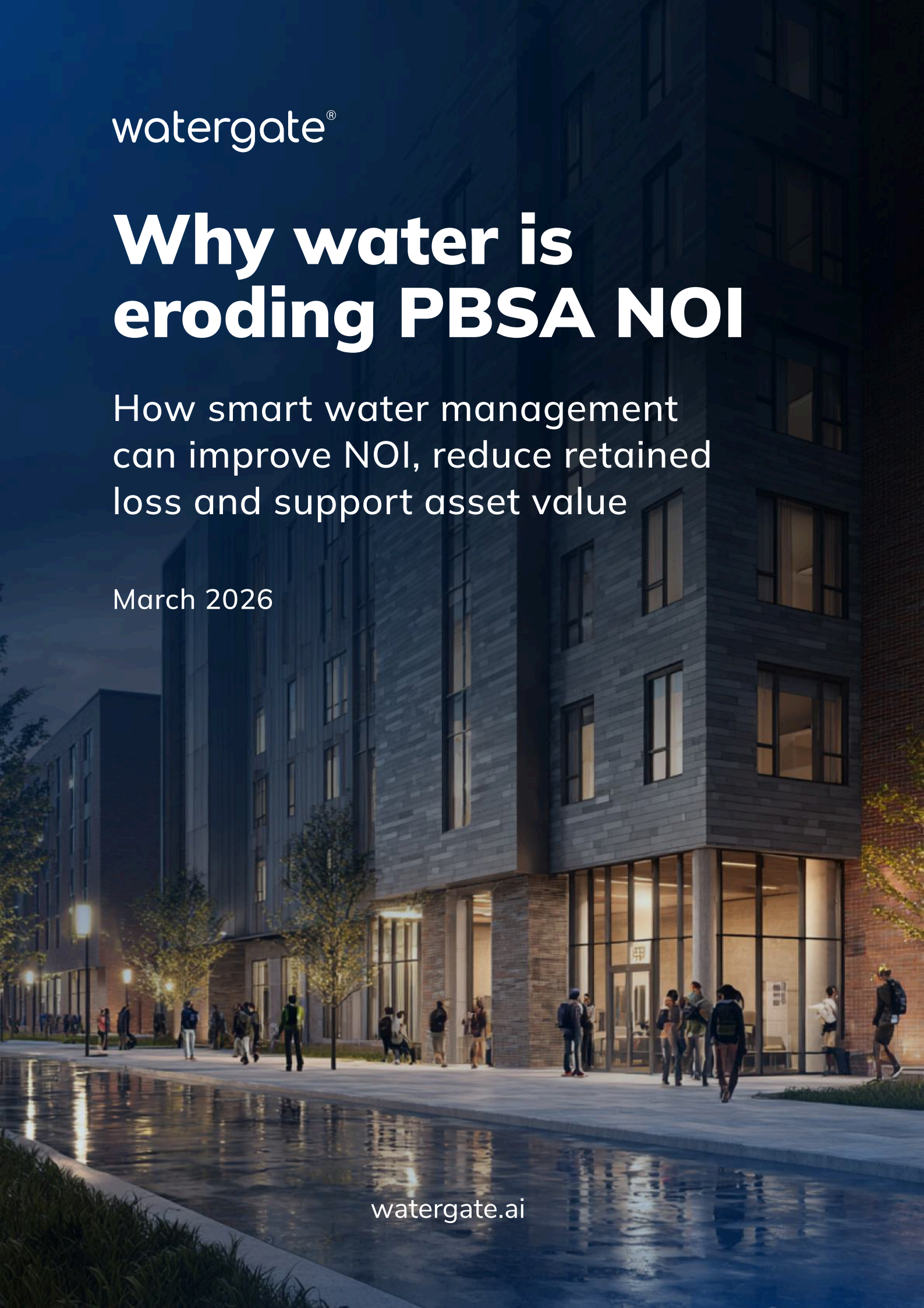
watergate®

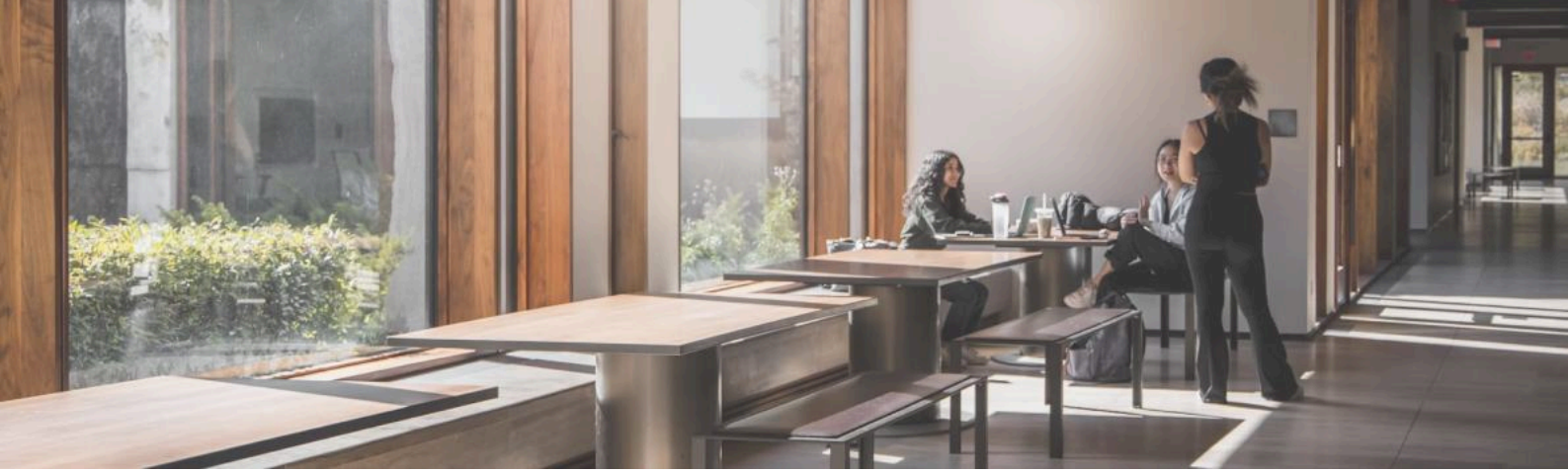
Why water is eroding PBSA NOI

How smart water management can improve NOI, reduce retained loss and support asset value

March 2026



watergate.ai



Executive summary

Water is becoming a more important financial variable in purpose-built student accommodation than the market usually assumes. That is not because water has suddenly become fashionable in ESG discussions. It is because the economics, the regulation, the insurance environment and the development context are all moving in the same direction.[1][2][3][4]

The UK PBSA market remains investable, but it is more selective than it was in the post-Covid rebound. Savills put UK PBSA investment at £3.5 billion in 2024. Cushman & Wakefield says 2025 volumes are expected to be only marginally below 2024 levels of £4 billion, while prime yields remain stable at 4.25% in Prime London and 5.25% in Super Prime Regional markets. Knight Frank's February 2026 guide puts prime direct-let student yields at 4.50% in London and 5.25% to 5.50% regionally. CBRE's 2025 PBSA Index found total returns of 3.4%, but capital values fell 2.0% overall and performance diverged sharply by location and asset quality.[1][3][4]

At the same time, the external water environment has changed materially. The Government's 2026 water white paper says current consumption is unsustainable, identifies a five-billion-litres-a-day shortfall for public water supplies in England by 2055 plus a further one-billion-litres-a-day deficit for the wider economy, and commits to accelerating smart metering, expanding access to meter data, and supporting reuse and rainwater management in large non-household developments and large water users. It also confirms that falling block tariffs for business customers are being phased out by March 2030.[2]

Commercial pricing pressure is already visible. Ofwat states that nearly all non-household customers with meters pay both a standing charge and a volumetric

charge. Thames Water's indicative 2026/27 schedule shows typical non-household metered water-only bills rising 10.0% across major consumption bands. Anglian Water's 2026/27 indicative wholesale statement shows illustrated measured non-household combined bills rising by about 9% to 12%, with water-only movements up to 15.2% at 10,000 m3. Southern Water says non-household wholesale water charges will rise 28.1% in 2026/27, partially offset by a 6.3% reduction in wastewater charges. United Utilities says almost all wholesale customers are expected to see bill increases greater than 5% in 2026/27.[5][6][7][8][9]

Developer economics are moving too. Yorkshire Water's 2025/26 charging arrangements say infrastructure charges increased 251% year on year. Thames Water's 2026/27 developer charging arrangements state explicitly that properties such as student housing, offices and care homes attract a multiplier on infrastructure charges to reflect their greater impact on the network. Anglian Water now offers an environmental incentive where connected premises can demonstrate water demand at 90 litres per person per day or below. In Greater Cambridge, local authorities have secured more than £5 million of government funding for retrofit water-saving measures because water scarcity is already affecting development and the councils want to ensure sustainable development can proceed in the short term.[10][11][12]

> **Yorkshire Water's 2025/26 charging arrangements say infrastructure charges increased 251% year on year.**

For PBSA owners and operators, the commercial point is simple. Water erodes NOI in two ways. The first is gradual and often overlooked: excess consumption, hidden leaks, inefficient fixtures, pressure problems and poor visibility over how water is actually being used across a building. The second is sudden and far more disruptive: escape-of-water events that damage finishes, displace residents, trigger emergency works, create retained insurance cost and push up future renewal pressure. Smart water management addresses both.

Water erodes NOI in two ways

In bills-included or operator-exposed PBSA, the first form of NOI erosion sits in recurring operating expenditure. Water and wastewater cost more when usage is poorly understood, hidden leaks go undetected, and maintenance teams are working reactively rather than diagnostically. In a dense, repetitive plumbing environment, those losses can scale faster than many operators expect.

The second form of NOI erosion is episodic loss. A serious water incident does not show up first as a utility problem. It shows up as excess, uninsured loss, emergency contractor cost, resident disruption, temporary decant, management time and reputational damage. Even when insurance pays a portion of the claim, a meaningful share of the economic damage still sits with the asset.

> **Even when insurance pays a portion of the claim, a meaningful share of the economic damage still sits with the asset.**

That distinction matters because it changes how smart water management should be evaluated. It is not simply a tool for lowering utility bills. It is a tool for reducing two forms of NOI leakage at once: recurring waste and retained loss.

Public examples make the point starkly. In late 2025, a newly opened London PBSA tower with around 900 beds suffered a major water incident that reportedly knocked out power and forced residents out for months, with students told they would not be able to return until at least May.[16] For any operator or investor, that is not a facilities issue. It is a balance-sheet event involving alternative accommodation, operational disruption, repair cost, resident dissatisfaction, reputational damage and potentially lost income.

Lockton's living-sector data suggests this is not an isolated problem. It says escape of water was the leading cause of claims across living-sector real estate in 2024, responsible for more than half of all claims, and that the average loss among student properties was £32,637, nearly two-and-a-half times the average across its wider living-sector portfolio.[17] Lockton also notes that prolonged incidents can lead to alternative accommodation cost, lost income potential and long-term reputational damage.[17]

> **...escape of water was the leading cause of claims across living-sector real estate in 2024**

The reputational and legal dimension matters too. Public disputes in the sector show that unresolved water-related defects, damp and mould can escalate beyond maintenance into legal action, refund claims and resident-health complaints. The Guardian reported group legal actions involving students in UK student accommodation who alleged poor conditions including mould and persistent damp.[18] Not every damp or mould issue is caused by hidden leaks, but the commercial lesson is still clear: unresolved water-related defects can migrate quickly from maintenance backlog to legal and reputational risk.

Why the case is getting stronger now

PBSA operators have historically focused on the obvious levers: rent growth, occupancy, staffing, energy, amenities and resident experience. Water has usually sat lower down the agenda. That hierarchy made more sense when water was cheaper, less contested and less visible. It makes less sense now.

In direct-let PBSA, utilities are often bundled into rent. Unite Students says its rent includes electricity, heating and water bills.[13] Public reporting does not usually isolate water, so it would be sloppy to claim that water is always the second-largest utility after electricity. But it would be equally sloppy to keep treating it as trivial. In a dense, bills-included operating model, water is increasingly material, owner-borne and under-managed.

> **In a dense, bills-included operating model, water is increasingly material, owner-borne and under-managed.**

Policy is also moving in the same direction as the commercial case. The Government's white paper is explicit that the current system cannot support future demand without much stronger efficiency performance. It links water efficiency directly to water security, infrastructure resilience and economic growth, and supports wider smart metering, better access to consumption data, and more water reuse in larger developments.[2]

Charging reform reinforces that shift. Ofwat explains that non-household charges are built from standing charges and volumetric charges, and that some large-user structures include extra fixed charges alongside reduced volumetric rates.[5] The Government has now stated clearly that falling block tariffs, which reward higher use with lower marginal prices, are being phased out by March 2030.[2] The direction of travel is unmistakable: the system is moving away from rewarding heavy consumption and towards clearer efficiency signals.

For new development, the issue is no longer just utility cost. It is development viability. Thames Water applies a multiplier to student accommodation and similar property types when calculating infrastructure charges.[11] Yorkshire Water has already implemented a 251% increase in infrastructure charges in its 2025/26 developer charging arrangements.[10] Anglian is using incentives to reward lower-consumption design.[7] In Greater Cambridge, water scarcity is already affecting development and councils are retrofitting water-saving measures in existing public buildings precisely to offset growth pressure and enable development to continue.[12] Water is moving upstream into planning risk.

Insurance and risk engineering are moving as well. Lockton's real estate commentary is explicit that escape-of-water claims create pressure on underwriting margins and that insurers will want increased costs reflected in renewal pricing.[19] The Joint Code of Practice for Escape of Water Prevention and Management on Construction Sites requires 24/7-operating active automatic flow monitoring shut-off devices when installing permanent water supplies, and specifically notes additional requirements for residential and student accommodation connections.[20] [21] The market is moving from passive indemnity towards active prevention.

> **...escape-of-water claims create pressure on underwriting margins... insurers will want increased costs reflected in renewal pricing.**

The financial logic is stronger than most people realise

Lower recurring water and wastewater cost reduces operating expenditure. In a direct-let, operator-exposed PBSA asset, that improves NOI. If the market believes the saving is durable, that higher NOI supports capital value through a lower yield denominator. At prime direct-let PBSA yields of around 4.50% in London and 5.25% to 5.50% regionally, a recurring annual saving of £100,000 equates to roughly £1.82 million to £2.22 million of value support.[3]

> **...higher NOI supports capital value through a lower yield denominator**

Institutional underwriting requires precise yield sensitivity, not broad multiples. At 4.25%, the income multiple equivalent is about 23.5x. At 4.50%, it is 22.2x. At 5.25%, it is 19.0x. At 5.50%, it is 18.2x. The principle is robust. The exact outcome depends on the asset, the structure and the market.[1][3]

There is one important caveat. This is strongest in direct-let models where the saving is retained. In long-lease structures, the operator may capture more of the immediate utility upside than the owner. But even there, leak prevention, asset protection, resilience and insurability still matter to ownership.

The same logic applies to insurance. Premium is only one part of the story. Excess, uninsured loss, emergency works, resident disruption and future renewal pressure all affect the economics of the asset. For many owners and operators, that retained-loss layer is where water becomes most financially painful.

What smart water management changes

Traditional water-efficiency measures tend to be passive. Low-flow fittings, awareness campaigns and periodic inspections can help, but they do not turn water into an actively managed operational variable. Smart water management does, because it adds visibility, anomaly detection, response triggers and, in some configurations, shut-off capability.

That matters in PBSA because the value does not come only from lower consumption. It comes from four places at once: lower water and wastewater cost, earlier detection of abnormal flow, faster intervention before small issues escalate, and better operational data for maintenance, asset planning and resident engagement.

This is also where discipline matters. Measured cold-water savings belong in the base case. Hot-water energy savings are likely in principle, but should sit in upside scenarios until measured. Insurance benefit should be treated similarly: modelled exposure reduction can be included where the logic is transparent, but premium or excess improvement should not be treated as guaranteed unless it has been agreed with insurers or brokers for the relevant scheme.

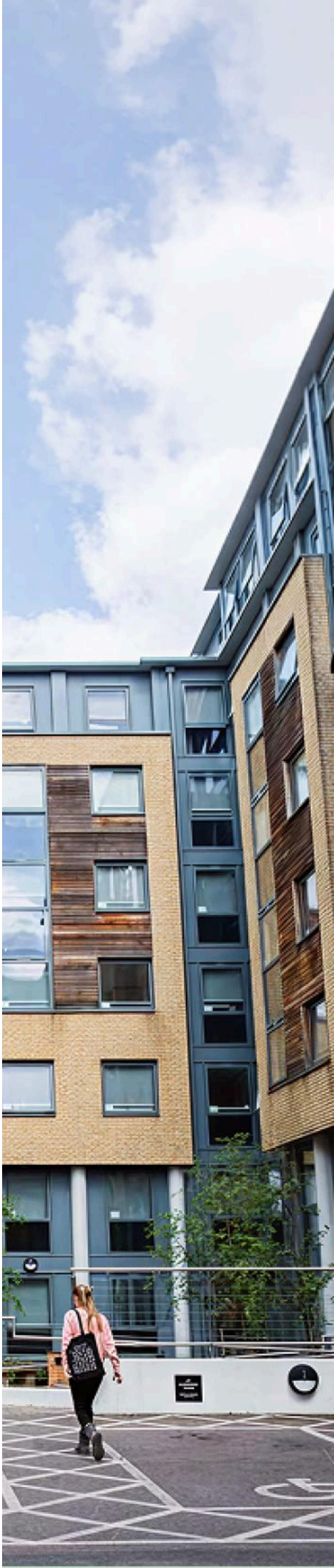
Real-world results: Chapter Islington

A clear illustration of how smart water management performs in PBSA comes from Watergate's deployment for Greystar.

Following an initial pilot, Watergate was rolled out across three Chapter Islington buildings, covering 684 apartments and communal spaces. The project found that 22% of units were using materially more water than expected, often because of hidden issues such as leaky taps or toilets. One apartment was using up to 11,600 litres of water a day because of a stuck toilet flush. The deployment also exposed pressure imbalances and temperature issues in the plumbing system.[A1]

More important than the diagnosis is the operating outcome. By November 2025, Chapter Islington had reduced water consumption by more than 10 million litres year to date, cut average daily cold-water use per occupied unit from 183 litres to 82 litres, and reduced water cost by about £40,753 year to date. The report states that if all units reach the 52-litre target, annual water-only savings would be £94,981, excluding insurance and other benefits. That target is explicitly for cold water only.

> **By November 2025, Chapter Islington had reduced water consumption by more than 10 million litres year to date**



The operational evidence is equally important. The report records 1,021 automated robo-calls for critical issues, 3,815 water-performance and leak-related issues surfaced through the dashboard, and a resident reporting campaign that generated 22 valid reports in six weeks, 86% of them relating to leaky toilets. Based on the report's own estimate, that first reporting phase alone saved at least 50,400 litres. This is not just a sensing story. It is a monitoring, maintenance and behaviour-change story.

Using Watergate's supplied commercial terms for this deployment, the room-level retrofit economics were approximately £144,324 for hardware, £82,080 for installation, £1,995 for platform set-up and £16,416 a year for subscription at £2 per device per month. That means roughly £228,399 of upfront capex before year-one subscription. If the asset reaches the report's £94,981 annual water-only saving target, the recurring net saving after subscription is about £78,565. That implies payback of about 2.9 years on upfront capex.

The insurance logic strengthens that further. Watergate's Chapter Islington case study modelled annual insurance-exposure reduction of £23,546, based on an assumed 1.23% leak likelihood per space, an average £3,887 escape-of-water claim cost and a 72% reduction in claim severity.[A1] Including that alongside the water-only case lifts recurring net benefit to about £102,111 and reduces indicative simple payback on upfront capex to about 2.2 years. That is still not a promise of lower premium or excess. It is a transparent way of reflecting retained-loss reduction in the ROI.

While Chapter Islington proves the returns on a high-granularity retrofit, lower-density installations can produce faster paybacks where the plumbing layout allows. OX Living is useful for a different reason. Across nine co-living properties, Watergate says it prevented 894,000 litres of unnecessary water use in 16 weeks, found hidden leaks in around 30% of sites, detected one developing leak with potential to waste up to 22,000 litres a day, and repaid hardware cost in under two months through water-bill savings alone.[14] That is not a substitute for PBSA evidence. It is evidence that system architecture changes the economics.

Why architecture matters

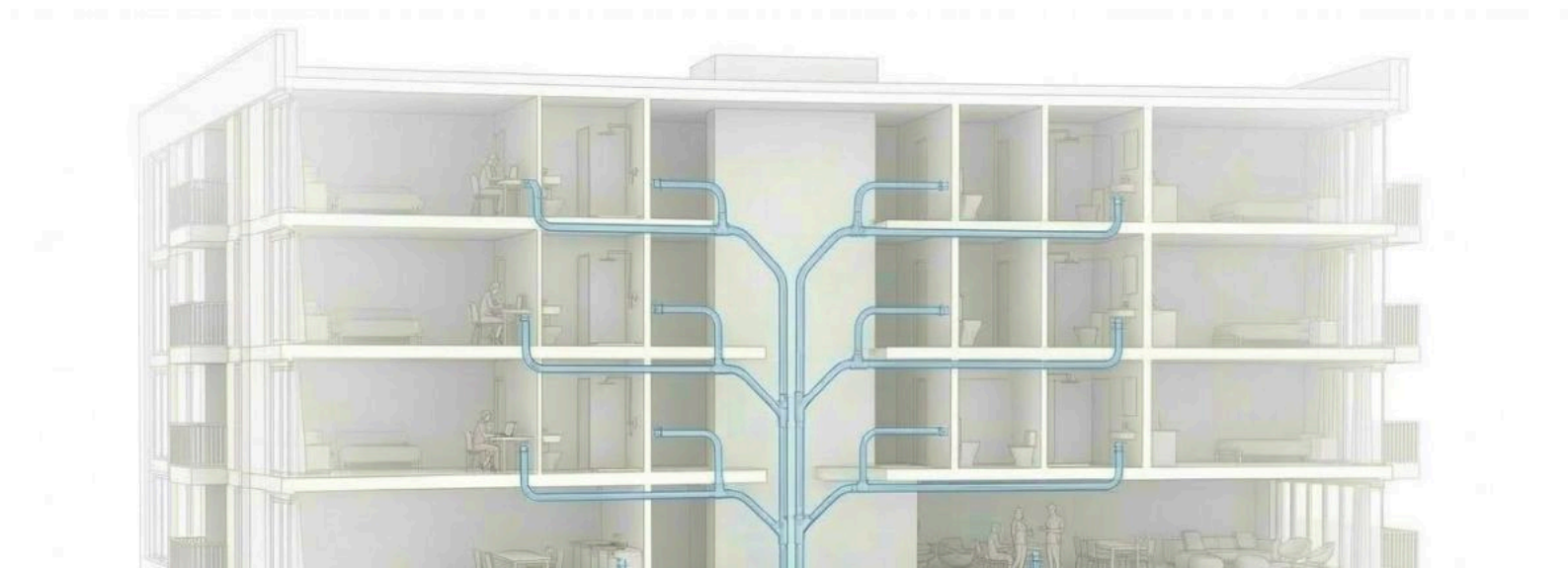
One of the biggest mistakes in this market is to talk about smart water management as if there is only one deployment architecture.

There is not.

Chapter Islington is a high-granularity retrofit benchmark. One Sonic per room on the cold-water side delivers precise leak localisation, selective shut-off and strong diagnostic value. It is also the more expensive configuration.

That does not mean it is the only route. Lower-cost topologies can materially improve ROI where the plumbing layout allows it. Incoming-main monitoring, cluster-level protection, riser-level monitoring and overlay onto existing pulse-capable meters all reduce hardware density and installation complexity. But moving from left to right on that spectrum usually reduces more than capex. It can also reduce hidden-leak pinpointing, selective shut-off precision, the ability to contain damage to a smaller footprint, and the strength of the risk story presented to insurers and brokers. The right question for owners and operators is therefore not whether one device per room pays back everywhere. It is what level of granularity, control, asset protection and insurance relevance a building actually justifies.

> **The right question for owners and operators is therefore not whether one device per room pays back everywhere. It is what level of granularity, control, asset protection and insurance relevance a building actually justifies.**



What this means for the sector

For PBSA operators, the implication is immediate. Water should be treated as a controllable margin line, not just a facilities issue. Where rents include utilities, every sustained reduction in water and wastewater cost improves operating performance. Just as importantly, every avoided escape-of-water incident can reduce retained loss, operational disruption and renewal pressure.

> **Water should be treated as a controllable margin line, not just a facilities issue.**

For asset managers, the implication is broader. Water touches cost control, asset resilience, maintenance workflow, ESG reporting, insurance strategy and future capex planning. It belongs in asset plans and underwriting, not just sustainability reports.

For investors and developers, the implication is sharper still. Water is becoming a constraint on growth as well as a cost of operation. In stressed geographies, the ability to demonstrate water efficiency may increasingly shape not just NOI but also planning certainty, connection economics and project viability.[11][12]

Conclusion

The market is moving into a period where water will matter more to PBSA than it has in the past decade. Non-household water charges are rising materially. Business tariff structures are shifting away from rewarding high consumption. Infrastructure and connection economics are tightening. Water scarcity is already affecting development in some of the country's most strategically important growth corridors. Government policy is pushing toward smarter metering, better data, more reuse and more explicit water efficiency.[2][5][6][8][10][11][12]

At the same time, escape of water remains one of the most serious and under-managed causes of operational disruption and insurance loss in living-sector real estate.[17][19][20]

In that environment, smart water management is not a side issue. It is a financial, operational and strategic tool.In bills-included or operator-exposed PBSA, smart water management can convert water from an under-managed cost and risk into a measurable NOI lever. It can do that both by reducing utility opex and by reducing retained escape-of-water loss that would otherwise leak out through excesses, disruption and future premium pressure. In a yield-priced asset class, that means the upside can extend beyond lower bills to stronger resilience and meaningful value support.

That is why water is the new frontier.

Independent verification of performance

This whitepaper has been authored by Watergate. Like any credible commercial paper, it should not ask the reader to rely on vendor claims on faith alone.

Smart Drop UK is an independently assessed water-efficiency certification run by Waterwise for products outside the forthcoming government-backed water efficiency label for fixtures and fittings. Products are assessed against strict criteria, including independently verified water-saving performance, compliance with UK regulations and environmental sustainability. In January 2026, Watergate Sonic became the first product in the UK to receive Smart Drop UK certification. This does not, on its own, prove a specific ROI in PBSA. It does, however, provide independent validation that Watergate's water-saving claims are not simply self-declared marketing.[15]

Exhibit 1

Yield sensitivity on a £100,000 recurring saving

PBSA market segment	Illustrative yield	Income multiple equivalent	Implied asset value support
Prime London	4.25%	23.5x	£2.35 million
Prime direct-let London	4.50%	22.2x	£2.22 million
Super prime regional	5.25%	19.0x	£1.90 million
Standard regional	5.50%	18.2x	£1.82 million

Exhibit 2

Why architecture changes ROI and risk transfer

Illustrative deployment topologies

Proactive
Higher precision

Reactive
Lower precision

Room-level Sonic	Cluster-level protection	Floor or riser-level	Existing-meter overlay
One device per room	One device across several rooms	Large-pipe or floor-by-floor layouts	Assets with compatible pulse-capable meters
• Strongest hidden-leak pinpointing • Asset protection and insurer relevance • Selective shut-off	• Good visibility and meaningful protection • Less exact localisation	• Good anomaly detection • Broader shut-off zones, less pinpointing • Limited damage control and insurance support	• Fastest low-capex route • The weakest layer for pinpointing hidden leaks • Lowest support for damage control and insurance benefits

Higher capex → Lower capex

Exhibit 3

Chapter Islington illustrative ROI layers

Scenario	Annual gross benefit	Annual subscription	Net recurring benefit	Indicative simple payback on upfront capex
Water-only case	£94,981	£16,416	£78,565	2.9 years
Protected case: water plus modelled insurance exposure reduction	£118,527	£16,416	£102,111	2.2 years
Strategic upside	Not included	Not included	Potential further benefit from premium, excess and disruption reduction	Scheme-specific

Sources

[1] Savills - UK PBSA investment hits £3.5bn in 2024

[2] UK Government - A new vision for water

[3] Knight Frank - Prime Yield Guide, February 2026

[4] CBRE - UK PBSA Index, year to September 2025

[5] Ofwat - How non-household customers are charged

[6] Thames Water - Statement of significant change for wholesale charges 2026/27

[7] Anglian Water - Statement of significant changes, indicative wholesale charges 2026/27

[8] Southern Water - Statement of significant changes, indicative charges 2026/27

[9] United Utilities - Statement of significant changes, wholesale charges 2026/27

[10] Yorkshire Water - Charging arrangements 2025/26

[11] Thames Water - Charging arrangements for new connection services 2026/27

[12] Cambridge City Council - £5m water-saving programme to support sustainable development

[13] Unite Students - Fees and charges

[14] Watergate - OX Living case study

[15] Waterwise - Smart Drop UK launch

[16] Yahoo News / Evening Standard - Major water leak disrupts London PBSA tower

[17] Lockton - Why leak detection is essential for living sector buildings

[18] The Guardian - Legal action over poor student accommodation conditions

[19] Lockton - Addressing escape of water losses in the real estate sector

[20] CIPHE - Joint Code of Practice for escape of water published

[21] Joint Code of Practice - Escape of Water Prevention and Management on Construction Sites (PDF)

[A1] Watergate - Greystar case study