

FireHard Canada

Media Package

A voluntary wildfire hardening framework for Canadian homes and communities

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The FireHard system — including the WER rating, technical documents, and design guides — is a voluntary framework that synthesizes current international wildfire construction standards and research into Canadian-accessible guidance. It is not a building code, regulation, or mandatory standard.

What Is FireHard Canada?

FireHard Canada is a free, voluntary wildfire hardening framework that provides specification-grade construction guidance for Canadian residential buildings. It synthesizes current international wildfire construction standards and research — from Australia, the United States, and Canada — into practical, accessible guidance for homeowners, contractors, designers, and building officials.

The system includes:

The Wildfire Exposure Rating (WER) — a four-level rating system measuring vulnerability to ember attack, radiant heat, and direct flame contact.

Design Guides — specification-grade construction documents for each WER level plus a Close Neighbour Package for structure-to-structure exposure.

Construction Detail Modules — technical assembly specifications for building elements. Standard construction details are currently under development.

A Self-Assessment Tool — enabling homeowners to determine their WER level in approximately 30 minutes.

All guides, tools, and specifications are free and will remain free permanently.

The framework synthesizes existing international standards into Canadian-accessible guidance. It is not a stamped engineering deliverable. WER-1 and WER-2 are designed for homeowner and contractor implementation. WER-3 benefits from experienced trades and designer involvement. WER-4 requires site-specific assessment by a qualified professional engineer.

Why This Is Needed

The Wildfire Problem

Canada is experiencing unprecedented wildfire losses. The 2023 season burned 18.5 million hectares. Insured losses exceeded \$8.5 billion in 2024. Communities like Lytton, Kelowna, and Jasper have suffered devastating losses.

The Gap

Building codes address life safety, not building survival. Code fire requirements give occupants time to evacuate. They do not address external wildfire exposure.

Fire services cannot protect every home. During major events, departments are overwhelmed. Most homes receive no direct firefighting response.

FireSmart provides excellent landscape guidance but limited construction specification. FireHard complements FireSmart with specification-grade building details.

Close neighbour exposure is unaddressed. In most Canadian subdivisions, homes are 1.2 to 3 metres apart. A burning house at 800–1100°C for 1–4 hours is a worse exposure than a passing vegetation fire. No Canadian framework specifically addresses this.

The Cost Reality

Hardening costs real money. Housing in Canada is already expensive, and adding \$5,000 to \$40,000 is a real burden.

But Canadians are already paying for unhardened housing: rising insurance premiums, taxes funding disaster response, uninsured losses, and the growing inability to insure homes at any price. The IBC reported over \$8.5 billion in insured catastrophic losses in 2024. Insurers are responding: premiums rising, coverage restricted, policies cancelled.

Approximate costs: WER-1 (\$0–\$2K, mostly maintenance), WER-2 (\$5K–\$30K, targeted upgrades), WER-3 (\$15K–\$120K+, full NC envelope), WER-4 (\$40K–\$150K+, engineered). The cheapest investment is made during construction or planned renovation.

The question is not whether hardening is expensive. It is whether hardening is more expensive than losing your home.

How It Was Developed

Developed by volunteer professionals in the Bulkley Valley, BC:

Wildernest Systems Inc. — WER methodology, all technical content.

Bulkley Valley Engineering Services Ltd. (EGBC Permit No. 1001683) — professional engineering.

Lazzarin Svisdahl Landscape Architects — defensible space and vegetation management.

Every person involved has volunteered their professional time. No one has been paid. The team is actively seeking funding to sustain and expand this work.

Technical basis: NIST, Australian Standard AS 3959, IBHS, California Chapter 7A, CAN/ULC and ASTM standards, FireSmart Canada.

Plans for Engagement and Growth

Non-Profit and Governance

FireHard Canada is being established as a non-profit. The team's explicit intention is to hand stewardship to a broader body — whether the FireHard non-profit, an existing standards body (CSA, ULC), a government agency, or integration with FireSmart Canada.

Funding and Sustainability

Built entirely on volunteer time with no funding. Actively pursuing government grants, institutional partnerships, community donations, and insurance industry support to sustain the work.

Insurance Industry

Seeking engagement with Canadian property insurers to establish WER as a recognized measure for underwriting and develop premium reduction pathways. The WER system covers all 10 qualifying measures under California's Safer from Wildfires regulation. Canadian programs may follow as the market develops.

Local and Regional Government

Municipalities can: reference WER in development permits, use WER in community wildfire protection plans, distribute guides to residents, integrate self-assessment into building permit processes, and use the Close Neighbour Package in subdivision planning.

Provincial and Federal

Seeking integration with existing provincial wildfire programs and federal agencies (NRCan, NRC). The goal is to complement existing programs with specification-grade construction guidance.

Key Facts for Media

What it is: A free, voluntary framework synthesizing international wildfire construction standards into Canadian guidance.

What it is not: Not a building code, regulation, or mandatory standard. Not a replacement for FireSmart. Not a guarantee of survival.

Who built it: Volunteer professionals in the Bulkley Valley, BC. No one has been paid.

Why it's free: Wildfire resilience requires community-wide adoption. The guides must be free for the system to work.

Who can use it: WER-1 and WER-2: homeowners and contractors. WER-3: experienced trades with designer involvement. WER-4: requires a professional engineer.

Cost of hardening: WER-1: \$0–\$2K. WER-2: \$5K–\$30K. WER-3: \$15K–\$120K+. WER-4: \$40K–\$150K+.

Hardening ≠ sheltering: Always follow evacuation orders. Hardening lets you evacuate knowing your home has the best possible chance.

Status: v1.0 published February 2026. Seeking engagement, peer review, funding, and institutional partnerships.

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