

Radon Mitigation

The purpose of this bulletin is to inform our customers about the British Columbia Building Code 2024 (“BCBC 2024”) provisions to address health concerns by requiring the implementation of air barrier and subfloor depressurization system to reduce radon concentration to a level below the guideline specified by Health Canada.

“This information is provided for convenience only and is not in substitution of applicable City Bylaws or Provincial or Federal Codes or laws. You must satisfy yourself that any existing or proposed construction or other works complies with such Bylaws, Codes or other laws.”

What is radon gas?

Radon is an odourless, invisible and tasteless radioactive gas that occurs naturally from the breakdown of uranium in the soil and rocks. This “soil gas” is present across British Columbia but varies in concentration levels depending on the area. Radon is released from the ground and into the atmosphere. The gas can enter a home through any openings along the building structure that is in contact with the ground (i.e., basements and crawl spaces). A high concentration of Radon inside a home can increase the risks of lung cancer.

Implementation (Applicable to building permits applied on or after March 8, 2024)

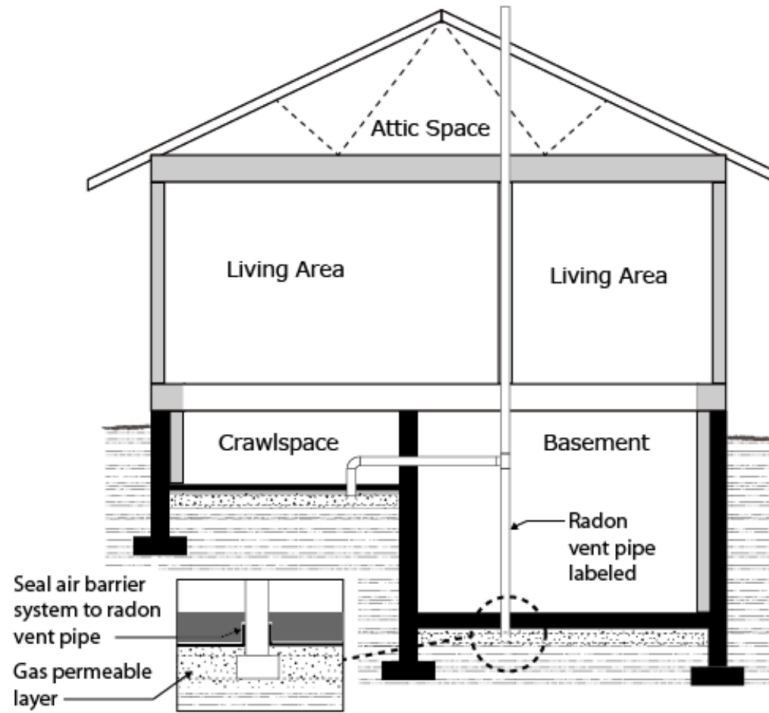
The latest version of British Columbia Building Code (“BCBC”) addresses this health concern by requiring the implementation of air barrier and subfloor depressurization system to reduce the radon concentration to a level below the guideline specified by Health Canada. This applies to all new Part 9 buildings with a conditioned space that is in contact with the ground. Owners and builders are responsible to comply with the latest Code and provide the details at the time of permit application and to be installed for the under-slab and subsequent inspections.

Building Permit Requirements

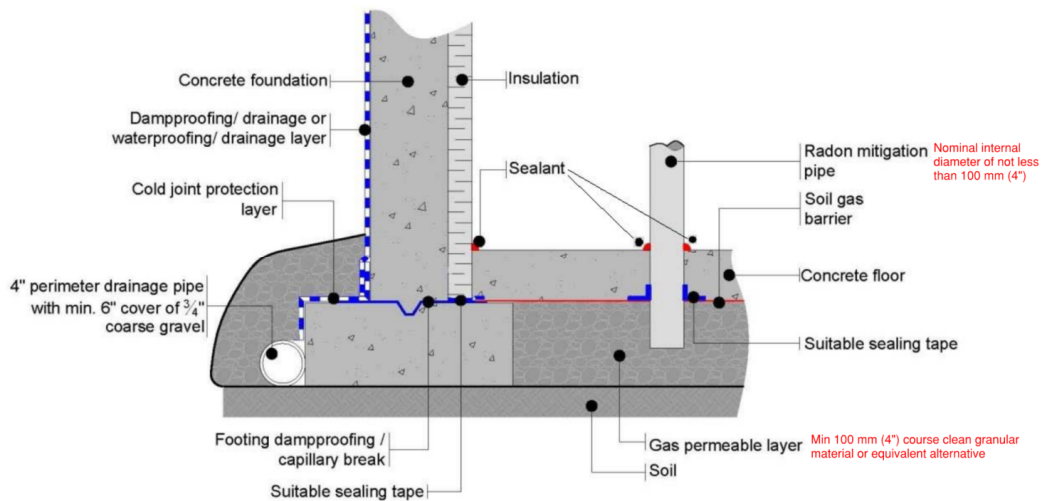
As a part of the building permit application, the following, but not limited to, are to be provided to demonstrate compliance with Subsection 9.13.4. on Soil Gas Control:

- Location of the sub-floor depressurization system rough-ins (i.e., radon vent pipe location)
- Details (i.e., slab on grade, basement foundation, etc.) indicating the gas permeable layer, air barrier joints, edges and penetrations

Sample:



Excerpt from BC Building and Safety Standard Branch Information Bulletin (No. B14-07)



Excerpt from CAN/CGSB-149.11-2019 – Figure 7.1.4.5.7.

Guidelines for Termination Clearances (Roof Top Discharge):

Location	Minimum Dimension (m)
Vertical clearance above the roof at the point of penetration	0.3
Vertical clearance above windows or doors	0.6
Vertical clearance above mechanical air supply inlet (air intake)	0.9
Horizontal clearance from windows, doors or mechanical air supply inlet	3
Clearance horizontally from a vertical wall that extends above the roof penetrated	3

CAN/CGSB 149.11-2019 - Table 7.2.4.6. on Minimum passive radon stack termination clearances for roof top discharge

Inspections Requirements

As a part of required inspection, the following items, but not limited to, will be reviewed on site:

- Gas permeable layer (i.e., Min. 100 mm course clean granular material or equivalent alternative)
- Air barrier to be properly installed
- Location of the radon vent pipe and labelled according to Code provisions

References:

- [British Columbia Building Code 2024](#)
- [Building and Safety Standards - No. B24-03 Radon Rough-in Requirements](#)
- [CAN/CGSB-149.11-2019 Radon Control Options for New Construction in Low-Rise Residential Buildings](#)

If you have any questions, please contact the Building Division at 604-294-7130.