



Green leak detection eliminates costly wastage

Green Optimisation was recently contacted by a major UK chain of restaurants to look into whether or not they had a leak on one particular site. The suspected leak was located between their mains-incoming water supply and the utility connection at the end of the road.

The Green Optimisation system utilises a range of meters and web based reporting tools that provide a variety of energy & cost reduction based services. This range of systems is ideal for use on projects where site information needs to be gathered on a timely and easily accessible basis.

On this site the restaurant had 1 x incoming meter provided by the utility company which was located 100m from the restaurant (positioned down a wet 1m deep hole). The restaurant required a meter system to be fitted within their building in order to check that the flow rate on the incoming feed matched the utility companies own meter i.e. to identify if there is leakage between the 2 x water meters within the 100m pipe run.

Fast forward 3 months...

Over a three month period Green Optimisation has:

- Fitted an eight channel pulse counter to the incoming meters (BBSP-PM8)
- Fitted a battery powered GPRS pulse counting meter to the utility companies meter
- Checked the validity of data from both devices by measuring pulses taken during a week long period and comparing those pulses with the meter readings
- Configured a bespoke Energy Manager Online system with the appropriate data feed points

The graph of the data usage provided to the client compares the 2 x meters and identifies any imbalance.

The water utility companies water meter has a [reasonably] constant 100 litres per hour feed greater than the internal water meter, which means either:

- We've missed something and there is another pipe fitted off of the pipe that runs between the utility meter and the site, or there is a leak of around 100 litres per hour.
- We checked the pipework schematics with the client and it was identified that there is no other connection, which means there must be a leak.

A gently dribbling tap will give a flow rate of roughly 1.2 litres per minute, which is roughly 100 litres per hour.

This will be the sort of magnitude of leak that was identified & confirmed at the site by the 2 x water meters being positioned in series.

Once this leak is rectified the site will save 876 cubic meters of water per year or c. £1,750 per year, over the 20 year operational life of the building this means the landlords will save c. £35k in total.

The fitting of the 2 x meters in series with pulse readouts and recording enable the leak to be verified. This metering system will also ensure that the 100m exposed length of interconnecting pipe is protected from future wastage as any over use will prompt a threshold alarm to the site operator.

All this information is delivered to the client via their own energy manager on-line system, which was deemed by the client on this application as being simple and easy to use.