joke, I think it's from *Dungeons*

and *Dragons*. One of the directors, Ben, is a gothic and there's some famous medieval work called *3 Ravens*, so there's English history associated with it.

Is the plant computerised?

Most breweries of this size would use computer valves, but for the hell of it we've gone manual. There is some control such as thermostats to maintain temperatures, but it's more electrical than electronic. One of us pours grains into the hopper, then we drain the sugary liquid off the bottom that goes into a giant electric kettle, except instead of 100 watts its 35,000 watts. You end up with this huge amount of yellow-looking sweet liquid that you boil up with hops for flavour and aroma, cool it down and inoculate it with yeast... the byproduct is alcohol.

What tech tools do you rely on?

Some of it is a bit Year 10 science with a microscope that shows how many yeast cells are in the liquid. I have a pH meter with a digital display that also measures conductivity and temperature. It's 1980s technology at its best and you can drop it in hot stuff and it doesn't break. This is the difference between me and some guy in the 14th century wearing a pointed hat.