

About South Staffs Water

South Staffs Water provides a potable water supply across two regions in England. In the West Midlands, South Staffordshire, South Derbyshire, North Warwickshire and North Worcestershire areas it serves approximately 1.3m people and 35,000 commercial customers over 1,500 square kilometres. In its Cambridgeshire area as Cambridge Water, it provides water to 319,000 people and 10,000 commercial properties across an area of 730 square kilometres. Predominantly this centres on the city of Cambridge but extends to Ramsey in the north, Gamlingay in the west, Balsham in the east and Melbourn in the south.

The Project

To verify not only the effectiveness of this new technology but also understand the efficiency and economic impact we conducted the following projects:

We started In January 2018 in the Cambridge Water area, where we conducted a limited trial, using an archived image acquired on April 2017. The purpose of this trial was to demonstrate the technology works as described.

In June 2018 we carried out a second project covering about a 1/3 of the network in the South Staffs region where 197 of most “problematic” DMAs were selected.

And in December 2018 we conducted the third engagement, a full satellite leak detection project on the entire Cambridge network. In each project several parameters were measured and compared with regular leak detection without satellite aid.

The Results

South Staff Water assigned a mathematician to track KPIs and relevant parameters to present solid conclusions at the end of this three phase project. Highlights of the results include:

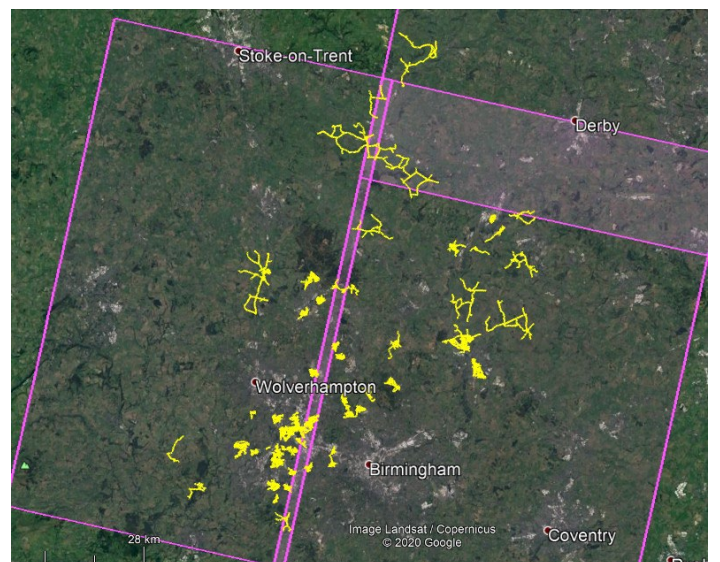
- Leakage savings of over, 2 MLD
- Total costs per MLD of approximately £180,000 (total cost, incl. Utilis, Point of Interest follow up and repairs)
- Daily technician performance comparison;

	With satellite	No satellite
Leaks/Technician/Day (range is regional dependent)	2.5 - 3.1	0.3 - 0.5
Average l/s per Technician per Day	0.28 - 0.40	0.04 - 0.07

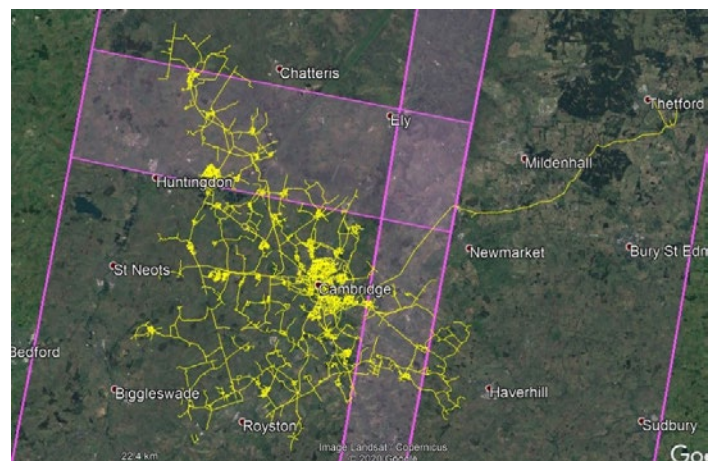
It was also found and important to note that Average Leak Size (l/s) did not vary.

- There was no skew on the types of leak found (main, customer side, ferrule, etc.) showing that it can detect leaks across all asset types.
- There was no skew of type of ground cover (tarmac, earth, concrete, etc.) showing that it can detect leaks through all ground cover types.
- If was found that satellite does not favour detection on a specific pipe material, moreover, on PE and PVC it performed better than regular ALC.

James Curtis, Leakage Strategy Manager at SSW concludes; “we did a very thorough analysis of Utilis’ Satellite Leak Detection solution to be confident in its use as part of our business as usual tool-box for reducing leakage. We can quantify the improvements in efficiency and effectiveness, its cost benefit and compare with other technologies to decide what’s best for us”.



The yellow lines show approx. 3,000 Km of pipes and the purple “tiles” show the corresponded satellite coverage in SST



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