

Improving natural underfloor ventilation

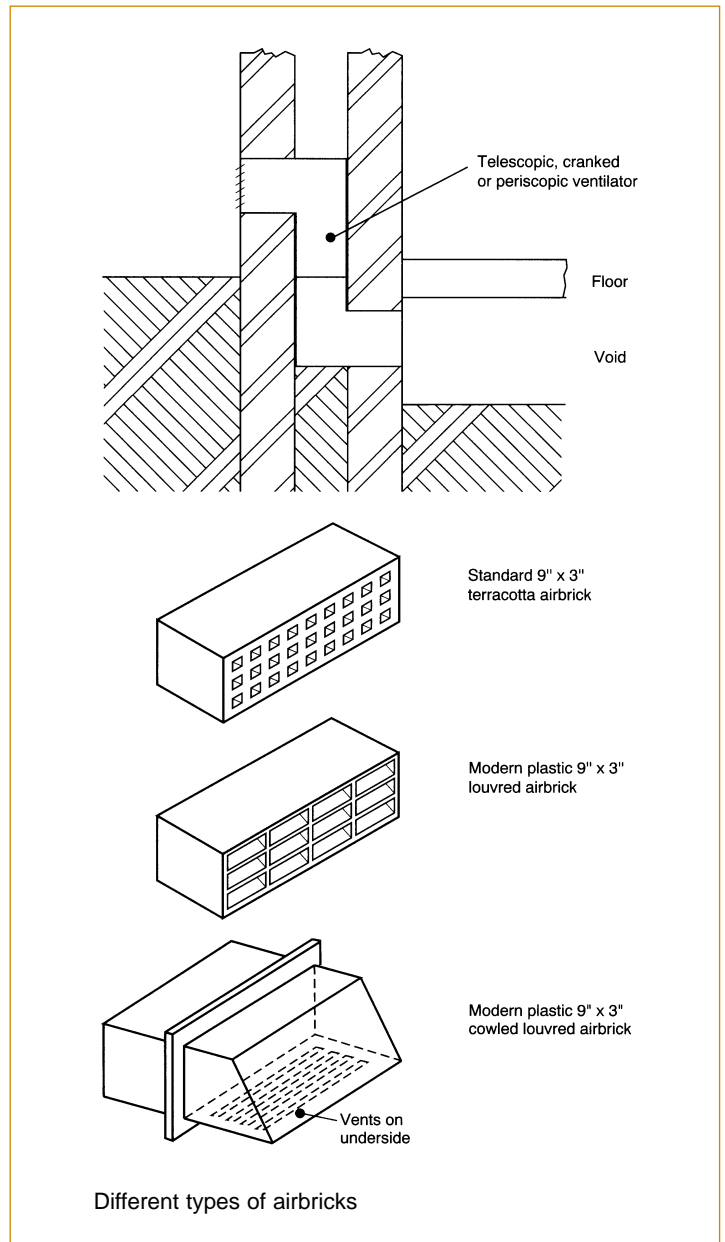
1. Simply remove obstructions

It is quite common in older homes to find that underfloor vents have become obstructed and are no longer fulfilling their purpose of providing ventilation to the underfloor space. They may have become blocked with dirt, become obstructed by foliage, raised paving or driveways, or deliberately blocked by householders to reduce draughts or some other reason. Where the radon level is only just above the recommended action level, say 200 to 300Bq/m³, it is often possible to reduce the radon level to below the action level by simply clearing obstructions from existing vents or air bricks.

2. Install additional vents

In older properties it is common to find that too few, if any, underfloor vents were provided in the first place. Where this is the case additional vents should be provided. They can be installed through the external walls just below the floor. Ideally, the openings should be provided on at least two opposite walls, and should be large enough to give an actual opening of at least 1500mm² for each metre run of wall. Typically air vents (the size of a house brick) should be spaced every 1.5-2.0m around the perimeter of the building.

Plastic louvred ventilators are preferable to clay air bricks, as they usually offer greater open area and fewer of them will be needed (as shown). Replacing terracotta air bricks with the same overall size of plastic louvred airbrick is a convenient way of increasing the ventilation under a floor without the need to break-out many new airbrick openings. Do not leave vents without some kind of vermin guard.



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3. Use periscopic vents

You should ensure that the vents are installed above ground level whilst providing ventilation beneath the floor. Where ground level is high you may need to use periscopic ventilators as shown. Unfortunately increased breaking out will be required to fit this type of vent.

General points to consider

When considering increasing the air movement beneath the floor, you should check whether services routed under the floor, particularly central heating or water pipes, could be put at risk from freezing. It may be necessary to insulate vulnerable pipework.

In cases where dwellings are sited in exposed positions, such as hillside or coastal locations increased underfloor ventilation can result in increased draughts,

lifting carpets etc. within the building. To help reduce the effect of draughts vulnerable vents can be fitted with cowls to shield them from direct wind action.

Where vents are provided through cavity walls they should be sleeved. This is of particular importance where the cavity wall has been or is going to be insulated.

Do not attempt to provide ventilation by cutting vents through the suspended timber floor itself, ventilation should always be provided beneath the floor.

It should be noted that if increasing the natural underfloor ventilation proves inadequate, a further increase in underfloor ventilation could be achieved with the installation of an electric fan

later. Plastic louvred airbricks and telescopic air vents are widely available from Builders merchants and DIY stores.

Who can carry out this work ?

The works described here are all minor building works which can be carried out by any small builder or competent householder as DIY works. Details of builders can be found in local business telephone directories. In addition the Radon Council maintains a list of contractors, suppliers and consultants offering advice and services involving remedial works for radon gas. Details can be obtained from:

**The Radon Council Limited,
PO Box 39, Shepperton,
Middlesex TW17 8AD**

Tel: 01932 221212

Fax: 01932 229779

Further information

More detailed guidance is available in BRE Report BR270 *Protecting dwellings with suspended timber floors: a BRE guide to radon remedial measures in existing dwellings* obtainable from BRE Bookshop, BRE Garston, Watford, WD25 9XX, telephone 01923 664262, e-mail bookshop@bre.co.uk, or visit www.BREbookshop.com

- for further practical advice about work to reduce radon levels
- for a list of companies known to supply suitable fans

Contact BRE Radon Hotline 01923 664707 www.bre.co.uk/radon

Disclaimer

It should be noted that BRE cannot guarantee that the measures described on this sheet will reduce the radon level in your home, however similar measures have regularly proven successful elsewhere in the UK.

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Other useful contacts

Defra 020 7082 8498
www.defra.gov.uk/environment/radioactivity/radon

NRPB 0800 614529 www.nrpb.org/radon

The Radon Council 01932 221212 www.radonhotline.org

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