

Tolerable Standard Guidance: Satisfactory Fire Detection and Satisfactory Carbon Monoxide Detection

16.1. A house meets the tolerable standard if it complies with the relevant requirements in relation to satisfactory smoke and heat alarms.

Introduction

16.2. The tolerable standard is amended by the Housing (Scotland) Act 1987 (Tolerable Standard) (Extension of Criterion) Order 2019 and now includes this new element covering smoke and heat alarms. For the first time, assessors will consider the presence, type and condition of smoke and heat alarms in a house when deciding if the house meets the tolerable standard. These criteria, which already formed part of the repairing standard, now apply to all houses.

16.3. This chapter of the guidance aims to provide the information and advice needed to carry out an assessment of the smoke and heat alarms in a house for the purposes of the tolerable standard. The methodology is based on the normal walk-through survey used for other elements of the tolerable standard, with the potential for support from a qualified specialist.

Legislation

16.4. The tolerable standard was first defined in the Housing (Scotland) Act 1969 which was then repealed and replaced by the Housing (Scotland) Act 1987. The Housing (Scotland) Act 1987 (Tolerable Standard) (Extension of Criterion) Order 2019 introduced this new element. The introduction of smoke and heat alarms in the tolerable standard is in recognition of the danger fire poses to the occupants of a house, and is intended to reduce the risk of loss of life, injury and damage to property in the event of fire.

Definitions

16.5. The revised tolerable standard includes criteria for 'satisfactory equipment for detecting fire and giving warning in the event of fire or suspected fire'. This guidance defines what is 'satisfactory' by setting out the requirement for:

- one smoke alarm installed in the room most frequently used for general daytime living purposes (normally the living room/lounge);
- one smoke alarm in every circulation space on each storey, such as hallways and landings;
- one heat alarm installed in every kitchen;
- all smoke and heat alarms to be ceiling mounted; and
- all smoke and heat alarms to be interlinked.

16.6 Mains-operated alarms (with battery backup) are permitted, and tamper proof long-life lithium battery alarms (i.e. not PP3 type or user-replaceable) are also permitted. Alarms should be regularly maintained and tested in accordance with manufacturer's instructions.

16.7. **Smoke alarm:** A fire detector that detects smoke as a primary indication of fire. It produces an audible and/or visible signal locally in a room or a home. Smoke alarms are usually housed in a small, round shaped plastic case, and ceiling mounted. Smoke alarms should conform to BS EN 14604. For more detailed information on smoke alarms, see BS 5839 Part 6.

16.8. **Heat alarm:** A fire detector that detects the presence of fire by monitoring the changes in temperature associated with combustion. It produces an audible and/or visible signal locally in a room or a home. Heat alarms should conform to BS 5446-2. For more detailed information on heat alarms, see BS 5839 Part 6. In a fire, heat alarms operate later than smoke alarms, so their use should be restricted to rooms in which smoke alarms would cause false alarms (e.g. kitchens).

16.9. **Multi-sensor alarm:** A fire detector that detects the presence of fire by monitoring more than one phenomenon of fire (e.g. smoke and heat). Multi-sensor alarms should conform to BS EN 54-29 or BS EN 14604.

16.10. **Ceiling mounted:** All smoke and heat alarms should be ceiling mounted, unless otherwise indicated as suitable for wall mounting in spaces of limited area (e.g. hallways) by the manufacturer.

16.11. **Interlinked:** Interconnected alarms which communicate with each other and form an integrated system of protection in the home, so that when one alarm detects a fire, all alarms operate simultaneously. Alarms can be interlinked via wires (hardwired) or wirelessly (by radio communication). Where adding to an existing hardwired system, care should be taken to ensure that all alarms are interlinked, with all alarms sounding when any one device is activated.

Making the assessment

16.12. In some buildings, it may not be practical to fit fire and smoke alarms to this exact standard. There may be instances where the number of alarms specified would not be required to meet the standard, such as a kitchen/diner or open plan layout. Assessors should take account of the layout and design of the building, and any advice given by a competent person. Further information can be found in the Building Standards Domestic Technical Handbook.

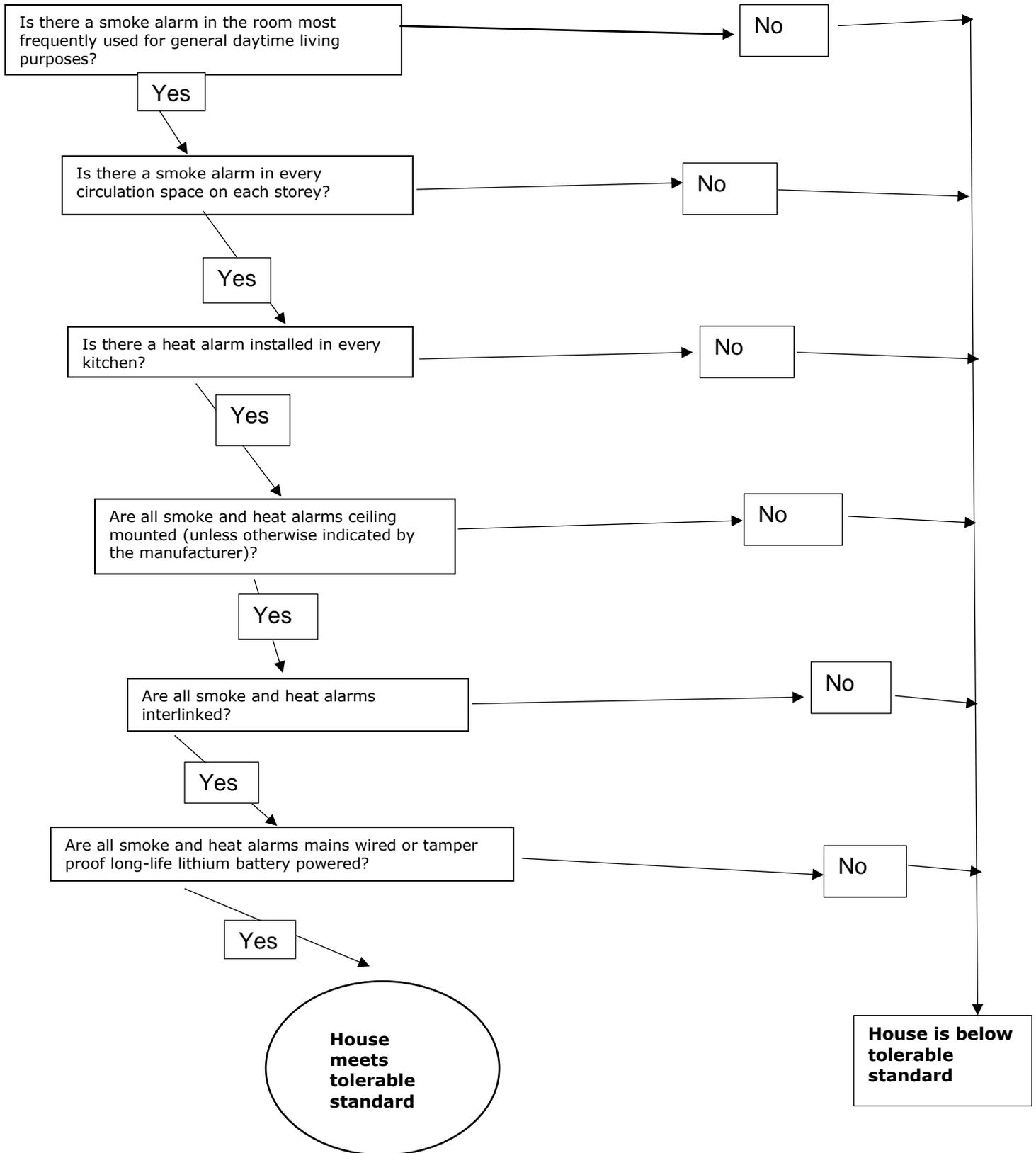
16.13. Local authorities may use their statutory powers to require owners to carry out work on substandard housing. However, as is the case for other elements of the Tolerable Standard (e.g. serious structural problems through to other failures such as insufficient loft insulation), it is expected that any intervention is proportionate, rational and reasonable. Local authorities are to consider the cost of any intervention alongside the cost of assisting owners to bring their property up to the minimum standard for satisfactory fire detection. As a general rule it is preferable that owners should carry out necessary works on a voluntary basis rather than as a result of enforcement action, with further information set out in **Chapter 2 – local authority powers**.

Recent cases in the sheriff court support the view that local authorities have to consider carefully which enforcement powers are appropriate to a failure in meeting

the standard and careful investigation must be carried out as to the cause of the failure as well as engagement with the owners.

16.14. The next part of this chapter gives advice for assessors on making judgements on this element of the tolerable standard.

16.15. The flow chart below will help guide an assessor through the process of determining whether the house has smoke and heat alarms which meet the tolerable standard. This should be followed in the absence of any technical advice provided against fitting to the standard.



Chapter 17 Satisfactory Carbon Monoxide Detection

17.1. A house meets the tolerable standard if it complies with the relevant requirements in relation to satisfactory carbon monoxide (CO) alarms.

Introduction

17.2. The tolerable standard is amended by the Housing (Scotland) Act 1987 (Tolerable Standard) (Extension of Criterion) Order 2019 and now includes this new element covering CO alarms. For the first time, assessors will consider the presence, type and condition of CO alarms in a house when deciding if the house meets the tolerable standard. These criteria, which already formed part of the repairing standard, now apply to all houses.

17.3. This chapter of the guidance aims to provide the information and advice needed to carry out an assessment of CO alarms in a house for the purposes of the tolerable standard. The methodology is based on the normal walk-through survey used for other elements of the tolerable standard, with the potential for support from a qualified specialist.

Legislation

17.4. The tolerable standard was first defined in the Housing (Scotland) Act 1969 which was then repealed and replaced by the Housing (Scotland) Act 1987. The Housing (Scotland) Act 1987 (Tolerable Standard) (Extension of Criterion) Order 2019 introduced this new element. The introduction of CO alarms in the tolerable standard is in recognition of the danger posed to the occupants of a house by CO in concentrations hazardous to health, and the vital role early detection and warning in buildings can play in the protection and safety of the occupants.

Definitions

17.5. The revised tolerable standard includes a criterion for 'satisfactory equipment for giving warning if carbon monoxide is present in a concentration that is hazardous to health'. This guidance defines what is 'satisfactory' by setting out the requirement for:

- CO detectors to be fitted in all rooms where there is a fixed combustion appliance (excluding an appliance used solely for cooking) or a flue.

17.6 **CO detector:** A device that detects the presence of CO in a concentration that is hazardous to health, giving an audible, and in some cases visible, warning. CO detectors should comply with BS EN 50291 and be powered by a battery designed to operate for the working life of the detector. The detector should incorporate a warning device to alert the users when its working life is due to expire. Hard wired mains operated CO detectors complying with BS EN 50291 (Type A) with fixed wiring (not plug in types) may be used as an alternative, provided they are fitted with a sensor failure warning device. The detector should be regularly maintained and tested in accordance with the manufacturer's instructions.

17.7 Combustion appliance: a fixed appliance (such as boilers, fires (including open fires), heaters and stoves) designed and installed to operate on a carbon based fuel (i.e. oil, solid fuel or gas).

17.8 All CO detectors should be either:

- ceiling mounted and at least 300 mm from any wall (unless otherwise indicated by the manufacturer) or
- wall mounted and positioned at least 150 mm below the ceiling and higher than any door or window in the room (unless otherwise indicated by the manufacturer).

17.9 Combined smoke/ CO detectors may be installed, providing they meet the appropriate requirements of BS EN 50291 with regard to CO detection/ alarm activation and the requirements of BS EN 14604 with regard to smoke detection/alarm activation.

Making the assessment

17.10. In making an assessment, assessors should take account of the layout and design of the building, and any advice given by a competent person. Further information can be found in the Building Standards Domestic Technical Handbook.

17.11. Local authorities may use their statutory powers to require owners to carry out work on substandard housing. However, as is the case for other elements of the Tolerable Standard (e.g. serious structural problems through to other failures such as insufficient loft insulation), it is expected that any intervention is proportionate, rational and reasonable. Local authorities are to consider the cost of any intervention alongside the cost of assisting owners to bring their property up to the minimum standard for satisfactory carbon monoxide detection. As a general rule it is preferable that owners should carry out necessary works on a voluntary basis rather than as a result of enforcement action, with further information set out in **Chapter 2 – local authority powers**.

Recent cases in the sheriff court support the view that local authorities have to consider carefully which enforcement powers are appropriate to a failure in meeting the standard and careful investigation must be carried out as to the cause of the failure as well as engagement with the owners.