

## What is a Flood Protection Product?

Permanent flood defences, such as flood embankments, are normally the preferred means of providing flood protection. There are, however, many places where permanent structures are not viable or appropriate on cost, environmental or other grounds. Flood protection products can be for commercial or domestic use and usually come in three versions – temporary free standing barriers, removable household barriers or removable flood boards.

- **Temporary free-standing barriers** these are removable flood protection systems installed at some distance from a detached house or group of properties with the purpose of holding back floodwater from reaching the property. They can also help to reduce the seepage of groundwater into the lower foundations and ground floor level of the property.
- There are important things to consider when installing such systems and a comprehensive guide to temporary and demountable defences is available from the Environment Agency website [www.environment-agency.gov.uk/floodline](http://www.environment-agency.gov.uk/floodline)
- **Removable household products**, are designed to seal potential flood routes into the property such as doors, windows, air bricks, sewers and drainage pipes. Most are designed to be fitted in a matter of minutes.
- **External door barriers** usually take the form of a plastic or metal flood board that can be quickly installed across a doorway in advance of the floodwater arriving. Flood boards normally slide into a frame attached around the door frame or doorway to provide a watertight seal. Barriers for windows and patio doors are similar to those for external doors. Flood boards or beams for wider openings are normally installed into a frame attached around the opening.
- **Air brick covers** are fixed over air bricks and other vents in external walls. They are usually made of plastic and clipped into fixings or a fixed frame around the air brick or vent opening.
- **Flood skirts** are designed to wrap around a property thus preventing floodwater from seeping through the building fabric as well as through openings.



## Why are flood protection products important?

Insurance companies are now offering flood cover based on the actual risks of flooding. In high risk areas where permanent defences may not be viable they will want to know what other local flood protection measures can be taken. Insurers will take account of effective action people have taken to protect their home or business, including the use of Kitemark flood products where these reduce the flood risk affecting those properties.

## What does Kitemark mean for flood protection products?

Kitemark certified flood protection products show that the product has been independently tested and certified by BSI (British Standards Institution) and that it conforms to the standard's requirements as well as the rigorous Kitemark criteria.

Because Kitemark certification requires full audit before licensing you can be sure that the product you buy already meets the rigorous standards. Kitemark licence holders are regularly re-assessed to ensure that they continue to meet the standards and deliver the same quality, safety and reliability of product and service.

Details of Kitemark flood protection product manufacturers can be found on [www.kitemark.com/find-it](http://www.kitemark.com/find-it) or [www.Environment-Agency.gov.uk/floodline](http://www.Environment-Agency.gov.uk/floodline)

## Why is Kitemark helpful for homeowners?

As different approaches to flood protection have emerged, so have a number of flood protection products. Until recently there has been very little information to help people choose and use the range of products now on the market. To meet this need, a BSI Kitemark was established for flood protection products to help people identify products that have been tested and independently certified as meeting the standard, being fit for purpose and performing to the right levels.

## Why do flood products only protect up to 1m?

As a general rule, the maximum height for any flood protection product fitted directly to a building should be not greater than one meter above the ground surrounding the building – about window sill height – unless further structural work is undertaken.

Keeping floodwater out of a property with a depth greater than one meter can result in long-term structural damage to the walls and floors and could undermine the foundations. With weak structures or foundations, structural damage could occur at lesser floodwater depths.

## I've heard that flood protection products still leak –is this so?

The consensus of opinion from the flood protection industry is that under the test conditions set out in PAS 1188 (the original PAS and the revised PAS in 2009) it is very difficult to achieve a zero leakage rate. Therefore it was agreed that some tolerance was needed and a maximum permissible leakage rate was set depending on the type of flood protection product.

- For building aperture products, the maximum leakage rate is 1 litre per a hour per a metre of aperture edge seal below the DMWD.
- For building skirt systems, the maximum leakage rate is 1 litre per hour per metre base length of the flood protection product.
- For temporary and demountable products, the maximum leakage rate is 40 litres per a hour per a metre of product measured along its base where it forms the seal.”

Temporary free-standing barriers cannot prevent seepage of groundwater through the subsoil below or around the sump to the foundations of the building, cellar or basement or to the ground floor level of the property, even when a pump is installed. Neither can they prevent flooding resulting from backflow through an overloaded drainage or sewage system.

Removable household flood products cannot prevent seepage of groundwater to the foundations of the property, to a cellar or basement or into the ground level floor of the property. Neither can they prevent penetration of floodwater through a party wall from an adjacent property if it is flooded.

It is always recommended that no matter what sort of flood protection product is installed, that a pump or sump forms part of the overall system.

## What is a PAS?

A Publicly Available Specification (PAS) is a commissioned standard developed using a similar process to that used for the development of a British Standard. Key stakeholders are brought together to collaboratively produce a BSI-published PAS which quickly satisfies industry and organizational needs.

## Do customers know that flood protection products permit leaks?

The maximum leakage rate and/or the actual leakage rate of a flood protection product conforming to PAS 1188 does not need to be declared, as this value would not be of significance to the customer.

The purpose of PAS 1188 and associated certification is to provide confidence that a product has achieved a minimum standard and not to specify information about the particular level of performance. As a result, this is not a requirement for marking. However, this does not prevent the manufacturer from providing such information if it so wishes.

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## Important points to note

To use these products to best effect you should consider how the fabric of your house – walls, services, floors etc – will respond to the pressure of the floodwater above ground level and seepage below ground level.

Other flood protection measures can be taken such as making walls more water-resistant and repairing sealing cracks. These can help reduce the pathways through which water can seep into your home during a flood.

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