

ADVICE SHEET #5



SMOKE ALARMS

The guardian that never sleeps...

If you have taken the time and trouble to fit battery operated smoke alarms in your property then I APPLAUD YOU- you are in the minority! The Fire Brigade are constantly telling us to fit these life saving devices- they're so cheap and yet so effective. At least they are when they work. How many have I seen sitting on the shelf, or hanging from the ceiling with the battery removed- seemingly the only way to stop the nuisance of a false alarm? Let me tell you why this is.....

A [smoke detector](#) works in one of two ways- it either 'smells' smoke or it 'sees' smoke. The difference is important because most of the battery powered alarms on the market today are ionisation units that 'smell'. This means that they are sensitive to anything that passes them by, be it the by products of crispy bacon under the grill or the fumes produced by your blackened toast. Remember that these devices are sensitive to smoke and fumes THAT YOU CAN'T SEE- so that's why they just seem to go off sometimes. And there's another reason why they suffer false alarms- people put smoke detectors in the kitchen! Madness!! The best device here is a [heat detector](#), which won't trigger until the temperature rises to approximately 50 degrees- which is basically during a real fire. You don't want something as sensitive as a smoke detector in the very room where hot gasses and smoke are being produced regularly.

Of course, batteries die. When they do, the alarm starts to warn you by 'beeping'- normally at 3 o'clock in the morning! This infuriates people and they do what I have done with my own alarms many times- they take the battery out and leave the alarm to one side. Or they refit the unit with no battery. Either way, the alarm is effectively useless!

By far the best solution is to have a mains powered alarm system that never needs a battery change and is less prone to false alarms. This is indeed the kind of system required by the Building Regulations when a new property is built, or an old one refurbished, or a new space is added, such as a rear kitchen return or a loft extension. It's known commonly as a [Grade 'D'](#) system and consists of [smoke detectors](#) in the [common parts](#) and [heat detectors](#) in the kitchen and the main dwelling room. This covers the areas

where a fire is most likely to start and protects the main exit from the building, warning people in the crucial seconds before smoke build up becomes a danger to life.

The actual system requires a dedicated circuit, supplied via its own **MCB** in the **consumer unit** and then cable to link all of the detectors together. The running of this cable is obviously the most challenging part, especially when the property has been decorated or fitted with permanent flooring, such as tiles. Which is why the manufacturers have designed radio linked units that 'talk' to each other without the need for interconnecting wires. However, two drawbacks here are that each detector still requires a permanent power supply and that the base units effectively double the cost of the materials. Still, it's an option when the former is too much trouble.

Once fitted and powered up, the internal battery (which can have a life of up to 10 years!) start to 'trickle' charge and continues to do so all the time the power is supplied. This battery is to allow the alarm to continue functioning if the mains electricity is cut for any reason and can actually power the detector for up to 6 months before the inevitable warning alarm sounds! Lights on each of the detectors inform you of their status.

Of course, as with all other electrical installation work, the wiring and the operation have to be checked and certified so the client can expect two separate certificates to cover each aspect of the system. One an **Electrical Installation Certificate** and the other a **Fire Alarm Certificate**.

This Advice Sheet has been produced to explain the reasons why electrical work is so often better left to the professionals or to at least indicate why a simple job can sometimes turn into a more complex one!

Should you have any questions, please call me on 07812 000 658 to discuss them.

Arthur Hunt

