

CASE STUDY:  
**Tower of London**

JULY 2009 - ONGOING



Historic Royal  
**PALACES**

# Moisture monitoring in Heritage Building

## The challenge

The conservation management team at the Tower of London is concerned about the degradation of Reigate stone in the Wakefield Tower due to salt build up, caused by penetrating damp. Additionally they wished to monitor a medieval wall painting both for damp, and also for accumulative light exposure.

Their existing wireless system was not able to cope with the particular challenges of radio transmission with the very thick walls of the Tower. It was not possible to view data from their existing system in real time as network access is not available around the buildings.

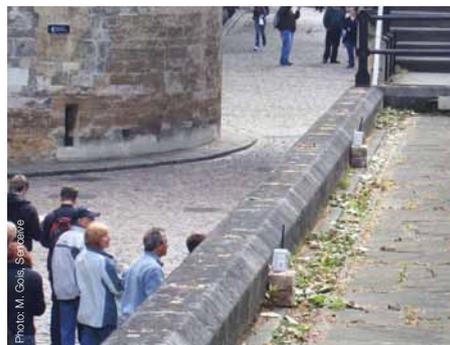


## The Senceive Solution

We integrated a humidity and temperature sensor into our FlatMesh product, and deployed a network of approximately 20 nodes. Deployment was particularly difficult as the nodes had to be kept out of sight from the public and hence placed in awkward positions, and made even more difficult by the thick walls which attenuate the wireless signals.

Senceive's mesh technology meant it was possible to place nodes in such positions using multiple short range network hops to create a large network covering two of their towers.

Senceive's solar powered GPRS unit was also deployed outdoors to relay the data to a remote server, giving live access to humidity and temperature data across the site.



## Our Findings

There is a now the potential for much better understanding of the impact of both short and long term variables that affect the building and its precious contents. This will enable improved decision making for the conservation management team that will help to maintain and improve the life and quality of these assets.

