Why wireless heating controls are the way forward

When the Bradford Cathedral estate approached Andy Wadsworth - Honeywell Installer Network member - with a heating dilemma, Andy had the task of specifying an upgraded heating system which would deliver the energy savings while causing minimum disruption during the installation phase. Part of being a successful installer is knowing what type of heating control to fit, when and where, and understanding which building regulations to comply with, as well as realising the customer benefits associated with different types of heating systems and controls. In this article, Andy explains why he specified a wireless heating system and highlights how wireless heating controls can be of benefit to other installers.

The Cathedral Case

The committee at Bradford Cathedral had some concerns over one of its outbuildings – an old church hall with a 40 year old floor-standing cast iron boiler, single piped heating system and no heating controls fitted. The building has since been converted into offices and workshops with a series of communal spaces. Finding a suitable and efficient heating system to meet the mixed uses of the building posed a number of challenges. The downstairs is a stained glass manufacturer, which required no heating, due to the furnaces used to blow the glass. The upstairs however is a combination of offices and communal spaces for underprivileged children, including computer rooms.

The pipework which initially ran from the old boiler around the downstairs also needed to be removed, to ensure no unnecessary heat was being delivered. With only one timer fitted and the boiler located downstairs, the heating was coming on uniformly at certain times and using large amounts of energy to heat the whole building to a comfortable level and reach the areas upstairs where heat was required.

Energy efficiency was at the forefront of the committee minds. Energy price increases were a significant factor when considering how flexible the heating system needed to be. Therefore finding a solution that could heat different areas to separate temperatures to match their usage, bypassing the downstairs glass workshop was something that could only be achieved by the addition of heating controls.

The building needed a complete heating system upgrade, with a modern, efficient combi-boiler, new pipework, numerous radiators and at least two room thermostats installed to help the building occupiers manage their energy usage and deliver on all areas of their requirements.

Once scope of the system was decided, the next area to consider was how to make changes to the system while still complying with the building regulations.

Building Regulations
The Building Regulations Part L state every time a new heating system is being fitted in an existing or new property, every time a property has an extension or change of use, every time a new property is built and every time more than one individual component such as a boiler or thermostat is replaced in a heating system, zoning is required.

Properties under 150m² should be divided into at least two space heating zones with independent temperature control, while buildings with a floor space of more than 150m² should be provided with at least two space heating zones, each having separate time and temperature control. Wireless heating controls can easily create heating and hot water zones to ensure compliance with these regulations and because there is little wiring involved, do not require Part P regulations notification relating to electrical installations.

The Solution
In this instance, the building is more than 150m² upstairs, so two heating zones needed to be created to cater for the offices in one zone and the communal areas in the other zone, with independent time and temperature control.

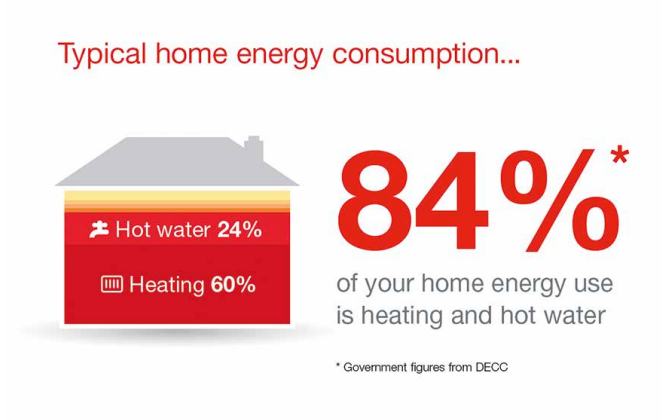
Honeywell's Sundial RF² Pack 5 wireless thermostats cater perfectly for this type of application, as the packs include a two channel programmer so two separate zones can be programmed individually, but from a single programmer. Two additional wireless thermostats are also provided to be fitted one in each zone.

Why Wireless?
Wireless controls are nothing new, but the benefits to both the installer and end user are often still overlooked within the industry. Many installers may still choose to fit a wired product, perhaps because they misunderstand what fitting wireless thermostats actually involves, leading them to stick to what they know best.

The reality is that for the building occupiers or homeowners, wireless heating controls can be fitted without causing any major disruption to the fabric of the building, eliminating any problems with lifting floors and damaging décor, leaving them with an intelligent control which is simple to use and will save energy and reduce their heating bills.

For the installer, the common misconception is that installing a wireless control pack, such as Sundial RF² requires complex, lengthy processes, when in fact it isn't the case. Simply by replacing a timer, a thermostat works automatically with no additional wiring. Wireless controls actually reduce installation time, increasing productivity and leaving time to answer more call outs and drive more business back to yourself.

For the Cathedral's outbuilding, once the major work of installing the new boiler and pipework was completed, the new programmer was wired straight into the main wiring terminal near the boiler and the room thermostats simply fitted to the walls in the optimum locations upstairs. This eliminated the need to run additional wires through the building and prolong the job. A simple signal strength test allows for the installer to test that the thermostats and the programmer communicate effectively, before fixing the thermostats in place.



As in this case, Sundial RF² pack 5 allows for the thermostats to be programmed to suit the occupier's movements or lifestyle, to ensure they are getting the best out of their heating system and reducing their energy bills.

The Result
The result is an energy efficient building which can be easily managed and programmed by the building occupiers, heating 'zones' as and when required. No heat is now delivered to the lower floor of the building, and upstairs energy is only used in certain areas when there is a demand or need for heat.

Based on the figures that fitting a thermostat delivers savings of around £120* a year for a four bedroom domestic property, the savings for a building of this scale should be significantly higher.

A building manager or homeowner need only spend a small amount of cash to save large amounts of energy and money off their heating bills. Upgrading to wireless heating controls minimises mess and disruption and offers added functionalities over wired alternatives, to reduce its energy bills further.