OTTAWA STONEWORK

Efflorescence & Moisture

White salts, damp brick and sealers: what National Research Council building digests explain about water, salts and frost in masonry

4 Expert Answers from Masonry IQ

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Table of Contents

1. Could a water repellent coating hurt my Ottawa brick?
2. Should I seal the brick on my Ottawa house?
3. Will efflorescence on my new Barrhaven brick fade by itself?
4. Cleaning century brick on an Ottawa house, what's safe?

Q1

Could a water repellent coating hurt my Ottawa brick?

A water-repellent coating can cause damage to brick, and a National Research Council building digest (CBD-30) explains the mechanism: when a vapour-permeable but water-repellent membrane is applied to the outer face, salts are deposited behind the surface layer, and the force of crystallization can cause the skin to spall. That spalling can look very similar to frost damage, which makes it hard to tell after the fact what caused it.

A mason looking at your wall can assess its condition before anything is applied.

A few things worth asking before applying anything:

- What is the coating's vapour permeability rating, and how does that interact with how your brick was made and how it currently performs?
- Is there any existing efflorescence, spalling or failed mortar that should be addressed first?
- What does the product manufacturer say about compatibility with your brick type?
- How will the coating affect any future repointing or brick replacement?

The short answer is: ask the mason before applying anything. No coating decision should be made without someone examining the wall in person, because the wrong product on the wrong brick can create the exact problem you are trying to prevent.
If the house is designated under the Ontario Heritage Act or sits within a heritage conservation district, a coating may affect the property's heritage attributes. Check your district's heritage conservation district plan or your designation by-law first, and if you are unsure whether the coating requires approval, ask the City's heritage staff before any product goes on the wall.

Q2

Should I seal the brick on my Ottawa house?

Sealing brick is a decision worth pausing on, because a sealer can cause the very damage it seems to prevent. A National Research Council building digest (CBD-30) explains that with a vapour-permeable but water-repellent membrane on the outer face, salts are deposited behind the surface layer and the resulting force of crystallization can cause the skin to spall.

What that means in practice is that the condition of your brick and mortar matters before anything goes on the wall. So the question is not simply whether to seal, but what is actually happening with moisture in your wall.

A few things worth knowing before you decide:

- CBD-30 also notes that salt spalling is very similar in appearance to frost damage, and in many cases it is difficult to determine which mechanism caused it. A mason looking at the wall can say more.
- CBD-30 notes the risk specifically with vapour-permeable water-repellent coatings; the behaviour of other sealer types is not covered in the same digest.
- If the property is designated or in a heritage conservation district, the Centretown and Minto Park district plan says painting brick or stone is not appropriate, and the Wilbrod/Laurier plan says existing unpainted brick should not be painted. A sealer is not paint, but any treatment that affects heritage attributes can require approval; check your district's plan or contact the City's heritage staff.

Ask the mason before applying anything to the wall. A mason who has looked at your brick can tell you whether the joints are sound, what the moisture source is, and whether a coating makes sense for your situation. That conversation is the right starting point.

Q3

Will efflorescence on my new Barrhaven brick fade by itself?

We found no source that says whether efflorescence on new brick fades by itself, so a mason looking at the wall is the one to say. A National Research Council building digest (CBD-123, 1970) notes that efflorescence "is usually at a peak during the late winter months."

Ask the mason where the water carrying the salts is coming from.

On sealers, CBD-30 notes that a vapour-permeable water-repellent coating on the outer face can cause salts to deposit behind the surface layer, and "the resulting force of crystallization can cause the skin to spall." Ask a mason before applying anything to the wall.

One thing worth keeping in mind: CBD-30 also notes that salt spalling "is very similar in appearance to that produced by frost action, and in many cases it is difficult to determine which mechanism has caused it." If you are seeing any surface flaking alongside the white staining, ask a mason to look at both.

If you would like quotes from local masons, the request form on this page sends your details to Ottawa-area masons listed in the Ottawa Construction Network directory.

Q4

Cleaning century brick on an Ottawa house, what's safe?

There are too few published sources on brick cleaning methods to give a general answer, so a mason looking at your specific wall is the one to say what is safe for it.

A National Research Council building digest (CBD-30) notes that applying a vapour-permeable but water-repellent membrane to the outer face of brick can cause salts to deposit behind the surface layer, and the resulting crystallization pressure can spall the skin off. CBD-30 also points out that salt spalling and frost spalling look nearly identical, so even after cleaning you may not be able to tell what caused any new damage without a mason's assessment.

There are a few things worth knowing before anyone starts work. First, the Centretown and Minto Park Heritage Conservation District Plan states plainly that sandblasting is not an appropriate method on historic masonry. If your house sits in any heritage conservation district or is individually designated, check whether the cleaning method needs heritage approval before work begins. Second, ask how the site and surrounding surfaces will be protected during the work.

When you speak with a mason, ask specifically what cleaning method they propose, why they consider it appropriate for the age and condition of your brick, and whether they have used it on brick of a similar age. Ask about any sealer they may suggest after cleaning: CBD-30's caution about vapour-permeable coatings applies there too, and a mason should be able to explain the reasoning before anything goes on the wall.

Before work starts, ask for a written contract that sets out the scope, the method, and the price. If you want confirmation of WSIB coverage, a clearance certificate is valid for up to 90 calendar days and is worth requesting.

Disclaimer: This guide is provided for informational purposes only by Ottawa Stonework. It does not constitute professional advice. Always consult qualified contractors and your local building authority (the City of Ottawa) before starting any fence project. Fences in Ottawa must meet the City's Fence By-law, and a free locate is required before digging any post hole. Information is current as of November 15, 2026 and may change. Visit **ottawastonework.com** for the latest answers.