

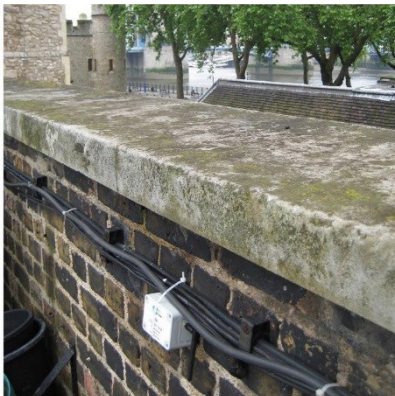


Tower of London: Moisture Monitoring in the Heritage Building

THE CHALLENGE

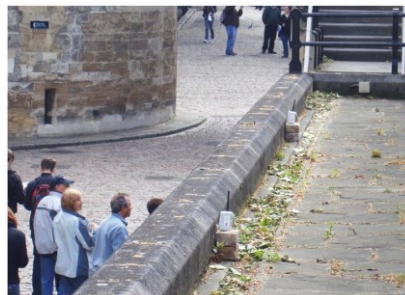
The conservation management team at the Tower of London is concerned about the decaying of walls due to humidity ingress, caused by events such as roof leakages as well as weathering and penetrating damp.

Their existing wireless system did not give them enough flexibility due to its limited range which meant only a limited number of points could be monitored. It was not possible to view data from their existing system in real time as network access is not available around the buildings and their existing system did not provide remote access.



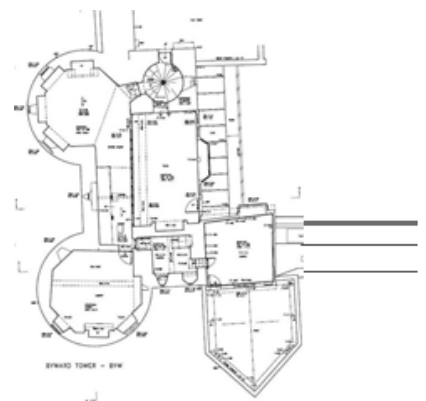
OUR SOLUTION

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.



THE OUTCOME

There is 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.



Supported by the Technology Strategy Board (TSB) collaborative development programme