



NON-INVASIVE TECHNOLOGIES CAN MAKE HISTORIC BUILDINGS MORE SUSTAINABLE

For entirely understandable reasons, the discussion around making the built environment more sustainable has tended to focus on the design and development of new-builds. But thanks to some recent interventions by high-profile individuals, including European Commission executive vice-president Frans Timmermans, awareness of energy efficiency issues in historic buildings is gradually improving.

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Taking part in a Dublin Climate Summit webinar, Mr Timmermans highlighted the significant role that older buildings will continue to play well into the future – and certainly beyond the mid-century ‘net zero’ target. “Most of the buildings here now will be here in 2050. That’s the advantage and disadvantage of living in Europe,” he remarked, before going on to call for an agenda that melds energy efficiency improvements and heritage preservation. (1)

Improving the energy efficiency of older buildings is becoming easier with the latest generation of minimal-impact control, sensor and retrofit technologies, says Priva’s Gavin Holvey.

Of course, implementing this agenda is easier said than done. This is especially true in countries with high numbers of buildings that have listed status or other preservation orders that limit alternations. For instance, in England alone, it is estimated that there are now around 500,000 buildings with listed status (2).

In this context it’s not surprising that demand for solutions that enable buildings to be made more energy efficient in a non-invasive way is continuing to rise. From lighting and heating infrastructure to sensors and integrated control systems, heritage customers now have a wealth of options that can help them chart a more sustainable future.

Three essential characteristics

It’s true of all buildings, but especially so in the case of historic sites that the energy and control systems have to work in harmony with the building itself. At Priva this has resulted in a consistent focus on our equipment satisfying three essential characters: that it be unobtrusive, non-disruptive and flexible.

With a centrally located and remote access Priva building management system (BMS) overseeing energy and climate, we are able to minimise the impact on historic buildings in multiple ways. For instance, the use of sensors to measure temperature and humidity negates the need for new wiring and trunking. It is often also possible to employ an existing IT network to connect to the BMS, further reducing the requirement for invasive installation work.

The results of this kind of approach can be seen at one of Britain’s most iconic buildings, St. Paul’s Cathedral in Central London (3). The project brief was to improve energy efficiency and plant reliability through the installation of a Priva BMS. In order to minimise disruption, project contractor Bunton M&E built everything off-site in five weeks, with on-site installation time reduced to only four weeks. Saving additional time, it was possible to use the existing IT network to communicate between the main panel, events and multipurpose space the Wren Suite, and the Priva BMS.

In conjunction with site-wide monitoring, the Priva BMS makes it possible to identify and address energy-related inefficiencies. The system can also be accessed and adjusted remotely, while its scalable design gives scope for future changes that can be carried out with minimal on-site work. Our work at St. Paul's and many other historic sites proves that there is no longer an obstacle to achieving flexible control and monitoring of building systems with no downsides. Ensuring that Europe's older buildings can operate more sustainably in the future remains no small challenge, but increasingly the technologies that can bring this about are within reach.

Sources:

- (1) <https://www.independent.co.uk/climate-change/news/europe-sustainable-old-buildings-cities-b1806633.html>
- (2) <https://historicengland.org.uk/listing/what-is-designation/listed-buildings/>
- (3) <https://www.priva.com/discover-priva/stay-informed/customer-stories/st-pauls-cathedral-upgrade>

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