

Water wise businesses tap into cost savings

Water is becoming an increasingly expensive resource with the majority of tourism businesses now on water meters. Introducing water minimisation measures is one of the easiest and most inexpensive ways to achieve cost savings and to reduce the environmental impact of your business. Businesses that adopt a systematic approach to water reduction typically achieve a 20 - 50% decrease in the amount of water they use (dwrcymru.com).

Read on to find out how two savvy, sustainable Welsh businesses are saving water and money.

Outdoor Alternative, Cerrig yr Adar, Rhoscolyn, Anglesey

www.outdooralternative.co.uk

Installing water saving devices

Outdoor Alternative was established by the owners, Ian & Margaret Wright, in 1985 and is now run as a family enterprise including their daughter Jacqui and her family. Outdoor Alternative has purpose-built accommodation designed to provide comfortable year round facilities for groups of up to 36 in 2 adjacent buildings, the accommodation is set up for use either on a self-catered or catered basis.



Demand for water, and especially hot water, can be high in group accommodation businesses such as Outdoor Alternative. As a business which is continually looking at ways in which they can reduce their environmental impact, they have taken action in recent years to radically reduce their water consumption. As well as the use of water butts to store rainwater for watering the garden, Outdoor Alternative have installed three types of water efficiency device;

- 1) **aerated shower heads** maintain a strong stream of water by mixing air in with the water. The resulting flow feels just as invigorating as it would from a normal shower head but uses less water. There are products available that work with combi boilers and power showers, but most do require a minimum water pressure, so check your pressure before purchasing. They are not suitable for use with electric showers, which are already low flow devices. The quality of the shower experience is frequently commented upon by visitors, and Outdoor Alternative's guests have had nothing but good to say about this sustainable solution.
- 2) **flow restrictors** on taps are an easy way to save water, there are several different types available depending on the equipment they are to be used with. Some flow restrictors replace the flow straightener that is in the end of the mixer tap spout, these aerate water flow and slow down the volume of consumed water. Other flow restrictors save water by limiting flow in the supply pipe.

3) Outdoor Alternative have fitted **hold down flush** devices to their toilets. These can be fitted to any standard single flushing WC syphon (for use with toilets with front of cistern mounted handle) to convert it so that the volume of water flushed can be controlled. Water only flushes down from the cistern for as long as the toilet handle is held down, therefore when a full flush is required, the handle can be held down until the cistern is fully emptied; when only a little water will be required to clear the toilet bowl, the handle can be pressed for just a short time. All toilets fitted after 2001 will have a maximum 6 litre flush, but if your toilets are older they could be using anything up to 9 litres per flush. Which means that by installing dual flush or hold-down flush toilets you can considerably reduce your water consumption.

All three of these devices deliver significant savings in water consumption for Outdoor Alternative whilst still providing a quality experience for their customers.

GreenWood Forest Park, Y Felinheli, Gwynedd

www.greenwoodforestpark.co.uk

Harvesting rainwater

Greenwood is a family adventure tourist attraction located near Caernarfon, Gwynedd. The wooded park has many innovative attractions including a unique and award winning eco-friendly, people-powered roller coaster, named 'The Green Dragon'. Greenwood was voted the Best Family Attraction in North Wales for 2011 and 2012. Owners, Steve and Andrea Bristow, have worked consistently to minimise its negative effects on the environment since it opened in 1993.

As visitor numbers to Greenwood have increased each year, so has the park's water consumption. Steve recognised that using expensively purified mains water for non-potable uses like toilet flushing was needlessly wasteful both environmentally and financially. Never one to shy away from implementing innovative ideas, Steve decided to install a rainwater harvesting system at Greenwood. These days there are commercially available rainwater harvesting systems but in 2007 this was all new!

Working with a new local business venture, a rainwater harvesting system was designed to collect rainfall from the roofs of two large buildings. The harvested rainfall is then used for the flushing of toilets in the main toilet block.

The system is used as an educational feature of the park with signs explaining its purpose and function.

The annual rainfall in the area is 1000mm, and the total roof plan area used for collection is 368m². The expected average rainwater yield was 190 m³ per annum, which was predicted to supply approximately 20% of the toilet water required. Rainwater is stored in large water tanks, which are topped up with mains water when there is insufficient rainwater available.

As with all innovative projects Steve has learnt lessons with regard to retrofitting rainwater harvesting systems. Due to the high amounts of detritus which fall from the many trees at

Greenwood's woodland setting there are ongoing problems with blocking of the filters which screen the water from the gutters. This is having a significant impact on the volume of water harvested, being only about half of that predicted, and is an ongoing maintenance issue. Steve and his team are working on this problem, which illustrates the 'bespoke' nature of such projects.

As the experience of Greenwood shows retrofit of rainwater harvesting systems can be difficult to implement successfully. However, incorporation into the design of a new build can be done relatively easily and cost effectively and is well worth considering on new building projects.

