

Vancouver Heritage Foundation, with the support of the City of Vancouver, offers grants to support the installation of storm windows, window repair, window restoration and, in special circumstances, window replacement. The following information includes design requirements for any window production supported by a grant. Please contact VHF to discuss suitable approaches for your windows before applying for grants or pursuing any work.

## Why Wood Windows?

Traditionally constructed, solid wood windows represent centuries of craftsmanship and service. They are often one of the most characterful elements of a home or building, and most conspicuous. In addition to their function - providing light, views, fresh air and access to the building - their arrangement and design is fundamental to a building's appearance and heritage value.<sup>1</sup>

A well-built and cared for wood window can last centuries, far outlasting current modern window assemblies (most vinyl window assemblies have a maximum life span of 20-25 years). From an environmental perspective, the embodied energy and life cycle impact of a wood window is far superior to modern vinyl or aluminum. Historic wood windows are also made of old growth hardwoods, which are denser, more durable, and more resistant to rot than woods typically used in modern windows.

For all their benefits, replacing wood windows is often seen as the first step in energy efficient upgrades. There's a perception that the incremental gain in energy efficiency makes a modern double-glazed unit the environmentally-friendly option. In reality, the environmental cost of modern window production is rarely, if ever, offset by their gain in efficiency. For example, the production of an aluminum window requires 100 times more energy than the production of a traditional wood window<sup>2</sup>, while also providing a fraction of the service life.



Martin Knowles Photo/Media for VHF

**Traditional wood windows can also be augmented with interior or exterior storm windows to improve efficiency and reduce noise and drafts. Please see our storm window guidelines for more information.**

## Maintenance

The key to functional, beautiful, long-lasting wood windows is maintenance. Regular maintenance, including painting, weather-stripping, and cleaning your windows will prevent the need for major interventions.

Any window that is 'maintenance free' should be examined critically. It's likely that once an issue appears, there's no option to repair, so the owner is left to buy a new set of windows. There is no maintenance, because there is only replacement. Once replaced, modern vinyl and aluminum windows also cannot be recycled, and will go to landfill.

When you suspect repair is needed, always seek out qualified carpenters with experience in heritage construction to evaluate the windows. **Maintenance and repair should always be considered before replacement.**

<sup>1</sup> [https://heritagebc.ca/wp-content/uploads/2017/10/Standards-and-Guidelines\\_Parks-Canada.pdf](https://heritagebc.ca/wp-content/uploads/2017/10/Standards-and-Guidelines_Parks-Canada.pdf) p.155

<sup>2</sup> <https://www2.gov.bc.ca/gov/content/industry/construction-industry/renovation-rehabilitation/heritage-sustainability-facts>

## New Window Design Criteria

Unfortunately, some wood windows have not been cared for or have simply reached the end of their service life. In the case of an original window which has degraded beyond repair<sup>3</sup> VHF can support replacement windows which meet our design and performance criteria. Please contact VHF to discuss your project and obtain our list of compliant window producers.

### Requirements for replacement wood windows:

1. Constructed from solid kiln-dried or well-seasoned Douglas fir or an equivalent durable exterior-use wood, jointed with through-mortise-and-tenon joinery for longevity;
2. Each side of the window sash is made from one piece of wood; splices are not acceptable. The use of finger-jointed wood is not acceptable;
3. Primed and undercoated prior to glazing and painted after glazing; glazing secured with putty;
4. Fitted with opening hardware that permits use for ventilation (and egress where required);
5. New wood windows match the appearance and character of the original wood window or are based on physical and documentary evidence where the original window has been removed previously;
6. Sash horns (if present on original windows) must be replicated as an integral part of the side sash. Pinned or glued-on horns are not acceptable;
7. Sashes with divided lights are constructed with True Divided Lights (TDL) and not Simulated Divided Lights (SDL).



### Additional Reading:

<https://www.vancouverheritagefoundation.org/resources/building-owners-guide/heritage-how-tos/>

[https://www.vancouverheritagefoundation.org/wp-content/uploads/2021/03/VHF\\_YourHouse\\_Woodwindows\\_3-2.pdf](https://www.vancouverheritagefoundation.org/wp-content/uploads/2021/03/VHF_YourHouse_Woodwindows_3-2.pdf)

<https://www2.gov.bc.ca/gov/content/industry/construction-industry/renovation-rehabilitation/heritage-sustainability-facts>

<https://www.nps.gov/tps/how-to-preserve/briefs/9-wooden-windows.htm#replacement>

[https://heritagebc.ca/wp-content/uploads/2017/10/Standards-and-Guidelines\\_Parks-Canada.pdf](https://heritagebc.ca/wp-content/uploads/2017/10/Standards-and-Guidelines_Parks-Canada.pdf)

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<sup>3</sup> This should be determined by a heritage professional, and is not at the discretion of the homeowner for granting purposes.