

Fire Safety Guidance Note: Personal Protection Watermist Systems

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The London Fire Commissioner (the Commissioner) is the fire and rescue authority for London. The Commissioner is responsible for enforcing the Regulatory Reform (Fire Safety) Order 2005 (as amended) in London.

This Guidance Note provides fire safety advice in respect of Personal Protection Watermist Systems

This Note is one of a series produced by the Commissioner to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please visit your local Fire Safety Office, telephone 020 8555 1200 and ask for the nearest Fire Safety Office, or visit our web site at <http://www.london-fire.gov.uk>

1 Introduction

- 1.1 This Guidance Note has been prepared to give advice on Personal Protection Watermist Systems. The information provided is based upon the publication "Guidance on the use, deployment and limitations of Personal Protection Watermist Systems in the homes of Vulnerable people" prepared by BRE Global in partnership with London Fire Commissioner.

2 What is a Personal Protection Watermist System?

- 2.1 A Personal Protection Watermist System is a self contained watermist system (conforming to LPS 1655:- Requirements and test methods for the LPCB approval and listing of personal protection watermist systems) designed to protect a vulnerable person from a fire within their home. These systems are designed for people who spend a significant amount of time confined to a specific area of their home ie. bedroom or front room.

3 Persons not suitable for protection by Personal Protection Watermist Systems

- 3.1 Personal Protection Watermist Systems (PPS) are not suitable for all vulnerable persons such as those individuals who are mobile and live in a multi roomed flat. In addition, people who display hoarding characteristics are unlikely to benefit from PPS due to the inability of the fine water spray to penetrate hoarding materials to control/extinguish the fire.

4 Typical risk profile of vulnerable persons

- 4.1 Analysis of the underlying cause of fatal fires in dwellings has identified that a combination of risk factors increases the likelihood of being involved in a fire. A significant percentage of victims are at greater risk due to a physical/mental impairment that makes them unaware of, or unable to respond to, a fire in their home. They are also more likely to have a fire in their home due to lifestyle/mental capacity issues.

Examples of typical risk factors are given below:

- Having previous fires
- Unsafe disposal of handling of smoking materials
- Burn Marks on carpets, furniture, clothing/bedding
- Unsafe use of candles

- Poor quality of damaged electrical wiring
- Unsafe use of electrical equipment, overloaded sockets or extension leads
- Unsafe use of space heaters
- A history of falls
- Living with dementia or similar cognitive impairment
- Mobility difficulties
- Decision making difficulties
- Alcohol or drug misuse
- Home oxygen use
- Sensory impairment

5 Why is the risk profile important?

- 5.1 Care needs to be taken to ensure that the risk profile of the vulnerable person is appropriate for PPS. For example, a vulnerable person who is mobile and living in a multi roomed flat has the potential to be affected by a fire anywhere in their home. As a result they would possibly require a full Automatic Water Fire Suppression system (such as a sprinkler system that is designed, installed and maintained to BS9251 Fire sprinkler systems for domestic and residential occupancies).

6 Cost

- 6.1 The typical cost of a PPS unit (including installation and legionella treatment) is £2,700 based on 2017 figures.

7 General Features

Features include:-

- Self contained unit consisting of a water container connected to an open mist nozzle
- Full portable and can be moved/reused as required
- Usually mains powered with battery back up
- Detects and suppresses fire at an early stage preventing the spread of fire
- Fire detection and alarm arrangements included
- 10 minutes activation time using 110 litres of water

8 Remote monitoring arrangements

- 8.1 Connection of a PPS to a permanently monitored fire detection or warden/care system is recommended so that if the system actuates, management action can be initiated and the fire and rescue service mobilised if necessary.

9 Additional/alternative control measures

- 9.1 If a person's characteristics make them unsuitable for protection by a PPS or further enhancements to the safety to the individual need to be made (as identified by their person centred fire risk assessment) then additional typical control measures as listed below can be considered.

- Fire Safety Ashtray
- Fire retardant bedding, blankets or clothing
- Personal protection watermist system
- Sprinklers
- Electrical circuit testing
- Space heater fire guard
- Alternative meal arrangements:eg Microwave or "meals on wheels"
- Electric thermostat controlled deep fat fryer
- Cooker fire detector & alarm
- Electric/gas cooker auto cut-off
- Arson control letterbox
- Smoke detection fitted in all areas of risk
- Heat alarm in cooking area
- Remote monitoring with interlinked smoke detection (e.g. Telecare)

10 Images of typical Personal Protection Watermist systems



11 Bibliography

- 11.1 Detailed guidance on the various standards referred to in this guidance note may be obtained from the following bibliography. You can also obtain fire safety advice on other subjects by visiting our website at www.london-fire.gov.uk.

The publications can be obtained from the following addresses:-

AVAILABLE FROM	TITLE
BRE Global Ltd	'Guidance on the use, deployment and limitations of Personal Protection Watermist Systems in the homes of vulnerable people'
LPCB Redbook Live	'LPS 1655:- Requirements and test methods for the LPCB approval and listing of personal protection watermist systems'

The above publications are current at the time of preparation of this Guidance Note (see date in footer).

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