

Comparison of radon remediation methods

The principles of radon remediation can be achieved using a range of radon remediation methods.

Table 1 gives a guide to the effectiveness of different remediation methods, based on UK Radon Ltd's experience.

Table 2 provides a summary of various remediation measures and some of the parameters to consider when deciding which system is best for your house.

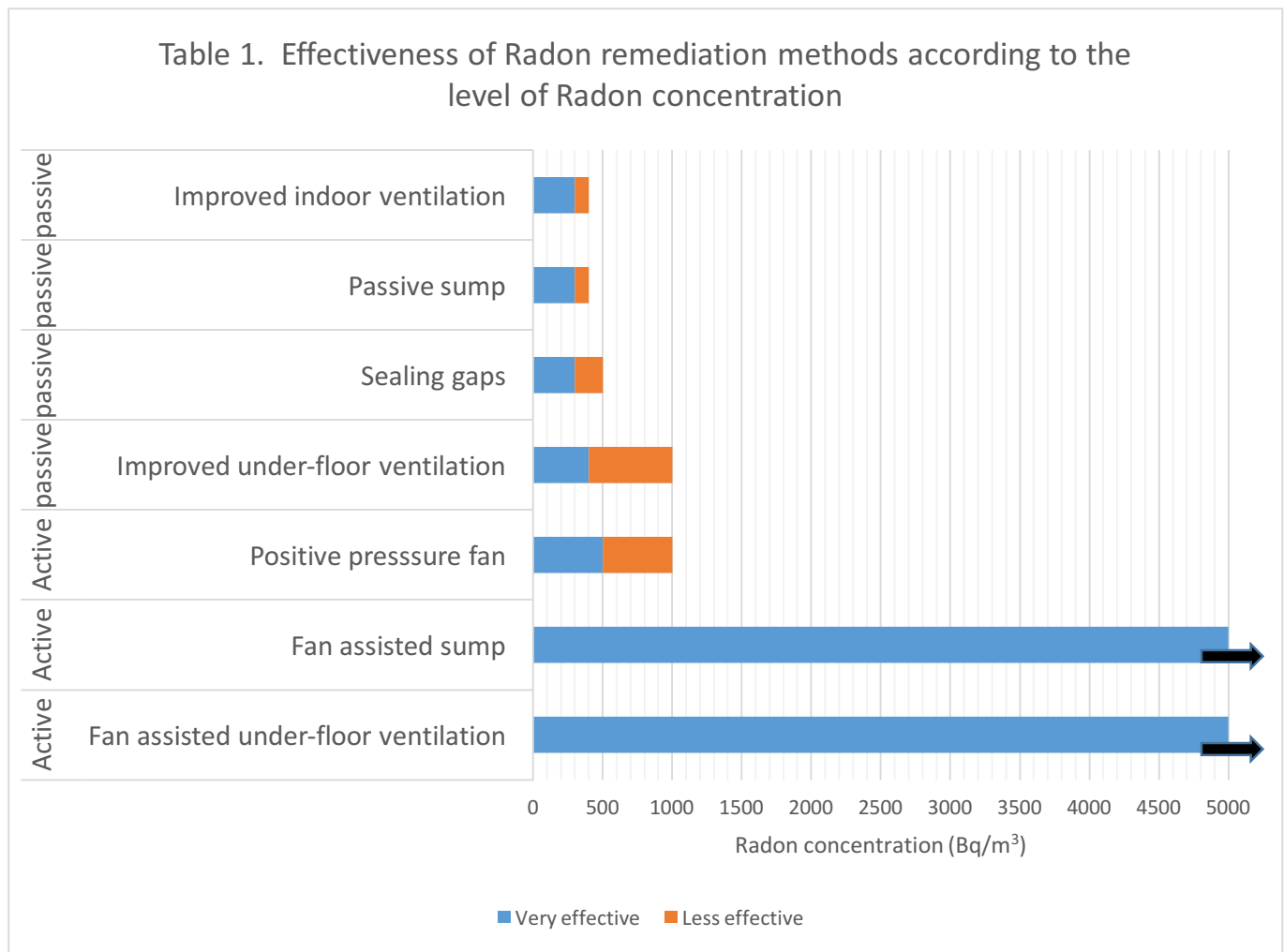


Table 2

Method	Floor Types	Effectiveness	Cost	Cost to Run (at 14p per kWh)	Maintenance and Life expectancy	Advantages/disadvantages Comments
Fan assisted sump - Low level outlet	Solid, or Suspended with concrete sub-floor	High and low level outlet sumps are the most effective method, and work for the highest levels of radon.	From £695 +£100 for stone walls	50W fan costs about £60pa 70w fan cost about £85pa	Fans have 2 year guarantee but usually last much longer. A replacement fan costs about £120	Sometimes difficult to find suitable spot e.g. enclosed yards
Fan assisted sump - High level outlet			From £865 +£50 per storey			More costly because more materials used + greater visual impact
Passive sump (no fan)	Solid, or Suspended with concrete sub-floor	Limited effectiveness up to 300bq	From £495	None	N/A	Can add a fan later if not effective (Cost from £395)
Positive Pressure fan	All types	Effective to 500bq Limited effectiveness up to 1000bq	From £645	Fan from 5W to 47w. Costs about £80pa as 500W heater about £1.70 per day.	5 year guarantee but usually lasts longer. Replace filter after 5 years	Very quiet Helps with damp and condensation Can cause draughts House needs to be airtight for maximum effect.
Underfloor ventilation - Axial fan in wall	Suspended	All the fan-assisted underfloor ventilation systems can be very effective up to the highest levels of radon.	From £645	18w fan costs about £22 pa	Fans have a 2 year guarantee but usually last much longer.	Method used depends on the nature of the property and the level of radon. Fans under the floor can be noisy (a silencer or speed controller can be fitted if necessary).
Underfloor ventilation - Fan under floor (small or large fan)	Suspended		From £645	18W fan = £20 pa 50W fan = £55 pa		
Underfloor ventilation – Boxed external fan (large)	Suspended		From £645	50W fan costs about £55 pa		
Underfloor ventilation – Boxed external fan (small)	Suspended		From £645	18W fan costs about £20 pa		
Natural underfloor Ventilation (airbricks)	Suspended	Effective to 300bq Limited effectiveness up to 800bq	From £25 per airbrick	N/A	Need to check if blocked or obstructed.	Should be on opposite walls, 1 – 2 metres apart.
Sealing Floor gaps	Concrete floors	Possibly effective to 400bq. Less up to 500bq	DIY recommended	N/A		All gaps need to be sealed to be effective.
Sealing Floor – DPM	New concrete		£200/m2 depending on size	N/A		Very labour intensive and much disruption when fitting
Natural indoor ventilation: trickle vents, Core vents, capped chimneys, sealed loft hatches,	All types	Effective to 300bg Limited effectiveness up to 500bq	Varies			General principle is to avoid a chimney effect by providing vents & opening windows downstairs, but keeping upstairs airtight.