

Rainwater Harvesting – Eastcott Vineyard

Richard and Hilary Waller produce wine on 12 acres of Devon farmland at Eastcott Vineyard, near Northlew, Okehampton. After starting with a range of still wine, the Wallers wished to expand their wine making enterprise and applied for an RDPE grant to the South West of England Regional Development Agency for additional equipment to make sparkling wine. Alongside their application for the wine making equipment, they also added a rainwater harvesting system, allowing for water from the winery roof to be harvested and then used in the business, as well as improving the green credentials of the vineyard.



Rainwater harvesting system

The rainwater harvesting system was installed in 2010. The system uses rainwater collected from the roof of the winery (approximately 14m by 10m area) that is fed into 3 x 1000 litre plastic tanks that sit outside the winery building. All the water collected is used in the wine making process from filling the tractor sprayer, to cleaning the tractor and picking crates post harvest. The water is put through a 28 µm filter system, which removes some particles, however does not take the water to mains quality as Richard does not feel that the additional filtration cost would be justified for the volumes of water used. At present the water is pumped to an inside tap through a standard garden pump for cleaning the winery; water outside is fed through a tap and a large bore pipe is attached to the tap to fill the sprayer. This is where the system's main benefit can be seen.

“Previously, using mains water to fill up the sprayer would take around 40 minutes longer than it does now,” Richard comments. “The water coming out of the rainwater tanks is at a better pressure, so not only can I fill the sprayer more quickly, the pressure helps in the cleaning processes. Having two supplies of water (mains and rainwater) also enables more efficient working as two supplies are able to be used at once. This also saves costs through reduction in mains water used.”



Winery at Eastcott Vineyard

Richard installed the system himself, and it cost the vineyard £400 plus the grant funding (total £650). However installing it himself presented a few issues. “The plumbing was over complex,” Richard adds, “there were a range of different pipe sizes that had to be fitted together and this caused complications, not just through the increased cost of fittings. Another issue is the location of the tanks, as during winter, the water in the tanks can freeze, and so the tanks have to be emptied. Potentially if we had enough space, we could move the tanks inside, however this is not something that we are considering at the moment.” When looking at the financial payback of the scheme, Richard admits that the system will take a long time to pay. Current use is approximately 10m³ per year, which at mains equivalent works out at a saving of approximately £18 per year. However if production were to expand, these cost savings would increase accordingly. The time savings of sprayer filling and having two supplies available at peak times are the most beneficial elements of this system, which allows for a better work efficiency.