

Exhibition Contents

- 1-** Photo series of post-fire landscapes along roads and highways surrounding Lebel-sur-Quévillon, 2024.
- 2-** Photo series of post-fire logging, clearing, and collection of burned timber for regional forestry, 2024.
- 3-** Photo series of berms of cleared trees and vegetation created during construction of the preventative firebreak surrounding Lebel-sur-Quévillon, 2024.
- 4-** Photo series of charred ground, exposed roots, and tree stumps surrounding the hydroelectric substation following active fire suppression, 2024.
- 5-** Fieldwork vegetation samples across three primary study sites, 2024.
- 6-** Video still from topography site model smoke migration study taken from afar, 2026. Video and model: dylan jozkow.
- 7-** Video still from axonometric view of topography site model smoke migration study, 2026. Video and model: dylan jozkow.
- 8-** Video still of grid model smoke study in wind tunnel chamber, 2026. Videography and model: dylan jozkow.
- 9-** Wind tunnel chamber and grid model for smoke study, 2022 + 2026. Chamber fabrication: Robert Wood. Model: dylan jozkow.
- 10-** Black spruce tree stump left exposed on hydroelectric substation site 02, 2024.
- 11-** Video compilation of three primary study sites and routes between, 2024.
- 12-** Drone video still documenting the Québec Hydroelectric Substation site 02 and surrounding landscape one year post-fire, showing the contrast between intensely burned ground and surviving forest, 2024. Drone operation: Adam Weigart, CIMS.
- 13-** Drone video compilation of three primary study sites, 2024. Drone operation: Adam Weigart, CIMS.
- 14-** Audio extracted from firebreak site 01, one year post-fire, 2024. Audio file editing: Christopher Payne.
- 15-** Drone video still documenting the Post-Burn Clearing + Logging site 03 one year post-fire, showing the contrast between burned, cleared, and surviving forest, 2024. Drone operation: Adam Weigart, CIMS.
- 16-** Drone video still documenting firebreak site 01, showing the monumental linear clearing and berms of felled vegetation in contrast to the surrounding boreal forest, 2024. Drone operation: Adam Weigart, CIMS.
- 17-** Video compilation of topography site model smoke migration studies, 2026. Models and videography: dylan jozkow.
- 18-** Tank and vapour model for smoke migration study, 2026.
- 19-** Dominant Tree Genus Maps, Multiple Scales
Maps the dominant tree genus across Canadian forests based on forest inventories collected by provincial, territorial and federal agencies. The Common Attribute Schema for Forest Resource Inventories (CASFRI) brings these inventories together, allowing forest information from different jurisdictions and time periods to be viewed together.
Inventory data: 1901 – 2026
Source: Natural Resources Canada, CASFRI
Interactive map: Government of Canada, Open Maps
Map acquisition: Ann-Catherine Lemond
- 20-** Forest Greenhouse Gas Net Flux, Multiple Scales
Represents the balance between greenhouse gases emitted by forest disturbance and carbon removed from the atmosphere through forest growth between 2001 and 2025. Purple indicates areas that are net sources of greenhouse gas emissions, while green indicates net carbon sinks. Darker colours indicate greater net emissions or removals.
Data: 2001 – 2025
Source: Harris et al. [2021]; Gibbs et al. [2025]
Interactive map: Global Nature Watch
Map acquisition: Ann-Catherine Lemond

- 21-** Tree Cover Loss + Loss Due to Fire, Multiple Scales
Identifies areas of tree cover loss between 2001 and 2025, including loss associated with harvesting, fire, disease or storm damage. Pink indicates overall tree cover loss, while brown identifies tree cover loss attributed to fire.
Data: 2001 – 2025
Source: University of Maryland (UMD) Global Land Analysis & Discovery (GLAD) lab
Interactive map: Global Nature Watch
Map acquisition: Ann-Catherine Lemond
- 22-** Importance of the Forest Industry to Regional Economies, Multiple Scales
Combines information on the forestry labour force and the location of mill facilities to provide a generalized picture of how communities and regions depend on the forest sector.
Data: 2001 – 2011
Source: Natural Resources Canada
Interactive map: Canada’s National Forest Inventory
Map acquisition: Ann-Catherine Lemond
- 23-** Forest Harvesting, Multiple Scales
Combines data from multiple forest harvesting datasets to show patterns of harvesting across the country.
Data: 1900 – 2022
Source: Provincial and Territorial governments; Canadian Forest Service, Natural Resources Canada
Interactive map: Canada’s National Forest Inventory
Map acquisition: Ann-Catherine Lemond
- 24-** Moffitt and Bernbaum, 2025. ‘Canada’s Changing Climate: Visualizing Wildfires in Lebel-sur-Quévillon,’ Journal of Landscape Architecture, Issue 1/2.
- 25-** Key resources used to understand fire dynamics, wildland-urban interface (WUI) design regulations, and empirical experiments in fire science.
- 26-** Video compilation of model fire studies exploring material combustion properties, 2024. Videography: Luis Panchi Galvan.
- 27-** Video compilation of leaf and model burns as part of Asha Tamirisa’s documentary project, *Smoke Gets in Your Eyes*, 2026. Videography: Asha Tamirisa.
- 28-** Video compilation of leaf, grass, and bark combustion studies, 2024. Videography: Luis Panchi Galvan.
- 29-** Video compilation I of ‘matchstick’ models exploring interaction between fire, wind, and topography, 2024.
- 30-** Video compilation II of ‘matchstick’ models exploring interaction between fire, wind, and topography, 2024.
- 31-** Timelapse photographs of leaf, grass, and bark combustion studies, 2024. Photography: Luis Panchi Galvan.
- 32-** Timelapse photographs of a ‘matchstick’ model with 20-degree topographic slope, 2025.
- 33-** Timelapse photographs of wood screen model studies, 2025. Collaboration with Liam Ross, University of Edinburgh.
- 34-** ‘Matchstick’ models exploring interaction between fire, wind, and topography, 2026. Models: dylan jozkow.
- 35-** Abstracted site model to study smoke migration, 2026. Model: dylan jozkow.
- Credits:** *This project has been made possible through the generous collaboration of specialists, students, recent graduates, staff, and community members. The work was supported by a Carleton University SSHRC Explore Early Career Researcher Grant and will continue into a new phase of research with a SSHRC Insight Development Grant.*
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After Fire 344

Piper Bernbaum + Lisa Moffitt

After Fire 344

Wildfires in Canada are common occurrences, but as climate change drives rising fire activity and intensity, remote wildland-urban interface (WUI) sites are increasingly under threat. This project uses a single event and site—the 2023 Québec wildfire 344, which prompted the evacuation of Lebel-sur-Quévillon twice—as a methodological pilot for visualizing dynamic wildfire behaviour and documenting the traces that megafires leave behind.

This exhibition advances two primary methods that move between general principles of fire behaviour at a distance and specific impacts on the ground. First, fieldwork was completed in LSQ one year post-fire, identifying, documenting, and sampling material from three sites of WUI significance: a firebreak, a power substation, and a logging clean-up site. Second, physical models drawing from fire science experimentation methods visualize principles of fire behaviour and smoke spread from afar.

Through close examination of a single community, the work highlights variables that drive dynamic fire spread while revealing the range of spatial and material conditions—and scales of destruction—that fall within the WUI purview. The work questions the role of architects as trans-scalar spatial, material, and representational thinkers before, during, and, in this case, after climate-fuelled natural disasters. As an evolving body of work, the exhibition also launches Bernbaum and Moffitt’s second phase of related research: the SSHRC-funded research-creation project *Burning, Thawing, Flooding, Eroding: Visualising Climate Change across Peripheral Canadian Communities*.

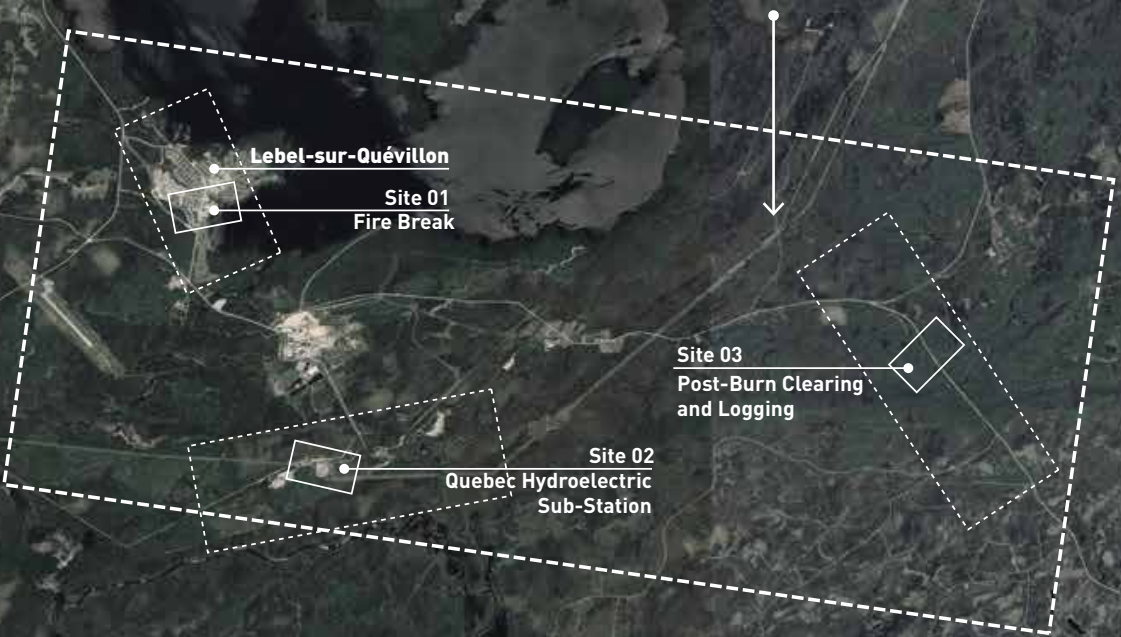
Lebel-sur-Quévillon

Fieldwork across Lebel-sur-Quévillon documented a wide range of landscapes, infrastructures and post-fire conditions. Three sites were identified as critical lenses for understanding the impacts of fire, suppression and recovery within this particular WUI context.

Site 01, Firebreak: Constructed along the western edge of Lebel-sur-Quévillon during the 2023 fires, the firebreak is a monumental linear clearing cut through the boreal forest to help protect the town. Volunteers and firefighters used bulldozers and chainsaws to clear the landscape in less than a week, leaving deep tracks and berms of felled vegetation behind. Although the fire never reached the break, the site remains as a trace of emergency intervention, now gradually filling with meadow, shrubs and new growth.

Site 02, Québec Hydroelectric Substation: Located just outside the town, the hydroelectric substation became one of the most intensively defended sites as the fire approached Lebel-sur-Quévillon. Firefighters worked to preserve the infrastructure, cutting trees even as they burned. The substation survived, but the surrounding landscape records the extraordinary intensity of the fire: charred stumps, exposed roots and areas where the boreal topsoil was almost entirely consumed. Hydro corridors extending from the site also form large clearings through the surrounding forest.

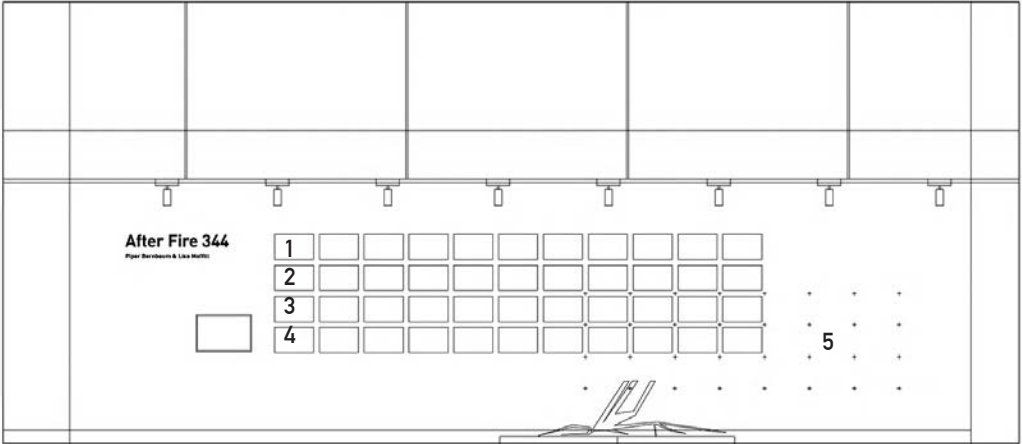
Site 03, Post-Burn Clearing and Logging: East of Lebel-sur-Quévillon, logging roads pass through vast areas burned by the 2023 fires. In places, the topsoil was consumed and forests remain as fields of charred trunks and exposed roots; elsewhere, surviving aspen and poplar, grasses and new saplings reveal uneven patterns of fire and regrowth. Post-fire salvage logging has further transformed the landscape through new access roads, clearing, sorting and transport, exposing the close relationship between the region’s forest ecology and resource industries.



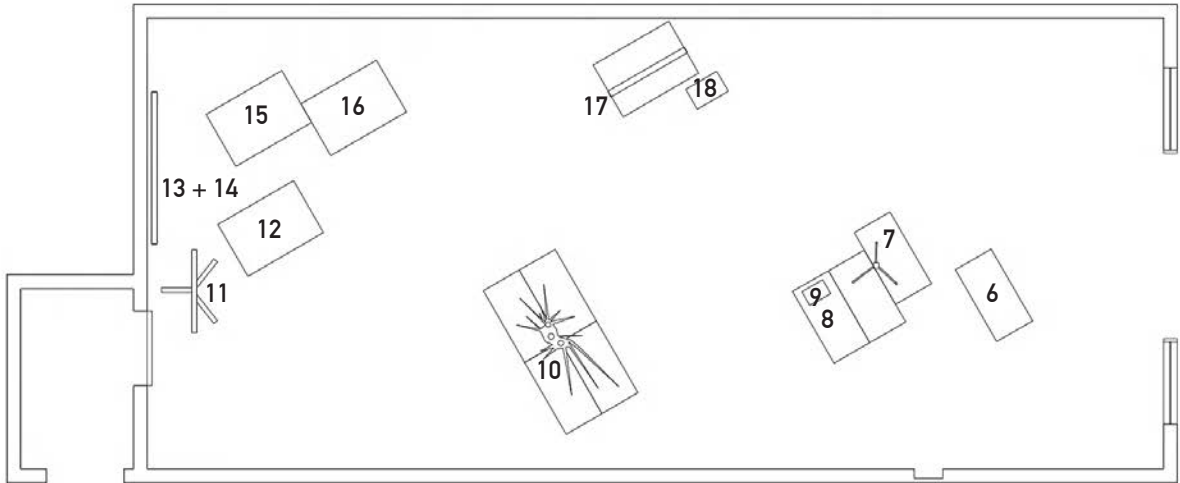
Source: Google Earth, 2026.

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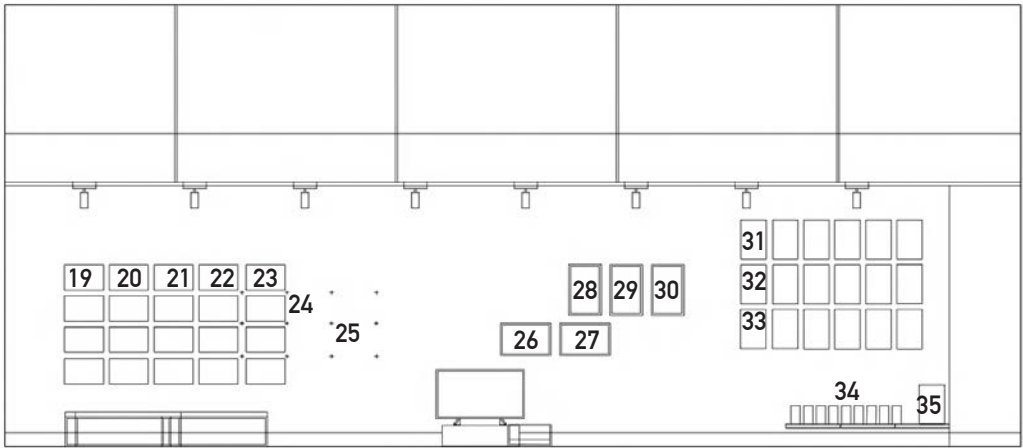
Lightroom Gallery



North Wall



Plan



South Wall