Anglian Water predictive monitoring of sewage pumping stations and rising mains

IMPLEMENTED 2022–2026 · ENERGY AND UTILITIES · UK · BAND C · CLAIMED ONLY
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Anglian Water uses Ovarro's monitoring platforms, which the supplier describes as machine learning, to flag bursts, blockages and pump faults before they cause pollution, and has moved pumping station maintenance from fixed schedules towards alerts.

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Facts and figures are as reported by the sources listed below, which may be incomplete, self-reported or out of date.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 and automation used: Machine-learning platforms that detect bursts, blockages and pump faults from telemetry.

Implemented: 2022–2026. Grade: band C, Process change, Claimed only.

Headline result, as reported: Alerts from Ovarro's platform now drive proactive servicing at Anglian's terminal pumping stations; total pollutions fell from 437 in 2024 to 371 in 2025 but stayed above the regulator's target, by the company's own plan

1 · The case

The facts, as reported by the 2 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Anglian Water. Water and water recycling company whose region runs from Norfolk to Lincolnshire and Suffolk; the largest in England and Wales by geographic area, by its plan. It manages a 76,000km sewer network with 6,000 rising mains, per Ovarro's release. Headcount and turnover: Not reported. Canvas block: 4. Operations and process. Also 6. Data and technology, 8. Governance and risk.

Business challenge

The challenge. Anglian Water pledged in its draft 2025-2030 business plan to eliminate serious pollution and cut total pollution incidents by 40%. In 2022, 9% of its pollution incidents were attributed to burst rising mains, per its pollution reduction plan as reported in Ovarro's release.

How it was addressed. In 2022 Anglian became the first utility to adopt Ovarro's BurstDetect, by Ovarro's account, a system the supplier describes as AI-led and using machine learning to detect rising main bursts; it then bought BlockageDetect. In February 2024 it adopted PumpInsight to monitor pump performance. By its 2026 plan the Ovarro platform covers all 360 terminal pumping stations at water recycling centres, with proactive teams expanded from 18 to 64 engineers. [1] [2]

Who implemented it

Ovarro (Software vendor): Supplied BurstDetect, BlockageDetect and PumpInsight.
In-house (In-house): Operates the platform and field response.

Technology (SEAM pillar E)

SEAM types: T8 Predictive / ML models. Deployment: Vendor SaaS. Vendors and products: Ovarro, BurstDetect, BlockageDetect, PumpInsight.

Where it was built in: Cloud platforms analyse existing pumping station telemetry, such as wet well fill and empty times, and send alerts to operators on a dashboard.

What changed

Before: time-based planned maintenance and reaction to incidents. After: alerts on pump and main behaviour trigger early intervention, and time-based maintenance is being removed at terminal pumping stations. Anglian says early intervention reduced critical and high-priority failures. Total pollutions fell from 437 in 2024 to 371 in 2025, against an Ofwat target of 191. [1] [2]

What it cost

Not reported

What it saved

Not reported in money. Anglian's plan reports that Aqua Consultants' assurance found an estimated 104 pollution reduction from the wider programme, against a target of 95, and the plan credits its Ovarro-based maintenance measure with an estimated 6 incidents prevented in 2025. Neither figure isolates the AI. [1] [2]

Governance and control

The chief executive personally approved the plan under section 205A of the Water Industry Act 1991, by the plan's own statement. A board-level Regulatory Compliance Committee was created in 2025. Anglian reports independent assurance of the wider pollution programme by Aqua Consultants; the assurance report itself is not among the sources.

S2 · Accountable owner · Claimed
The chief executive personally approved the 2026 plan and a board-level Regulatory Compliance Committee was created in 2025, by the plan. [2]

A1 · Safe use · Not reported
Not reported.

A2 · Human in the loop · Claimed
Alerts go to operators for early response; field teams were expanded to act on them, by Anglian's plan. [1] [2]

A3 · Monitoring and assurance · Claimed
Anglian's plan reports independent assurance of its wider pollution programme by Aqua Consultants; the AI tools were not assessed separately, and the assurance report is not among the sources. [2]

A4 · Vendor AI · Not reported
Not reported.

A5 · Agent controls · Not reported
Not applicable as described; not an agent deployment.

A6 · Standards and regulation · Claimed
Anglian reports the plan under section 205A of the Water Industry Act 1991 and against Environment Agency and Ofwat measures; no regulator review of the AI tools is reported. [2]

What worked, what did not, what is unproven

WORKED

– Ovarro reported about 70% accuracy across more than 2,000 alerts, and 50 rising main bursts detected in 2022.

– Anglian says early intervention from performance alerts reduced critical and high-priority failures, with no subsequent failures where action was prompt.

– Total pollutions fell from 437 in 2024 to 371 in 2025, by Anglian's plan.

– Aqua Consultants found the wider programme stabilised pollution performance and exceeded its original risk-reduction target, by Anglian's account.

DID NOT

– Anglian's plan says its performance "isn't where we want it to be": 12 serious pollutions in 2025 against an Ofwat target of 0, a deterioration from 2024.

– Anglian expects not to meet Ofwat's 2026 targets for total and serious pollutions, by its plan.

– The supplier's accuracy figure of around 70% implies that some alerts were not confirmed events; the share is not reported by Anglian.

UNPROVEN

– How much of the change in pollutions comes from the AI tools rather than extra staff, sewer lining and monitors.

– Independent figures for alert accuracy.

– Whether predictive wet well cleaning, planned from 2026, will work.

Timeline

2022 Anglian Water becomes the first utility to adopt Ovarro's BurstDetect, by Ovarro's account, then buys BlockageDetect [1]

Feb 2024 Anglian adopts PumpInsight, which uses machine learning to monitor telemetered pumping stations [1]

2026 By the 2026 plan, Ovarro platform extended to all 360 terminal pumping stations at water recycling centres; proactive service teams grow from 18 to 64 engineers [2]

2026 Pollution Incident Reduction Plan reports 371 total pollutions for 2025 and plans predictive

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). Pumping station maintenance is moving to data-led alerts; the programme also includes added staff and capital work.

Graded C, process change. Maintenance moved from time-based schedules towards data-led alerts, with more staff to act on them. Claimed only: the alert figures are the supplier's, the plan is the company's own account, and the independent assurance it reports covers the wider programme without isolating the AI tools. 2025 performance remained above the regulator's targets.

The SEAM view and lessons learnt

Several things changed together: alerts, 46 more engineers, 200 pressure monitors and sewer lining. The AI part cannot be separated from them, and 2025 was also a dry year, by Anglian's account. A leadership team should ask who acts on each alert and how alerts that are not confirmed events are handled, and how the AI's effect would be measured apart from the added crews.

1. Fund the people who act on alerts, not only the alerting software.
2. Measure alert accuracy in the field and publish it.
3. Separate the effect of analytics from other changes before scaling.

Evidence

Score 2 of 4. Self-reported: the company's statutory plan, which reports external assurance of the wider programme, and the supplier's release for alert figures; no independent source on the AI tools.

Evaluation method. Before and after at company level: pollution counts against regulator targets, as reported in the company's plan; no isolation of the AI.

Sources disagree. Not reported.

Status. Ongoing: the 2026 plan embeds the Ovarro platform at 363 inlet pumping stations and plans to begin exploring predictive analytics for wet well cleaning. Anglian expects not to meet Ofwat's 2026 pollution targets.

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/anglian-water-ovarro-predictive-pumping-station-monitoring

[1] Ovarro press release, published by Water Online: Data-Driven Blockage Detection Cuts Pollution (May 2024)
https://www.wateronline.com/doc/data-driven-blockage-detection-cuts-pollution-0001

[2] Anglian Water: Pollution Incident Reduction Plan 2026
https://www.anglianwater.co.uk/siteassets/household/corporate/pollution-incident-reduction-plan-2026.pdf

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