

Heritage responds -
**Taking positive action
on climate change**



Case study

Smart sensors in historic buildings - Kenwood House

English Heritage

English Heritage worked with Ecclesiastical and technology firm Shepherd on a pilot for state-of-the-art monitoring sensors at Kenwood in North London. The pilot involved installing self-contained sensors to discreetly monitor the building and environmental factors in real time, allowing us to respond to risks and understand, manage and reduce electricity, gas & water consumption to lower costs and reduce carbon footprint. The pilot predicts this could help reduce operating costs by as much as 25% by driving down energy and maintenance costs and preventing damage.

The system – now being rolled out more widely by Ecclesiastical – is quick and easy to install, so it can be up and running in a matter of weeks.

Due to heavy masonry walls and statutory protections, many historic properties struggle with patchy WiFi and it can be difficult to wire new sensors into to mains. The system addresses this by using a LoRaWAN Gateway, acting as a bridge between the sensors and the Hub and not requiring WiFi. The sensors also use AA batteries, lasting up to three years and removing the need for mains power.

The project was recognised at the CIR Risk Management Awards where it received the 'highly commended' award in the Risk Management Innovation of the Year category. Read more about the project here: www.ecclesiastical.com/media-centre/kenwood-house-technology-pilot.

photo credit:
English Heritage

How does it work?

- Sensors are delivered to site and self-installed by clients with support from the central team who provide guidance on where best to place them.
- Once installed, the system gathers data to understand the property, building up a picture of conditions over the first few weeks, after which changes in environment and energy consumption are easily picked up.
- Once the system is fully operational notifications are delivered automatically to up to seven nominated team members via the alert system