



Surrey Building Control Guidance Note - Number 14



Smoke Alarms in Dwellings

Building Regulations

For all new dwellings, buildings converted to dwellings, loft conversions and dwellings that are substantially extended or altered the Building Regulations require that **mains** operated smoke alarms are fitted.

What should I do in my existing house/flat?

If you are not planning any building work please consider the following:

- You're twice as likely to die in a fire at home if you haven't got a smoke alarm.
- A smoke alarm is the easiest way to alert you to the danger of fire, giving you precious time to escape. It's cheap, easy to get hold of and easy to fit. There's no excuse for not having one.
- Many people who have smoke alarms are in danger too. The alarm could be in the wrong place, there may not be enough smoke alarms for the size of their home, they may not have checked their alarm recently or the batteries could be missing.

This guidance note shows what to look for in smoke alarms, how to fit them so they work most effectively, and how to maintain them.

Excuses Kill! Fit a smoke alarm now.

How to choose one

Detection method

The detection method determines how well the alarm spots different kinds of fires. There are two detection methods - or you can combine both.

- **Ionisation** alarms are sensitive to free-burning fires with flames - for example, chip pan fires. They detect these fires before the smoke becomes thick.

These are the cheapest and the most widely available smoke alarms. You can find them in supermarkets as well as DIY and electrical shops.

- **Optical** alarms are more effective at detecting slow-burning fires, like overheated electrical wiring. They are less likely to go off accidentally or when you're cooking.

Optical alarms are more expensive. They are not quite as widely available, but are easy to get hold of in DIY and electrical shops.

- **Combined** detectors are effective at detecting slow-burning as well as flaming fires - which are both common types of fire.

The cheapest combined alarms actually cost less than optical-only alarms. And they're about as easy to find as optical-only alarms.

Power Supply

A lot of people forget to check their smoke alarms, so the best choice of power supply is one that lasts longest.

- **Standard battery** - The cheapest and most widely available alarms are powered by ordinary batteries. The drawback is that the battery needs replacing every year.
- **10-year battery** - Alarms with 10-year batteries cost a little more (they're usually combined ionisation and optical alarms). With a 10-year battery you don't have to remember to change the battery every year.
- **Mains** - Mains-powered alarms eliminate the problem of checking the battery. But to be really safe you need a battery back-up (which costs extra). They need to be installed by a qualified electrician. These are the type required by Building Regulations when you carry out building work.

Additional Features

- **Hush/silencer button** - Some people find their alarms are frequently set off when they're cooking or when the toast burns. This is partly a problem of positioning (the alarm shouldn't be in the kitchen or right outside it). But it can be made less annoying by a button that quietens the alarm temporarily.

The alarm lets you know it's been silenced by "chirping" or by displaying a red light - and a real fire producing lots of smoke will set it off anyway.

- **Emergency light** - When the alarm sounds, the light comes on. The light can help you see your way out, and it's good for alerting people whose hearing isn't perfect.
- **Strobe light and vibrating pad** - For people who are hard of hearing or deaf, there are alarms which come with a pad. When the alarm goes off, the pad vibrates, and a strobe light flashes - alerting you or waking you up instantly.

Making Your Choice

If you're not sure which one to buy then get an alarm that combines optical and ionisation detection and that has a 10-year battery or mains supply. Mains operated are required by Building Regulations when you carry out building work.

Making it Work

Smoke alarms are easy to fit. The simplest types just need a screwdriver, and that's about it.

How many?

The more you have the safer you'll be. At minimum you should have one on each floor - probably in the hall and landing ceilings.

But if you have only one smoke alarm and two floors, put it where you can hear it when you're asleep - in the ceiling at the top of the stairs leading to the bedrooms.

If you have a TV or other large electrical appliance in your bedroom, you should fit a smoke alarm there.

Where?

The best place is on the ceiling, near or at the middle of the room or hall. The alarm should be at least 30 cm (one foot) away from a wall or light.

Alarms should be sited within 7.5m of all bedroom doors.

Siting of alarms should consider the need to gain access for maintenance and testing.

Looking after smoke alarms

Once a week test each alarm by pressing the test button till the alarm sounds.

Once a year change the battery (unless it's a ten-year alarm).

Twice a year open the case and gently vacuum the inside using the soft-brush attachment to remove dust from the sensors. If it doesn't open, vacuum through the holes.

After 10 years it's best to get a whole new alarm.

Keeps going off?

If your smoke alarm keeps going off don't take out the battery! The problem is easily solved.

Most probably it's positioned too near the kitchen. Move it further down the hall.

If it's not the cooking setting it off, try vacuuming the alarm as there may be a build-up of dust or dirt.

For further information contact the Building Regulations Division

Please note that these guidance notes are for advice only and may not cover all situations. It is your responsibility to ensure that they are appropriate for use in your particular circumstance.