

NESTLED IN NATURE: LAKESHORE RETREAT WITH RHEINZINK GRANUM

SUSTAINABLE DESIGN



PROJECTREPORT



GRANUM BASALTE CONNECTS INSIDE AND OUTSIDE

The architecture firm Booth Hansen designed a private retreat on the forested shores of Lake Huron in Ontario. Treading lightly on the previously undeveloped lot, the owners sought to maximize the views and access to outdoors, while remaining good stewards of the land. The 7-acre setting hosts a cluster of freestanding “cabins” connected by weathertight walkways to total 4,500 square feet.

Thomas Young Builders Ltd. constructed three of the five cabins parallel to the water, following the site’s natural contours. The façade of each cabin showcases RHEINZINK-GRANUM basalte-colored, matte-finished, architectural-grade zinc. Nearly 12 tons of the metal was provided by Sheet Metal Supply Ltd. Ipro Sheet Metal fabricated and installed the zinc material as angled standing-seam wall cladding and roofing. A Decorative, deep-grey zinc cladding continues into the interior of the walkways, further connecting the indoor and outdoor environments. “Their dark color allows the cabins to blend in well with the shoreline forest, thereby intentionally diminishing the presence of the structures when viewed from the water,” said Booth Hansen’s principal, Christopher Guido, AIA. Completed in 2021, the private retreat on Lake Huron is one of the first projects in North America with RHEINZINK-GRANUM, which was introduced to Canada in 2020. For centuries, European homes and buildings have relied on zinc building materials.

TITANIUM ZINC THE ALL-ROUNDER

Founded in 1966 in Germany, RHEINZINK is one of the world’s leading producers of architectural-grade zinc. In the early 1990s, RHEINZINK-CLASSIC bright

rolled, and RHEINZINK-prePATINA blue-grey and graphite-grey zinc debuted in the U.S. and Canada. Contributing to the Lake Huron retreat’s sustainable goals, RHEINZINK-GRANUM delivers a weather-resistant, self-healing, corrosion-resistant material with a potential lifespan of 100 years. At the end of its useful life on the buildings, the metal remains 100% recyclable.

Installed properly, zinc cladding systems will resist air and water penetration. For regions with high winds and hurricane conditions, zinc systems have been tested to withstand high winds as required by regulations and local laws. In fire-prone environments, zinc also provides a non-combustible solution. Zinc’s natural metallic properties allow the material to deliver low-maintenance and long-lasting performance. No paint, varnish, or sealants are required. Runoff is minimal, non-staining, and does not adversely affect the environment as the zinc material’s patina naturally forms. “Our resilient, basalte-hued, RHEINZINK-GRANUM provides an immediate, distinctive dark-grey finish.

Over time, the dynamic qualities of the finish and the zinc alloy naturally patinate to a lighter toned grey,” said Richard Strickland, RHEINZINK America’s regional sales manager. “The ever-changing, unique coloration and character of this elemental material will continue to evolve and enhance the buildings’ design throughout the decades.”

The ever-changing, unique coloration and character of this elemental material continues to evolve over decades, adding value to the building design.

ENVIRONMENTALLY RESPONSIBLE DESIGN AND CONSTRUCTION

The retreat's environmentally responsible design and construction also employed passive house insulation strategies, optimizing thermal performance for occupants' year-round comfort and energy-efficient operations. "Windows are aligned with one another to promote cross ventilation through the cabins as well as to frame specific views of the exterior from the inside. Operable windows located near the peak of each gabled volume allow a natural chimney effect to remove heat from the sharp gables ceiling as well as to allow diffuse light to enter," described Guido. When privacy, security and shading are preferred, the structures offer a unique design solution. Guido explained, "Custom zinc-clad operable shutters are recessed into the walls a concealed track to secure the building and protect the windows when it is not in use, but recede from view and provide additional insulation to the walls when open." Strickland elaborated.

"The windows and shutters were sized perfectly, so that the seams would terminate next to the opening and all panels would be the exact same width." RHEINZINK-GR-

NUM flat lock tiles also were fabricated by and installed by Alpro Sheet Metal to precisely frame the openings. For added thermal comfort, radiant floor heating was utilized and geothermal loops were installed into the bottom of the lake to sustainably heat and cool the home, according to Guido. He also noted, "The cabins stand on a raised pillar foundation, respecting the site by maintaining the natural topography, allowing snow melt and rainwater to drain naturally into the lake."

AMIDST THE TREES

Interior of the retreat cabins include five bedrooms, four baths, a laundry room, a great room, a study/library and a garage. A central cabin holds the living and dining spaces, opening onto a waterfront deck. The glass and metal enclosed walkways on either side bridge to two sleeping cabins. The study comprises floor-to-ceiling bookshelves and a view across the water to the distant lighthouse, a structure that recalls fond childhood memories for the owner. Deeper in the woods, an independent, 1,500-square-foot, two-level building offers garage space on the lower level and a private dance studio on the second floor. "Four sides of glass allow dancing among the treetops and along with a view back to the water," adds Guido.

While our clients were intrigued by the austere, dark-grey zinc cladding for the exterior, on the inside of the home, an aesthetic that brings in color from the landscape was desired," he continued. "The earthy interior palette was pulled directly from the surrounding landscape. Jade green cabinets emulate the pine trees, while chocolate-toned wood flooring recalls the forest floor. Furniture and personal items further propagate the idea of natural moments of color in the woods."





**LIVE, DANCE, WORK
IN NATURE. PRIVATE
RETREAT IN CANADA
OFFERS SPECTACU-
LAR VIEWS OF FOREST
AND LAKE.**

CONSTRUCTION PANEL

Project

Private Retreat, Canada

Architect

Booth Hansen, Chicago, USA

Contractor

Thomas Young Builders Ltd., Richards Landing, Ontario, Canada

Alpro Sheet Metal, Tiny, Ontario, Canada

Sheet Metal Supply Ltd., Grayslake, Illinois, USA

Technical Data

12t RHEINZINK GRANUM basalte, Angled Standing Seam System

Photos

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