

## **Letcombe Brook Water Height Measurements – Where, how and why.**

A Water level data logger has been set up upstream of Lower Mill, East Hanney.

The water level data logger (Ref 1) consists of a pressure sensor and recording unit. The sensor is located in the water and this transmits the pressure to a recording unit. The pressure is converted into water height by the recording unit which takes into account variation in temperature and atmospheric pressure. The logger is set up to record every hour. The data is downloaded to a computer regularly.

By measuring the water level upstream of a weir then the volumetric flow rate can be calculated (Ref 2). This information enables the flood group to calculate the actual flow rate along the brook and so helps with our discussions with the Environment Agency.

The data logger also shows the variation in water height over time and helps us understand how quickly the brook water level responds to rainfall. It also shows some unusual sudden changes which may be due to the operation of the Wantage Sewage Treatment Works which has an outfall on the Letcombe Brook between East Hanney and Grove.

The data logger was funded by East Hanney Parish Council and has been installed with help from Robert Hodgson.

Water level graphs for each month since operation started on 9<sup>th</sup> March 2008 can be downloaded from [here](#).

(Ref 1) WL16 (USB) 1-3ft range, manufactured by Global Water In.

(Ref 2) BS 3640-4E:1990 Measurement of liquid flow in open channels-Part 4E: Rectangular broad-crested weirs