

BY  
Rpmatters

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UNITED KINGDOM

REPORT RECEIVER(S)  
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## RADON MONITORING REPORT

### Description of the measurement

The measurement was performed with a closed alpha-track detector following the guidelines given by PHE (PHE-CRCE-040).

The detector(s) arrived to Radonova Laboratories **2024-05-14**.

They were measured **2024-05-23**.

### Result

ESTIMATED ANNUAL AVERAGE

# 32 Bq/m<sup>3</sup>

32 BECQUEREL PER CUBIC METER OF AIR

The annual average in dwellings is calculated as an occupancy-weighted and seasonally corrected average of the measured radon concentrations.

Please, turn over for more information.

### Property data and address

Test data have been given by **Joshua Hay**, who also certifies that the instructions were followed.

#### MEASURE SITE ADDRESS

25 Redington Gardens  
London NW3 7RX

BUILDING ID

#### TYPE OF BUILDING:

Semi-detached

#### WINDOW OPENED DURING

NIGHT:

#### FLOOR TYPE (LOWEST FLOOR):

#### BUILDING TIME:

#### REMEDIAL ACTIONS:

### Test results

DETECTOR #	MEASUREMENT PERIOD	DESCRIPTION	ROOM	FLOOR	MEASURED CONC.	SEASONALLY CORR. CONC.
103 290 235 [Radtrak <sup>3</sup> ®]	2023-12-21 – 2024-03-22		Living area	Basement	34 ± 14 Bq/m <sup>3</sup>	25 Bq/m <sup>3</sup>
100 130 319 [Radtrak <sup>3</sup> ®]	2023-12-21 – 2024-03-22		Bedroom	First floor	51 ± 10 Bq/m <sup>3</sup>	38 Bq/m <sup>3</sup>

### Comment to the results

#### Susanne Niklasson (Electronically signed)

Signature Radonova Laboratories Laboratory Measurement Specialist

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## Method of measurement: Closed alpha-track detector (Radtrak<sup>2</sup>®/Radtrak<sup>3</sup>®)

The measurement is performed following the rules given in the validation scheme, PHE-CRCE-040, from the Centre for Radiation, Chemical and Environmental Hazards of Public Health England (PHE). The detector container is manufactured from electrically conducting plastic. Through a small slit (filter), radon gas enters the detector. The track-detecting material (film) inside the detector is hit by alpha particles generated by the radon entering the container and the decay products formed from it. On the film, the alpha particles make small tracks which are enlarged with chemical etching and later counted in a microscope in order to determine the radon exposure. Radonova Laboratories is accredited (no. 1489) by SWEDAC (Swedish Board for Accreditation and Conformity Assessment) to do measurements of the radon-gas concentrations using the measurement method closed alpha-track detector. Our Accreditation by SWEDAC is accepted in 18 European countries by the EAL (European Cooperation for Accreditation of Laboratories). The analysis equipment is checked daily and the detectors are regularly calibrated.

## Measured radon concentration

For each detector, the location and the measured value of the radon concentration are given. For each value an uncertainty is given which reflects the uncertainty of the measurement. The uncertainty is given at 95 % confidence level. (E.g., a value of  $100 \pm 20$  Bq/m<sup>3</sup> means that the radon concentration most probably is between 80-120 Bq/m<sup>3</sup> with 100 Bq/m<sup>3</sup> as the most probable value.) The lowest detection limit for a measurement period of 3 months is 10 Bq/m<sup>3</sup>. The presented results apply only to the samples tested.

## Annual average concentration

The annual average of the radon concentration in dwellings is calculated as an occupancy-weighted and seasonally corrected average of the measured radon concentrations. Occupancy factors of 58% for the bedroom and 42% for the living area are used. If there is only a result from the living area, then this result is multiplied by 0.83 to get the dwelling average. Seasonal correction factors are used to account for the generally higher radon levels during the winter compared to the summer.

## Action Level

The Action Level is 200 Bq/m<sup>3</sup> expressed as the annual average concentration. Public Health England recommends that radon levels should be reduced in homes where the average is more than 200 becquerels per metre cubed (200 Bq/m<sup>3</sup>). This recommendation has been endorsed by the Government. The Target Level of 100 Bq/m<sup>3</sup> is the ideal outcome for remediation works in existing buildings and protective measures in new buildings. If the result of a radon assessment is between the Target and Action Levels, action to reduce the level should be seriously considered, especially if there is a smoker or ex-smoker in the home. The average radon concentration in UK homes is 10 Bq/m<sup>3</sup>.

## Advices on the basis of the estimated average radon concentration

Estimated annual average radon level	Advice
Less than 100 Bq/m <sup>3</sup>	Remedial measures not required
100-200 Bq/m <sup>3</sup>	Consider installing remedial measures
200-1500 Bq/m <sup>3</sup>	Install remedial measures
more than 1500 Bq/m <sup>3</sup>	Install remedial measures; call Building Research Establishment for specific advice* (01923 664 718).

\* Except in Northern Ireland where BRE do not operate

## Codes on non-reportable detectors

DNR	Not Reported – Detector Not Returned
VTW	Not Reported – Visibly Tampered With
FBD	Not Reported – Film Broken or Damaged
LIL	Not Reported – Lost in Lab
DTO	Not Reported – Detector Too Old

## Measurement method versions used when the report was created

ISO 11665-4:2021, Measurement of radioactivity in the environment — Air: radon-222

PHE-CRCE-040, 2018, Validation Scheme for Organisations Making Measurements of Radon in UK Buildings

## Signature on the report

With the signature on the report, the person responsible for the analysis at Radonova Laboratories certifies that the measurement procedures follow the standard PHE-CRCE-040, and that the demands from SWEDAC are fulfilled. When performing an electronic signature, the person responsible for establishing the report must state a personal password each time the signature is performed. Measurement information displayed in italics on report has been provided by the customer.

## Further information

You can get an information about radon from the UK reference site on radon from Public Health England, [www.ukradon.org](http://www.ukradon.org).

You can also get practical and effective advice about construction work to reduce radon levels from BRE [www.bre.co.uk/radon](http://www.bre.co.uk/radon).



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