



May 2025

CASE STUDY

RETROFITTING 1930'S PROPERTY
TO LOWER DAMP & MOULD RISK



UTILISING THE
CONNECTED HOME
SOLUTION TO IMPROVE
INDOOR CONDITIONS
OF 1930'S PROPERTY

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PROJECT OVERVIEW

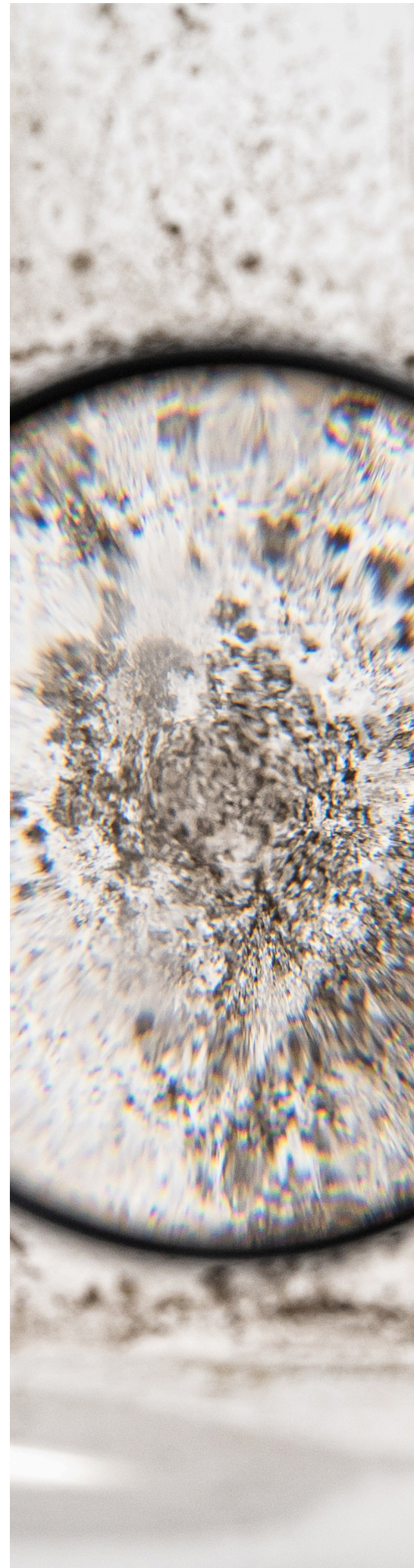
This case study highlights the successful use of Aico's HomeLINK Environmental Sensors to reduce Damp and Mould Scores (DMS) from high to low in a 1930's property occupied by two professionals working from home.

The property initially faced common issues such as outdated ventilation, single-glazed windows, and poor airflow, resulting in high-risk damp and mould areas, in particular the bathroom and kitchen.

The overarching goal was to monitor indoor conditions whilst gradually retrofitting the home. Access to the HomeLINK Resident App proved vital, especially for one partner working full-time in a small, poorly ventilated office with CO₂ levels reaching 3,000 PPM.

Upgrades included replacing single glazing with double-glazed windows fitted with trickle vents and installing a more effective bathroom extractor fan. However, the most impactful changes were behavioural. This was guided by real-time data, with residents adjusting their routines, ventilating after showers and cooking, conducting weekly cross-ventilation, and switching to a constant low heating strategy.

These changes, driven by environment monitoring insights, reduced the DMS from 100 to an average of 20–25 within three months, even during peak damp and mould season. This resulted in a significantly improving indoor air quality and occupant wellbeing.



PROPERTY IMPROVEMENTS

Ei1020 & Ei1025 - ENVIRONMENTAL SENSORS

The property owners installed several of Aico's Environmental Sensors throughout the property to monitor indoor conditions of the home, including temperature, humidity, and air quality, providing actionable insights. These innovative sensors are:

- Easy to install and manage
- Gather data on indoor environmental conditions
- Suitable for wall and ceiling mounting
- Powered by a sealed 10-year lithium battery
- Connect to Ei1000G Gateway to extract data insights



PROPERTY IMPROVEMENTS



Ei1000G - THE GATEWAY

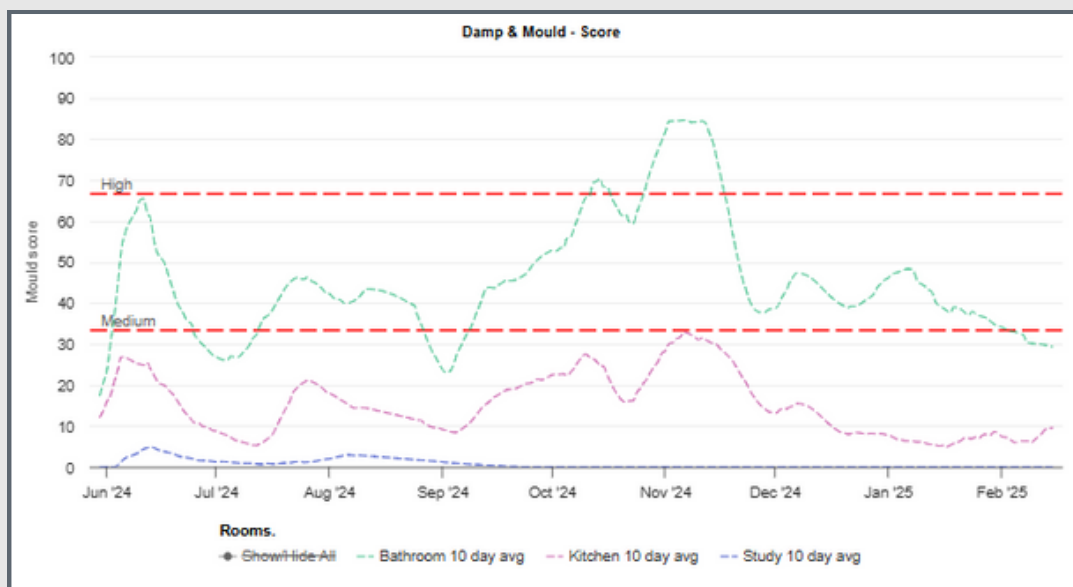
The Ei1000G Gateway is the hub of Aico's Connected Home Solution and is a cloud-based device which enables the remote monitoring and management of Aico products.

Designed to work with SmartLINK and RadioLINK+ enabled devices, it collects real-time data from all alarms and Environmental Sensors in the property, transmitting it securely to the HomeLINK Portal. It allows Portal users to remotely access, monitor and manage detailed data insights on the property, gathered by connected alarms and sensors.

It also features encrypted communication, battery backup, and easy installation via the SmartLINK app, helping to streamline operations while improving safety and peace of mind for residents.

DAMP & MOULD INSIGHTS

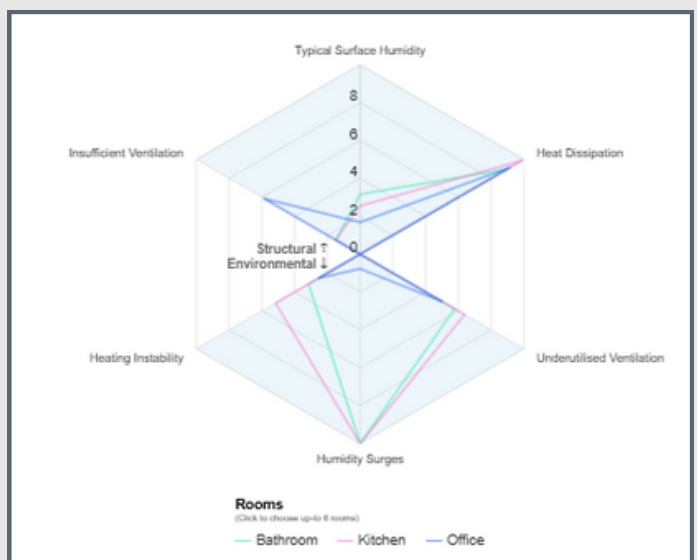
After a year of living in the property, it was clear that specific areas of the home such as the kitchen and bathroom were high risk for damp & mould development. The 1930's property had an outdated ventilation system alongside single-glazed windows. After several structural and lifestyle changes, led by the data produced from the Connected Home Solution, the damp & mould score was significantly reduced.



The damp & mould insight distinguishes between the contributing factors that cause damp & mould.

The damp & mould insight shows with precision whether the cause of mould is environmental or structural. Several structural and environmental factors such as natural ventilation, heating patterns and humidity surges.

In this property's case, heat dissipation, humidity surges and ventilation were highlighted as key factors.



RESIDENT APP BENEFITS

By utilising Aico's HomeLINK Resident App, residents have greater control over their living environment, providing real-time data and actionable insights. Key benefits include:

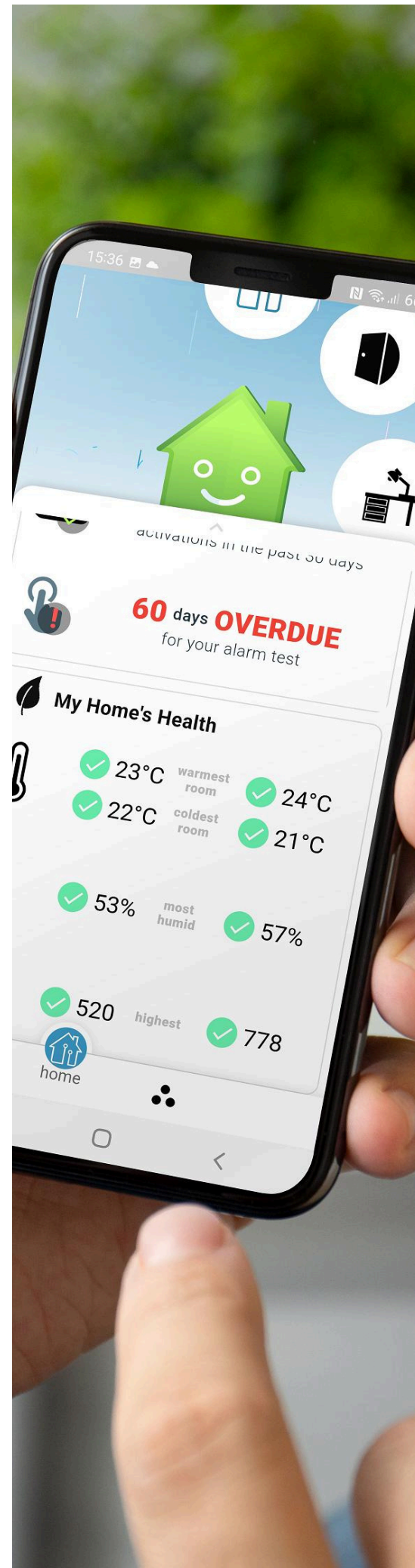
Personalised Home Health Insights: Residents receive a comprehensive overview of their home's indoor environment, including temperature, humidity, and CO₂ levels. The app offers tailored advice to improve air quality and overall living conditions.

Preventative Maintenance Alerts: The app acts as a first line of defense by notifying residents of potential issues like damp, mould, or poor air quality, allowing them to take corrective actions before problems escalate.

Enhanced Communication: By facilitating open communication between residents and owners/landlords, the app supports a collaborative approach to maintaining a safe and healthy home environment.

User-Friendly Experience: The app features an intuitive design with engaging elements, making it accessible and enjoyable for users of all ages.

By integrating the Resident App into their daily routines, the home owners are now proactively managing their home's health and safety and taking regular action, leading to improved well-being.





“

Using the HomeLINK Resident App was eye opening. I'd never really considered the air quality in my home before, but the app really highlighted the benefits of a healthy home.

Working from home, I do spend most of my time indoors and just having that extra prompt to let some fresh air in has been really handy and helped with my productivity.

Grace Lee, Resident

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The implementation of Aico's Connected Home Solution, including the Environmental Sensors and the Resident App, played a transformative role in reducing damp and mould risk and increasing the air quality in this 1930s property.

By pairing remote monitoring via the Ei1000G Gateway and Environmental Sensors with behavioural changes informed by real-time data, the household successfully lowered the Damp and Mould Score from high to consistently low levels, even during peak damp season.

Additional structural upgrades, such as installing double-glazed windows, improved ventilation, and optimising heating patterns, were guided by insights from the system.

Crucially, the Resident App empowered both occupants, particularly one working full-time from home in a high-CO₂ environment, to take simple yet effective actions, like timed ventilation and cross-ventilation routines. The result was not only a healthier indoor environment but a deeper understanding of how the way a home is lived in can impact air quality and mould risk.