

# Quality pumps the success story behind environment-friendly Mornington Peninsula winery

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## The Situation

Australian wineries face a number of challenges in their quest to make and bottle fine wine, and of all the technical hurdles confronting the winemaker&nbsp; accessing and storage of sufficient water of the right quality, is perhaps the most fundamental.

One Victorian winery, The Port Phillip Estate at Red Hill on the Mornington Peninsula, illustrates one extremity of the challenge, because it has no access to mains water and must collect, store, clean and dispose of its own supply.

The Port Phillip Estate, and its sister site Kooyong Winery, specialise in production of premium quality table wines from red and white grapes, including pinot noir and shiraz, and sauvignon blanc, pinot gris and chardonnay. The total area under wine is about 55 hectares.

No winemaking is done at the Port Phillip Estate. This reduces its demand for water, but because wine made at Kooyong Winery is bottled at Port Phillip, it still needs a supply of quality potable water – and its capacity must be flexible. This is because Port Phillip Estate also is used to bottle other wineries' product made at Kooyong under contract. In good years, considerable contract work can result.

Along with a cellar door, accommodation and a stunning, fine-dining restaurant, the Port Phillip Estate site houses a bottling hall

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### TOPIC:

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### LOCATION:

Australia

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### COMPANY:

The Port Phillip Estate

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and underground storage area. The building is made of rammed-earth with walls 500 mm thick. It recesses into the hillside to ensure a uniformly cool temperature in the storage areas.

The building has 14 tanks of varying sizes, all with full temperature control, with a total capacity of 220,000 litres. Its bottling line capacity is 4000 bottles per hour. Its first year of bottling was 2009.

#### The Grundfos Solution

Port Phillip Estate harvests rain water into a gravity fed 300,000L concrete tank. Water is then purified to drinking quality via an Edson Water Technologies™, filtration/treatment system.

Potable drinking water is pumped to a reservoir header at the top of the building, from which it is distributed by gravity feed.

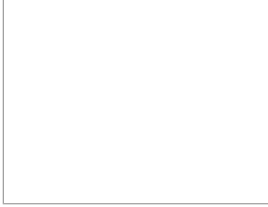
Wastewater is reclaimed onsite in a black-water treatment facility. As no winemaking is performed at Port Phillip, there is minimal organic and solids loading in the wastewater.

Most of the water, heated to 90°C, is used to sterilise the bottling line. The relatively clean hot water washings are forwarded to a holding tank for cooling before discharge to waste. Surprisingly, no water is used for bottle cleaning. Instead, high purity sterile compressed air does the job.

Tanks emptied of stored wine are washed with a gentle cleaning solution. Nevertheless, washings and rinsings are forwarded to a tank for neutralisation before disposal to the treatment facility, after which they are stored in a holding pond and are used to irrigate the vineyard.

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