

## The Importance of Wetlands

A wetland is an area of land whose soil is saturated with moisture either permanently or seasonally and that contains shallow pools of water. Swamps, marshes and bogs are common types of wetland and the water found in them can be saltwater, freshwater or brackish.

Wetlands and their ecosystems cover a global area one third larger than the USA and one half larger than Brazil. Half of the world's wetlands have already been lost over the last century and this is increasing.

Wetlands are considered the most biologically diverse of all the ecosystems as they contain a wide range of plant and animal life. Increased pressure on land use and the changing climate has meant that even more, wetlands need to be protected and extended to offer natural flood water storage and improved water quality, lock away huge amounts of carbon, provide havens for wildlife and interesting places for people to visit and enjoy - it is said that wetlands hold the key to protecting our past and future.

Constructed wetlands offer new solutions to many water quality issues including industrial wastewater and run-off pollution and domestic and agricultural effluents, so their development is being encouraged worldwide. The new EU Water Framework Directive, arguably the most wide reaching legislation since the Common Agricultural Policy, aims to protect and establish more wetlands to help deal with the polluting effect of economic growth and development not just in Europe, but throughout the world.

Wetlands are protected under the Ramsar Convention, an international agreement signed on the 2 February 1971 to conserve and use wisely all wetlands through local, regional and national actions and international co-operation, as a contribution towards achieving sustainable development throughout the world.

### Van Walt and Wetlands

Van Walt has been providing equipment and training to organisations involved in the conservation and maintenance of the UK's wetlands for more than 25 years. Our wetland equipment includes:

#### Multi-sampler & Beaker sampler

For sampling soft sediments or sludges - both provide good material retention and a virtually undisturbed sample, profiled for visual identification, classification and sub-sampling. Both pieces of equipment are light, easily transportable and quite capable of sampling lakes, wetlands, river beds and even sludges within a tank.

Available to rent or buy



#### Van Veen Grabs

There is nothing complicated about these 'jaw' samplers. You lower them onto river, sea, wetland or lake beds by a rope and when they rest on the bottom a trigger unlocks the jaws which then grab a sample. The sample is disturbed and you only grab a sample at the surface.

Available to rent or buy



#### Liquid Layer Sampler

Our liquid layer sampler captures the product/water interface and presents it to you visually - exactly how it is on site. Construction is all stainless steel and Teflon for easy cleaning and decontamination.

Available to rent or buy



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### Water Quality Meters

Van Walt Ltd is the exclusive UK and Ireland dealer for the YSI Environmental Monitoring and Water Quality Systems for groundwater applications. This market-leading, rugged range of water quality meters, environmental monitoring systems and accessories are available in single, dual or multiparameter options – whether you are measuring, monitoring, sampling, purging, water levels, temperature or turbidity they consistently provide reliable and quality data with a minimum of downtime and low maintenance costs.

Available to rent or buy



### Pumps

Van Walt has a wide selection of pumps available for sampling, purging and moving contaminant – but getting the right pump for your requirements is vital that's why we have produced a Pump Comparison Table available from <http://www.vanwalt.com/rental-pumps.htm> or call one of our experts on 01428 661 660.

Available to rent or buy



### Water level meters

e+WATER L is a system for measuring surface water levels, an essential element of the monitoring and maintenance of wetlands and SUDS (Sustainable Drainage Systems). Available as a stand-alone logger or as part of a complete telemetry system that can provide a powerful early warning system which will generate event specific alarms, for example in the event of flood.



### Equipment for sediment sampling

Sediment and sludge sampling requires a completely different set of tools to soil sampling. Sediment, by its nature, is usually sloppy and waterlogged and sample retention more difficult than a cohesive soil. We have many different devices for sampling sediments - it's just a matter of choosing the correct tool for the conditions.



### Soil Moisture Meter

Van Walt's latest soil moisture meter - PICO-BT 64 - measures soil moisture and temperature. Currently it is the most precise electrical TDR soil-moisture measuring system on the market that works by the wireless transfer of soil moisture and soil temperature data by Bluetooth to a PDA. It is small, easily portable and designed to withstand heavy usage in the field and - for the same price as a good quality capacitance probe - this new system is infinitely more powerful and accurate.

Available to rent or buy



### Augers

Van Walt has a selection of hand, gouge and peat augers. All of them are lightweight, cost effective and efficient soil investigation tools. They are unpainted and untreated so are therefore suitable for environmental research.

