



EnviroSmarts

WHITE PAPER · 2026

Smarter Sensing for Intelligent Buildings

How wireless environmental monitoring helps Property Management companies and Insurers reduce escape-of-water claims, protect assets, and unlock building performance.

Prepared for:

Property Management Companies | Insurance Underwriters & Risk Engineers

Published by EnviroSmarts | May 2026

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1. Executive Summary

EXECUTIVE SUMMARY

Escape of water remains the single most expensive and disruptive non-weather peril in residential and commercial property — and the majority of those losses begin as slow, undetected events that simple environmental sensing could have caught in minutes.

EnviroSmarts deploys battery-operated, wireless sensors that continuously monitor water leaks, temperature, humidity, vibration, CO₂, pressure and water levels across portfolios — without trenching, rewiring, or disruption to tenants. The result is a real-time risk picture that property managers can act on and that insurers can underwrite against.

This paper makes the case that combining smart sensing with property management workflows and insurance risk models produces measurable, repeatable outcomes: fewer claims, lower severity, faster response times, and a step-change in tenant and asset protection.

\$3.4bn+

annual escape-of-water claims
across home & commercial
property

~30%

of property insurance claims
linked to water damage

Minutes

from first drop to actionable alert
with EnviroSmarts sensing

Source figures are indicative industry estimates drawn from ABI, Aviva and AXA published claims commentary; deployment outcomes vary by portfolio.

2. The Smart & Intelligent Building Market

Property is in the middle of a once-in-a-generation digital upgrade. Owners, managing agents and occupiers increasingly expect buildings to behave intelligently: to sense their environment, to flag faults, and to feed live data into the systems that protect people, equipment and revenue.

Three forces are accelerating that shift:

- **Economics** — Rising claims costs and shrinking margins are forcing both landlords and insurers to invest in loss prevention rather than reinstatement.
- **Regulation** — ESG, indoor air quality, and net-zero reporting now require continuous data rather than annual surveys.
- **Technology** — Low-power wireless networks and battery chemistry have made deep, retrofit-friendly sensing financially viable for the first time.

EnviroSmarts is built specifically for this moment. The platform delivers leak detection alongside the wider environmental telemetry — temperature, humidity, CO₂, pressure, vibration and water level — that modern, intelligent buildings demand.

2.1 What “Intelligent” Really Means

An intelligent building is not defined by how much technology it contains, but by how reliably that technology turns conditions into decisions. EnviroSmarts focuses on the parts of that loop that have historically been weakest: detection at the edge, low-latency alerting, and clean data ready for downstream systems — whether those are CAFM, BMS, broker portals or insurer platforms.

3. The Problem: Buildings Fail Predictably

Buildings rarely fail without warning. They fail in patterns: a slow drip behind a riser, a chiller running 3°C warmer than it should, a freezer creeping up overnight, a humidity spike in a storeroom before mould appears. These signals exist for hours, days or weeks before the loss is visible. Traditional inspection regimes — quarterly walk-rounds, annual surveys, reactive call-outs — cannot see them in time.

WHY ESCAPE OF WATER STILL DOMINATES

Escape of water is the largest single cause of property insurance loss in the UK and a top-three cause in most mature insurance markets. The Association of British Insurers reports that household water damage alone accounts for around £1.8 million of insurer payouts every single day.

The reasons are structural: water travels gravitationally and silently, modern plumbing densities have increased, and once damage is visible the cost curve is already vertical.

3.1 The Cost Curve of an Undetected Leak

A pinhole leak detected in the first hour typically costs less than the price of an engineer's visit. The same leak, undetected for 24 hours, can compromise multiple floors. Undetected for a weekend, it can take a building out of service for months. The economics of prevention are not marginal — they are exponential.

4. The EnviroSmarts Approach

EnviroSmarts delivers a portfolio-grade sensing platform purpose-built for intelligent buildings. Each sensor is battery-operated, wireless, and engineered to be deployed in minutes by a non-specialist installer.

4.1 What We Monitor

- **Water** — Spot and rope-style leak detection for risers, plant rooms, voids, kitchens, bathrooms, server rooms and storage.
- **Temperature** — Continuous monitoring to spot freeze risk, void overheating and HVAC drift before equipment failure or condensation damage.
- **Humidity** — Mould-risk and IAQ monitoring across residential, healthcare and commercial spaces.
- **CO₂** — Ventilation effectiveness and occupant wellbeing data linked to lettable space performance.
- **Vibration** — Early warning of pump cavitation, plant imbalance and structural events.
- **Pressure** — Critical for utility risers, sprinkler systems and process water lines.
- **Water level** — Tank, sump, attenuation and flood-risk applications.

4.2 How It Works

Sensors transmit over low-power wireless protocols to an EnviroSmarts gateway, which forwards data to the cloud platform. Property managers receive instant alerts on the channels they already use — email, SMS, mobile app and (optionally) a direct CAFM ticket. Insurers and risk engineers receive aggregated, structured data through secure APIs, suitable for their pricing, modelling and surveyor workflows.

DESIGNED FOR RETROFIT, NOT JUST NEW BUILD

Every EnviroSmarts sensor is wireless and battery-operated, so a typical asset can be made “intelligent” in a single morning. There is no requirement to open ceilings, run cabling, or re-commission the BMS. This is what makes a portfolio-wide rollout commercially realistic, rather than a 10-year capital programme.

5. Benefits for Property Management Companies

For managing agents, FM providers and residential operators, the value of EnviroSmarts is operational and financial. The platform converts a portfolio of static, opaque buildings into a live, ranked risk register — and provides the workflow hooks to act on it.

OUTCOME	WHAT THIS MEANS FOR YOUR PORTFOLIO
Early Warning	Continuous monitoring of high-risk zones (risers, plant rooms, voids, kitchens) catches faults before they escalate into insurable losses.
Lower OPEX	Fewer reactive call-outs, less out-of-hours emergency spend, and reduced reinstatement costs across the portfolio.
Easy Retrofit	Battery-powered wireless devices install in minutes per asset — no cabling, no tenant disruption, no capital programme required.
Portfolio Visibility	A single pane of glass across multiple buildings — ideal for managing agents, FM providers, and asset owners operating at scale.
Tenant Trust	Demonstrable duty of care: residents and commercial occupiers see proactive protection of their homes, businesses and possessions.
ESG & Compliance	Real-time data on temperature, CO ₂ and humidity supports indoor air quality reporting, net-zero commitments and statutory compliance.

5.1 Residential Operators

In residential buildings — Build-to-Rent, PRS, social housing, student accommodation and retirement living — undetected water damage is a top driver of resident complaints, void days and reputational risk. EnviroSmarts allows operators to monitor high-risk zones continuously and intervene before damage spreads between flats. The outcome is faster reinstatement, fewer disputes, and a measurably safer living environment.

5.2 Commercial & Mixed-Use Estates

In commercial and mixed-use settings, EnviroSmarts protects revenue-generating space. A leak in a let unit is not just a repair bill — it is lost rent, displaced tenants and potential business-interruption

exposure. Continuous sensing makes those losses substantially less likely and substantially smaller when they do occur.

6. Benefits for Insurers

Insurers are uniquely positioned to benefit from environmental sensing because they carry the cost of every undetected failure. EnviroSmarts offers a credible, deployable prevention layer that links directly to claims experience, underwriting quality and customer relationships.

LEVER	IMPACT FOR THE INSURER
Claims Frequency	Detecting leaks at gallons rather than thousands of gallons cuts the volume of escape-of-water claims at the source.
Claims Severity	Where incidents still occur, faster shut-off and faster response materially reduce the cost of each claim.
Underwriting Data	Continuous, asset-level environmental data improves segmentation, pricing accuracy and exposure modelling.
Risk Engineering	Sensor estate doubles as an ongoing surveying tool — informing recommendations and validating that they are being followed.
Client Retention	Co-branded prevention propositions strengthen broker and policyholder relationships and reduce churn at renewal.
Premium Strategy	Provides a credible technical basis for premium discounts, excess waivers or coverage extensions where sensors are deployed.

6.1 An Indicative ROI Picture

The table below illustrates the order of magnitude of savings available across representative portfolios. Figures are based on published industry averages for escape-of-water frequency and severity, combined with EnviroSmarts deployment data; they should be treated as planning estimates.

Portfolio profile	Avg claims/yr (pre)	Avg claims/yr (post)	Estimated saving
100 residential units	6 EoW claims	1–2 EoW claims	£35k – £60k
Mid-sized commercial estate	10 EoW claims	2–3 EoW claims	£90k – £180k
Multi-site managed portfolio	40 EoW claims	8–12 EoW claims	£400k+

FROM LOSS PAYER TO RISK PARTNER

Forward-leaning insurers are moving from reimbursement to prevention — bundling sensors with policies, offering premium credits for verified deployments, and treating live building data as part of the underwriting fact base. EnviroSmarts is engineered to plug into that model on day one.

7. Integration & Implementation

EnviroSmarts is delivered as a managed service. A typical engagement follows four phases:

Phase 1 — Risk Mapping

Working with the property team (and, where appropriate, the insurer's risk engineer), EnviroSmarts identifies the highest-impact monitoring points across the asset or portfolio. The output is a ranked sensor plan with expected loss-reduction outcomes.

Phase 2 — Deployment

Sensors and gateways are installed during normal working hours, typically without contractor access to occupied spaces. A 100-unit residential block can usually be fully covered in 1–2 days; a small commercial estate in under a week.

Phase 3 — Activation & Alerting

Alerting paths are configured into the property team's existing workflows — helpdesk, CAFM, on-call engineer rota, mobile app. Insurer dashboards and APIs are provisioned at the same time.

Phase 4 — Continuous Improvement

Quarterly reviews compare incident data, response times and (where shared) claims experience against the baseline. The sensor estate is tuned, expanded, or rebalanced based on real-world performance.

8. Conclusion

Intelligent buildings are no longer a future ambition; they are an operational, regulatory and financial requirement. The owners, managers and insurers that get there first will protect more assets, satisfy more occupiers, and write more profitable books of business than those that don't.

EnviroSmarts exists to make that transition straightforward. Wireless, retrofit-friendly sensing delivers immediate loss prevention, generates the data that modern underwriting demands, and gives property teams the live operational picture they have been asking for.

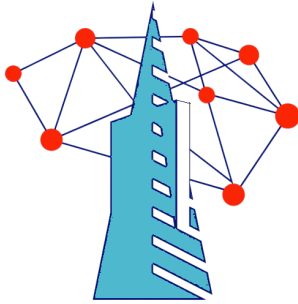
In short: fewer losses, smarter buildings, better outcomes for every party in the value chain.

TAKE THE NEXT STEP

Whether you are a property management leader looking to de-risk a portfolio, or an insurer building a prevention-led proposition, EnviroSmarts can scope a pilot in days — not months.

Contact: info@envirosmarts.com | www.envirosmarts.com

About EnviroSmarts



EnviroSmarts is an American IoT sensor company focused on the water leak detection marketplace and the wider intelligent buildings sector. We design and operate battery-powered wireless sensors and the platform that turns their data into action — for property managers, asset owners, and insurers.

Our mission is simple: turn every building into an intelligent building, and every loss into a loss that didn't happen.

Web: www.envirosmarts.com

Email: info@envirosmarts.com

Disclaimer: Figures and projected outcomes in this white paper are illustrative and based on published industry data combined with EnviroSmarts deployment experience. Actual results vary by portfolio, asset mix, occupancy and existing risk-management posture. Nothing in this document constitutes financial, insurance or legal advice.