

# Leakage detection survey

## Education and research campus



**Managing a precious resource is central to what we do at Anglian Water as the region we serve receives only half the annual rainfall of the rest of the UK. We are committed to helping our customers use water wisely so that we can make the water we take from the environment go further, which in turn helps to reduce our customers' bills.**

**Our Optimiser Leakage Detection Service assists our customers to identify water leakage to reduce waste and manage site sustainability.**

The customer operates a research and educational campus, using up to 92,000m<sup>3</sup> of water per year, and discharging 90% of this as wastewater. Water is utilised for various processes including laboratory work, domestic and office supplies and for heating and cooling systems.

Over time the customer's Maximum Daily Demand had increased from 250 m<sup>3</sup> to 374 m<sup>3</sup>, incurring additional charges of £13,429 per year.

Although the customer suspected a proportion of the water was being lost through leakage, no leaks could be located, hindering the customer's ability to accurately account for the continuing increase in demand.

**The customer therefore accepted Anglian Water's proposal to carry out a leakage detection survey in a bid to stem spiralling water costs.**





#### study findings:

**Utilising leading industry detection equipment and employing highly trained staff, the leakage detection survey proved to be highly successful in pinpointing the key problem areas that had led to the increase in water use.**

#### **The survey identified;**

- leaks at five principal locations on the customer's ring main;
- three buildings consuming an excessive amount of water due to wasteful processes that could be simply rectified;
- in total around 26,177 m<sup>3</sup> of water per year that was being wasted due to leakage and poor practice, accounting for 28% of the site's annual water use.

#### benefits:

**The leakage detection survey enabled the customer to pinpoint leaks in their water distribution system so as to make effective repairs, and also take advantage of advice from experienced leakage detection engineers to tackle wasteful practices.**

#### **The leakage detection survey enabled;**

- a total saving of approximately £36,700 per year on water and sewerage charges, resulting in the cost of the survey being paid back in less than 2½ months;
- the site Maximum Daily Demand (MDD) to be significantly reduced, minimising the unit cost of water on the site as well as freeing up infrastructure capacity to cater for future expansion requirements;
- the customer to complete a viable capital expenditure business case, which was approved, for the total replacement of their water ring main;
- internal approval to be gained for a site wide sub-metering system to monitor water use in real time, to identify unusual changes quickly and target efficiency savings;
- accurate location of leaks allowing the site to minimise road closures and the making good of surfaces following excavation and repair work.