OTTAWA INSULATION CONTRACTORS

Air Sealing & Vapour Barriers

The continuous air barrier, the warm-side vapour barrier, sealing gaps and hatches, and the ventilation question

4 Expert Answers from R-Value IQ

ottawainsulationcontractors.ca/construction-brain

Table of Contents

1. Can air sealing an Ottawa house cause ventilation problems?
2. Which side of the wall does the vapour barrier go on in Ottawa?
3. What permeance must a vapour barrier have under Ontario's Code?
4. Which gaps should an air sealing quote in Kanata list?

Q1

Can air sealing an Ottawa house cause ventilation problems?

It can, and the rebate program that pays for air sealing says so in its own rules.

The Home Renovation Savings program puts it plainly in its own terms: performing air sealing may result in inadequate ventilation, which may be detrimental to the house and its occupants. That is the program's caution, not a prediction about any particular house, and the program says to ask your energy advisor and a qualified ventilation contractor. If you plan to claim the program's air sealing rebate, the follow-up assessment must be booked by November 30, 2026; funding may be fully allocated before then (checked October 2026).

Ontario's Building Code addresses the air barrier as a continuous barrier to air leakage, with sealed penetrations and lapped or taped joints in flexible sheet materials. The Code also requires access hatches and sump pit covers in an air-barrier assembly to be weatherstripped. Those are construction requirements; they do not tell you whether your existing ventilation equipment will handle the house after sealing.

What to ask before the work begins:

- How will the house be ventilated once it is tighter? Ventilation equipment, ducts and furnaces are HVAC work (ottawahvacpro.ca), so ask a ventilation contractor.
- Will the contractor test the house's air leakage rate before and after, and what is the target?
- What areas of the house are being sealed, and in what order?

Put the list of what will be sealed, and how the result will be measured, in the written quote before the work starts.

Q2

Which side of the wall does the vapour barrier go on in Ottawa?

In Ottawa, the vapour barrier goes on the warm side of the insulation assembly. Ontario's Building Code, section 9.25.4, says the vapour barrier is placed on the warm side of walls, ceilings and floors that separate heated space from unheated space, outside air or the ground.

For a wall between the heated inside and the outdoors, the warm side is the inside, so the vapour barrier sits between the insulation and the interior finish. The same rule applies to ceilings below an unheated attic and to floors above an unheated crawl space.

Where insulation itself serves as the vapour barrier, the Code says it must be thick enough to meet the vapour barrier's permeance limit (9.25.4.2).

A few things change the answer for a specific wall:

- Where insulation is split between the inside and the outside of the framing, the warm-side rule still applies, but the position of the barrier within the assembly depends on how the layers are arranged.
- Where spray-applied polyurethane foam is used, the Code says it must be installed in accordance with CAN/ULC-S705.2, and the foam's permeance at a given thickness determines whether it meets the vapour barrier rule on its own.
- In a basement, the wall assembly is different from an above-grade wall, and the warm-side rule applies to the interior face of the foundation wall assembly.

The Code's air barrier rules are separate. Section 9.25.3 requires a continuous air barrier throughout the assembly, including the basement, with sealed penetrations and sealed or lapped joints. The air barrier and the vapour barrier are not the same thing and are not always in the same place.
For an existing wall where you are adding insulation without opening the framing, the Code's Part 11 renovation rule says the performance of the assembly afterward must be at least equal to what it was before.

Ask the contractor to show, on the quote, where the vapour barrier sits in the wall they are proposing and what product it is.

Q3

What permeance must a vapour barrier have under Ontario's Code?

Ontario's Building Code sets the vapour barrier permeance limit in clause 9.25.4: the barrier must have a permeance no higher than 60 ng/(Pa·s·m²), and it must be placed on the warm side of the insulated assembly.

That rule applies to insulated walls, ceilings and floors that separate heated space from unheated space, outside air or the ground. The vapour barrier can be a separate sheet product, or the insulation itself can serve as the vapour barrier, provided the insulation is thick enough that its permeance meets the 60 ng/(Pa·s·m²) limit.

A few things follow from that rule that are worth confirming with your contractor. First, a separate set of rules covers the air barrier, which is continuous: clause 9.25.3 requires that penetrations be sealed, and that joints in flexible sheet barriers be sealed with tape or sealant, or lapped at least 100 mm and clamped. Access hatches and sump pit covers in an air-barrier assembly must be weatherstripped. Second, the warm-side placement rule means the barrier goes between the insulation and the interior living space, not on the cold side of the assembly. Third, where

insulation is used as the vapour barrier, ask the contractor to confirm in writing which product they are specifying and how they are calculating that it meets the permeance limit.

A few questions worth putting to your contractor before work begins:

- What product are they using as the vapour barrier, and what is its rated permeance?
- If the insulation itself is serving as the vapour barrier, what thickness are they specifying, and how does that meet the 60 ng/(Pa·s·m²) limit?
- How will penetrations (electrical boxes, pipes, any structural members passing through) be sealed, and with what materials?
- Will the vapour barrier be covered by an interior finish, and if so, what?

For work in an existing home, Part 11 of the Code applies: a renovation cannot leave the house's performance worse than before (11.3.1.1). Ask your contractor what documentation they will provide.
Make sure the written contract spells out the vapour barrier product by name, its permeance rating, where it goes in the assembly, how penetrations will be sealed, and the completion date, so there is no ambiguity once the walls are closed.

Q4

Which gaps should an air sealing quote in Kanata list?

A fair air sealing quote should name every location being sealed, the material going into each one, and the area or linear metres covered. If it just says "air sealing" with a lump sum, ask for the itemised list before you agree to anything.

The Ontario Building Code (9.25.3) describes the air barrier as a continuous barrier to air leakage, with continuity extending throughout the basement, and requires that penetrations be sealed, that joints in flexible sheet air barriers be sealed with tape or sealant or lapped at least 100 mm and clamped, and that access hatches and sump pit covers in an air-barrier assembly be weatherstripped, and that gaps at chimneys and gas vents be sealed with noncombustible material. A quote that reflects this work should list locations in those categories rather than a single line item.

Locations the quote should name specifically:

- Penetrations through the ceiling plane: plumbing stacks, electrical boxes, pot-light housings, bathroom exhaust fan boxes, and any wiring or duct chases into the attic
- The attic hatch or pull-down stair frame, and whether weatherstripping is included
- The rim joist (the framing at the top of the foundation wall), noting the material, whether it is foam board, spray foam or caulk, and the linear run
- Gaps at chimneys and gas vents, and the noncombustible material being used there
- Joints or laps in any sheet membrane, with the tape or sealant product named
- The sump pit cover if one is present, and whether it will be weatherstripped

The quote should also say whether the work is a standalone job or part of an insulation job. If you plan to claim the Home Renovation Savings air sealing rebate, a registered energy advisor must assess the home before any work begins, and the follow-up assessment must be booked by November 30, 2026; funding may be fully allocated before then (checked October 2026).
The program's own rules warn that performing air sealing may result in inadequate ventilation, which may be detrimental to the house and its occupants, and say to ask your energy advisor and a qualified ventilation contractor.

The request form on this page can send your job details to contractors listed in the Ottawa Construction Network directory.

Before you commit, ask the contractor to walk you through how they will confirm the air barrier is continuous from the basement through to the attic plane, and what they do when they find a gap they did not price for.

Disclaimer: This guide is provided for informational purposes only by Ottawa Insulation Contractors. It does not constitute professional advice. Always consult qualified contractors and your local building authority (the City of Ottawa) before starting any insulation project. Insulation on its own is not named on the City's permit lists, but work that comes with it can need a permit, so ask the City first. Information is current as of November 15, 2026 and may change. Visit **ottawainsulationcontractors.ca** for the latest answers.