Thames Water satellite leak detection

IMPLEMENTED 2026 ONWARDS · ENERGY AND UTILITIES · UK · BAND C · CLAIMED ONLY
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Thames Water put an AI and satellite leak-finding service from Origin Tech into its day-to-day leakage work after a trial that, by its account, found more than 800 leaks.

ABOUT THIS SYNOPSIS

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Facts and figures are as reported by the sources listed below, which may be incomplete, self-reported or out of date. Check the original source before relying on any figure.

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NOTICE WORDING LAST UPDATED 16 NOVEMBER 2026

AT A GLANCE

AI used: AI analysis of satellite data to flag likely underground leaks, supplied as a service (Origin Orbit).

Implemented: 2026 onwards. Grade: band C, Process change, Claimed only.

Headline result, as reported: Satellite and AI leak detection moved into business-as-usual leakage work after a trial found more than 800 leaks, by Thames Water's account

1 · The case

The facts, as reported by the 5 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Thames Water Utilities Limited. Water and wastewater company serving London and the Thames Valley, which describes itself as the UK's biggest water company. In 2025/26 its auditors reported a material uncertainty about Thames as a going concern, per The UK Water Report. Canvas block: 4. Operations and process. Also 6. Data and technology, 8. Governance and risk.

Business challenge

The challenge. Many leaks are underground and never seen by customers, and traditional methods of finding them are slow, Thames Water says. It needed faster and more accurate ways to locate leaks so crews could prioritise repairs. Its leakage was 15% below the 2019/20 baseline in 2025/26 against a target of 21.3%, per The UK Water Report.

Who implemented it

Origin Tech (Software vendor): Supplies the Origin Orbit satellite and AI leak detection service. In-house (In-house): Thames Water leakage team: specialist crews investigate and repair flagged leaks.

Technology (SEAM pillar E)

SEAM types: T8 Predictive / ML models. Deployment: Vendor SaaS. Vendors and products: Origin Tech, Origin Orbit.

Where it was built in: Satellite data analysed by AI flags likely leaks within a 30-metre search radius; specialist crews in Thames Water's leakage operation investigate and repair.

What changed

Before: leaks found mainly by traditional detection methods, which Thames Water describes as difficult and time-consuming. After: satellite and AI screening points crews to search areas, alongside acoustic sensors, by Thames Water's account. Measured results for the full deployment: Not reported. [1] [2] [3] [4] [5]

What it cost

Not reported

What it saved

Trial, by Thames Water's account: more than 800 leaks found and an estimated 8.7 million litres of water a day saved. Expected, by Thames Water: more than 100 million litres a day over the contract and about 25 leaks per week per crew. Money saved: Not reported. [1] [2] [3] [4] [5]

Governance and control

Thames Water's Head of Leakage is the named spokesperson for the work. Crews of specialists investigate each flagged area, by Thames Water's account. Assurance of the savings estimates and the accountable owner for the contract: Not reported.

S2 · Accountable owner · Claimed
Thames Water's Head of Leakage speaks for the work; a named owner for the contract is not reported. [1] [2]

A1 · Safe use · Not reported
Not reported.

A2 · Human in the loop · Claimed
A team of about 20 specialists investigates the locations the service flags, by Thames Water's account. [1] [2]

A3 · Monitoring and assurance · Claimed
Thames Water reports trial results and expected savings; how they were measured or checked is not reported. [1] [2]

A4 · Vendor AI · Not reported
The service is supplied by Origin Tech; contract terms and model details are not reported. [1]

A5 · Agent controls · Not reported
No agents described.

A6 · Standards and regulation · Not reported
Not reported for the AI service; the UK Water Report records Thames Water's leakage against its regulatory target. [5]

What worked, what did not, what is unproven

WORKED

– Finding hidden leaks in the trial: more than 800 found, 92% of them non-visible, by Thames Water's account.

– Moving from trial to business-as-usual use within the leakage team, by Thames Water's account.

DID NOT

– Overall leakage stayed short of target: 15% below the 2019/20 baseline against a target of 21.3% in 2025/26, per The UK Water Report. The satellite contract began only in March 2026.

UNPROVEN

– Whether the full deployment delivers more than 100 million litres a day; this is a projection.

– How the trial saving of 8.7 million litres a day was estimated and checked.

– How much of the rise in leaks found in July 2026 came from satellites rather than acoustic sensors or dry-weather bursts.

– Cost of the contract and cost per leak found.

Timeline

Mar 2026 Thirteen-month partnership with Origin Tech launches [2]

May 2026 Thames Water announces the contract and says it is the first water company to fully integrate Origin Orbit into business-as-usual leakage work [1]

Jul 2026 Annual results report leakage 15.1% below the 2019/20 baseline [4]

Aug 2026 Thames Water reports more than 75,000 acoustic sensors and 88% more leaks found in July than a year earlier, during drought [3]

2 · Grade and SEAM assessment

MarLuc's opinion, made on the evidence above. How cases are graded: marluc.co.uk/case-studies/how-we-rate

Level of change and impact

Claimed: Not applicable. Grade: C, Process change. Proof: Claimed only. Level of change: Process change.

Process change (Level 2, band C). Satellite and AI screening now directs crews in the leakage process; the contract has not yet reported results.

A process change in how leaks are found: satellite and AI screening now directs crews in business-as-usual leakage work. The headline saving of more than 100 million litres a day is a

The SEAM view and lessons learnt

The AI sits at the front of an existing field process: it narrows the search area and people still find, confirm and fix each leak. That split keeps accountability with the crews and lets the utility measure the tool by leaks confirmed. For any asset-heavy organisation, the transferable point is to count confirmed outcomes per crew, not alerts, and to separate the tool's effect from other changes made at the same time.

1. Measure confirmed leaks and litres saved per crew, not flags raised.
2. Separate the effect of each detection method when several change at once.
3. Publish how projected savings will be checked before quoting them.

Evidence

Score 1 of 4. Self-reported: trial and expected figures are Thames Water's own; overall leakage performance is relayed by an independent trade publication.

Evaluation method. Self-reported company figures: trial results and contract expectations; no independent evaluation of the satellite service.

Sources disagree. Thames Water's May 2026 release describes an 18-week trial; its project page and August 2026 release describe a 19-week trial.

Status. Ongoing: 13-month contract from March 2026; no results from the full deployment published at 16 November 2026.

3 · Original sources

Read these in full. To challenge a fact or a grade, use the contact form at marluc.co.uk or the link on https://marluc.co.uk/case-studies/thames-water-satellite-leak-detection

[1] Thames Water: Thames Water signs landmark leak detection contract with Origin Tech (May 2026)
https://www.thameswater.co.uk/news/2026/apr/thames-water-signs-landmark-leak-detection-contract-with-origin-tech-to-save-over-100-million-litres-of-water-per-day

[2] Thames Water: AI leak detection project
https://www.thameswater.co.uk/about-us/innovation/ai-leak-detection

[3] Thames Water: satellites, AI and acoustic sensors to hunt down leaks (August 2026)
https://www.thameswater.co.uk/news/2026/aug/thames-water-uses-satellites-ai-and-thousands-of-acoustic-sensors-to-hunt-down-leaks-as-south-east-drought-pressure-intensifies

[4] Thames Water: Annual Results 2025-26
https://www.thameswater.co.uk/news/2026/jul/thames-water-annual-results-2025-26

[5] The UK Water Report: Thames reports investment up 20%
https://www.thewaterreport.co.uk/single-post/thames-reports-investment-up-20

Thames Water Utilities Limited website: https://www.thameswater.co.uk

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VERSION HISTORY