# Leak detection systems

Installing a leak detection system can dramatically reduce the risk of damage to property and contents from escape of water incidents.

Most of us think of escape of water as a burst pipe or a significant visible amount of water, but insurance industry data shows that the vast majority of water damage claims come not from catastrophic leaks and bursts but from unseen lower level leaks that soak into the fabric and structure of the building.

A leak detection system can detect both catastrophic and low-level leaks and deliver peace of mind for a property owner or occupier.



### The benefits of installing a leak detection syste

With the potential water loss from a burst pipe up to 400 litres an hour (around 4 full bath tubs of water) property owners and commercial organisations can all benefit from installing leak detection.

- Small existing leaks in a property can be identified and remedied before further damage is caused.
- If leaks are detected post installation, the costs of repair is usually much less, as a result of early identification.
- As the level of damage caused is likely to be reduced, there is less disruption and far less likelihood of relocation whilst repairs are made.
- With tenants increasingly taking to social media to complain there is less risk of Reputational Damage

affecting the freeholder and the property, enabling higher occupancy rates and sustainable rents to be achieved.

- By reducing the risks and lowering on-going ownership costs, commercial property asset values are enhanced as occupation and rental incomes are maximised.
- Property management costs can be reduced with real-time remote risk monitoring.
- In new build developments the early identification of leaks means they are more likely to fall within the Contractor's defects period.





## **Case Studies**

#### Four bedroom property in North London.

The property is finished to a very high standard with luxury bathrooms on the first floor and a laundry room also on the first floor that had been the source of a flood when a washing machine poured water through the first and ground floors. The client wanted a system that would automatically turn the water off if a similar leak or burst occurred.

#### The solution:

A shut off valve was installed on the incoming water supply and localised leak detection installed in the form of a tape in each of the high-risk areas (the pressurised system in the loft space, the laundry room, the bathrooms and the kitchen). The tape that is connected wirelessly to the valve is designed to signal the valve to automatically turn the water off if it comes in contact with water.

#### The benefit:

Within three months of the system being installed the washing machine that had been left working when the family had left the property in the morning, leaked again. The leak detection tape in that area shut off the water supply and when the family returned in the evening they found only a small wet patch on the floor of the laundry room in contrast to the flood that followed the previous incident.



#### Block of 30 luxury flats in Mayfair

This block had a history of escape of water losses and in the 24 months prior to installing a leak detection system in each flat had registered losses of just under £500,000.

#### The solution

Each flat had its own localised leak detection system with automatic water shut off installed protecting the boiler cupboard, kitchen and bathrooms. The system was linked to the Building Management System and 24 hour concierge service.

#### The benefit

In the first year after installation, 9 leaks were detected by the system. No damage was caused and no insurance claims were made, after which the building insurer reduced the escape of water excess that had been dramatically increased as a result of the claims in the previous 2 years.

#### **New Build Student Accommodation in Scotland**

271 student flats with pod bathrooms and a number of communal kitchens. The property developer commissioned a leak detection system to protect the pod connections and it was installed after the main contractor had handed the building over, but before student occupation.

#### The benefit

24 leaks were detected in the 16 weeks following completion, all the damage was minor, and all the construction defects were discovered within the Contractor's default period. The system continues to deliver benefit month on month.

# A range of different leak detection devices are available from LeakSafe:

LeakSafe utilise a range of technologies either separately or in combination to design an appropriate solution for a property

#### Localised leak detection:

- Localised leak detection tape or sensors are positioned at risk points in the property e.g. baths, showers, WCs, and appliances (dishwashers, washing machines etc.), and any water storage tanks including boilers.
- Will pick up catastrophic bursts.
- Will detect low level leaks.
- Will identify where the leak is.
- Will alarm and notify the occupier and can shut off the water.

#### Flow-Based:

- Installed on the incoming mains.
- Measures the amount of flow through the incoming mains.
- If the volume of flow in a pre-determined period exceeds the expected normal usage, the system assumes a leak and will shut the water off.
- Useful for the identification of catastrophic leaks but less effective identifying longer term gradual leaks.

#### Notification systems:

- GSM systems connected to either flow based or localised leak detection systems that immediately SMS if a leak is detected.
- LPWAN (Low Power Wide Area Network) enabled devices connected to leak detection tape or sensors, and shut off valves to transmit alerts directly to a users smartphone and a remote monitoring platform and user dashboard/APP.



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LeakSafe Solutions specialise in the supply of water leak detection and prevention systems. They work with insurers, private property owners and other organisations to minimise the risk associated with water leaks and burst pipes.

LeakSafe manufacture their products in the UK and key elements of its range have been performance tested by the Building Research Establishment (BRE). LeakSafe's WaterSwitch2 is a modular system that protects against both catastrophic and low level leaks and can be easily fitted to any building.

LeakSafe are a preferred supplier to Ecclesiastical Insurance and customers can benefit from preferential rates.

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