Health Protection Agency

RADON Sumps

An active radon sump, fitted with a fan, is the most effective way to reduce indoor radon levels. Sumps work best under solid floors, and under suspended floors if the ground is covered with concrete or a membrane. Occasionally, passive sumps without a fan may reduce radon levels.

- **Active sumps**: these are the most effective and are powered by an electric fan. They will often reduce even the highest radon levels of over 1000 Bq m^{-3}.
- **Passive sumps**: these do not have a fan and are less effective. Sometimes they can reduce radon levels of up to 300 Bq m^{-3}.

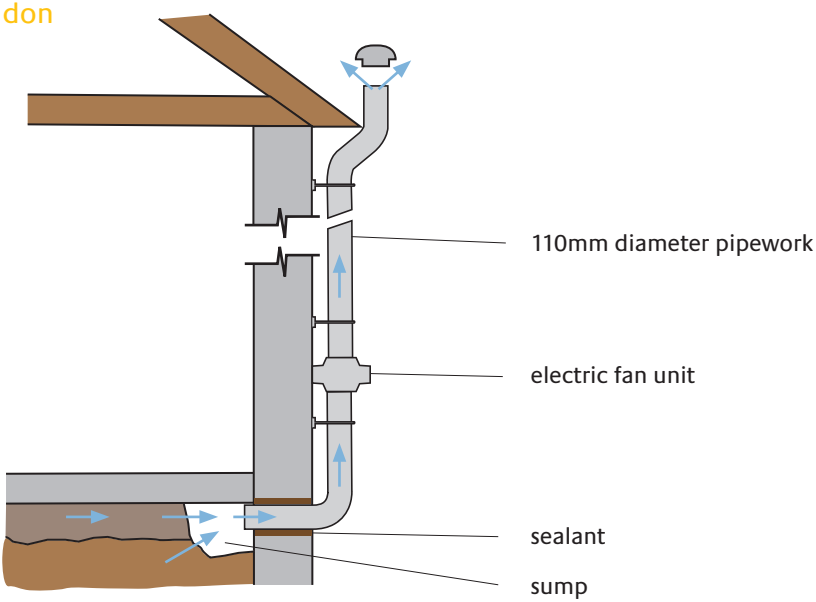
Sumps can be constructed from outside. A small hole (about 110 mm diameter) is made in an exterior wall just below ground floor level and a bucketful of material is removed to create a space just below the floor slab. A pipe goes from the space through the wall then up the side of the house to roof level. The system is powered continuously by an electric fan. The end of the exhaust pipe should not be near any doors or windows.

TIPS

Consider using a 110mm core drill to create the hole.

Typically, a single sump will be adequate for an average sized home.

Radon



Important point: Seal the pipe well in the wall.

A list of fan suppliers and further information is available on the websites of HPA **www.ukradon.org** and BRE websites **www.bre.co.uk/radon/** Fittings for the pipes are available from DIY stores and builders merchants.

The typical cost of a system is £800, but might be up to £2000; installation normally takes a day or two. The continuous running cost of a fan will normally be less than £2 per week.

Disclaimer. It should be noted that the measures described on this sheet are not guaranteed to reduce the radon level in your home, however similar measures have proven successful in many UK homes