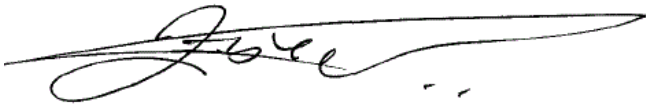




Hamilton

INFORMATION REPORT

TO:	Chair and Members Planning Committee
COMMITTEE DATE:	November 17, 2020
SUBJECT/REPORT NO:	Radon Gas Mitigation Requirements (PED20200) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Jorge M. Caetano (905) 546-2424 Ext. 3931
SUBMITTED BY:	Ed VanderWindt Director, Building and Chief Building Official Planning and Economic Development Department
SIGNATURE:	

COUNCIL DIRECTION

Not applicable.

INFORMATION

Hamilton Public Health Services recently conducted a study of radon gas levels in residential homes in the City of Hamilton. Preliminary data from this study found that 14.4% of the homes tested exceeded Health Canada's recommended radon level guideline of 200 becquerels per cubic metre (Bq/m³).

Based on these results the Building Division will be requiring radon gas mitigation construction requirements in accordance with the Ontario Building Code for all new, and additions to, low-rise residential buildings effective November 17, 2020. This Information Report is intended to provide background information on why the Building Division is implementing these radon gas mitigation requirements.

Radon

Radon is a colourless, odourless and tasteless gas that is formed naturally by the radioactive breakdown of uranium contained in soil and rock. Normally radon escapes from the ground into the air where it mixes with fresh air resulting in concentrations too

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low to be a health concern. However, when radon enters an enclosed space through cracks or openings in floors in contact with the ground, or through foundations, it can accumulate to higher concentrations.

According to Health Canada, long-term exposure to radon is linked to approximately 16% of lung cancer deaths in Canada and is the second leading cause of lung cancer after smoking. Canada's radon guideline is currently 200 Bq/m³.

The only way to determine if radon levels are within the guideline of 200 Bq/m³ is to carry out a test. However, this test can only be carried out after construction is completed and the dwelling is occupied. Health Canada recommends that radon testing should be conducted for a minimum of 91 days during the heating season (October to April) to ensure an accurate reading of radon levels.

Hamilton Public Health Services Study

The Hamilton Public Health Services conducted a study last year within the City of Hamilton. As part of this study, free radon test kits were provided to volunteer residential home owners to collect data on radon levels within the City of Hamilton.

The study found that 14.4% of the tested homes within the City of Hamilton were found to exceed Health Canada's radon level guideline of 200 Bq/m³. This was well above the 5% found by Health Canada for the City of Hamilton in a previous smaller sample study carried out between 2009 and 2011.

Ontario Building Code

Where radon gas is known to be a problem, the Ontario Building Code requires construction to comply with the requirements for soil gas control contained in the Ministry of Municipal Affairs and Housing's Supplementary Standard SB-9 ("Requirements for Soil Gas Control") so that the radon concentration inside a building does not exceed 200 Bq/m³.

Accordingly, based on the findings from Hamilton Public Health Services, effective November 17, 2020, the Building Division will require all building permit applications for all new construction, and additions to, low-rise residential building in the City of Hamilton to incorporate radon gas mitigation construction requirements in compliance with the Ontario Building Code. These requirements are detailed in the attached Appendix "A".

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" – Radon Gas Mitigation Requirements