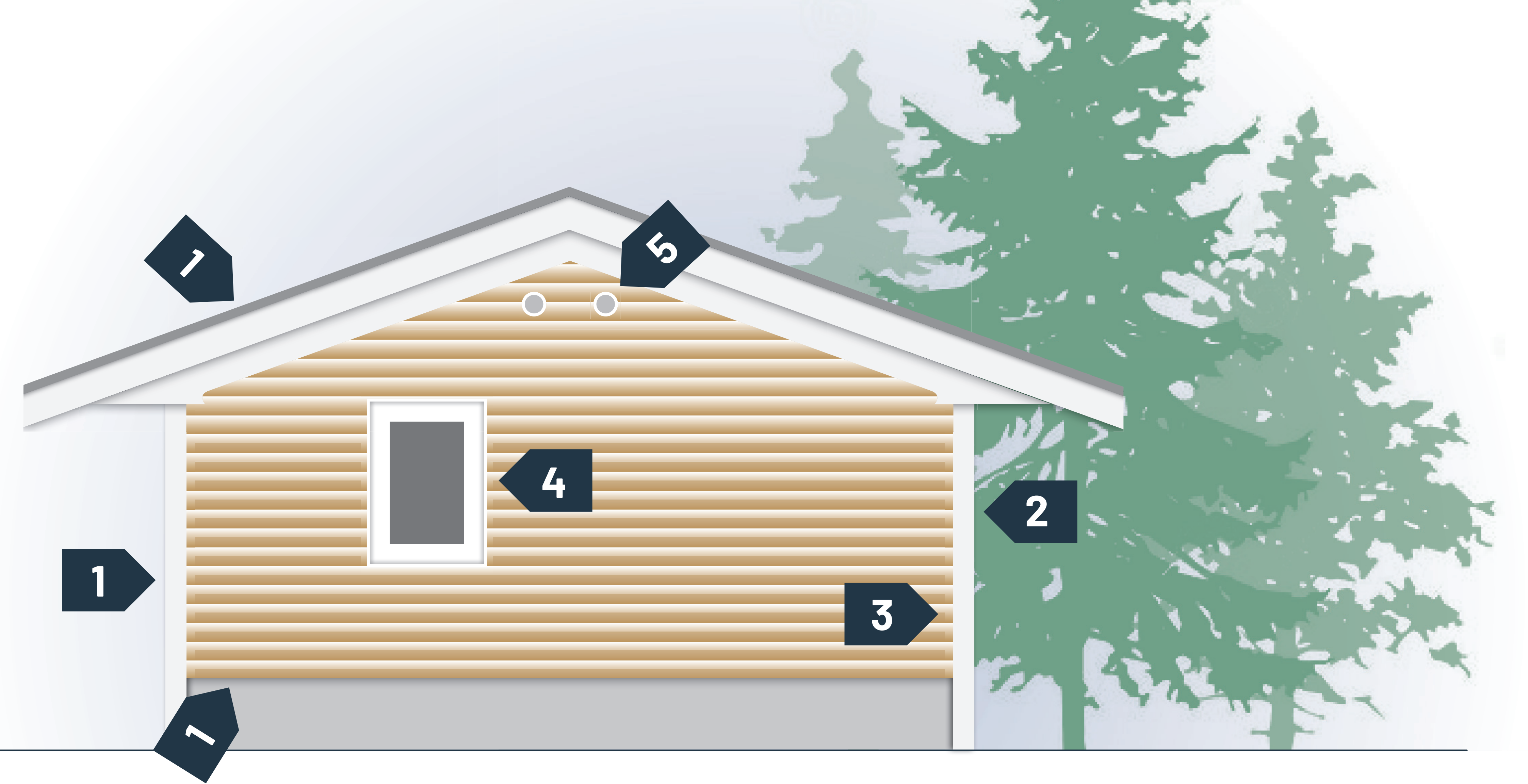


CREATING COZY CABINS

What do you notice about the atmosphere when you're inside this cabin? How does it feel? What you might notice is that there isn't anything to notice! It's not too cold and it's not too hot—it's just right. That's because the cabins were renovated using zero energy building techniques.

BCIT, Cheakamus Centre and SD44 worked with several partners to upgrade the cabins so they are energy efficient and comfortable to be in year-round.

bcit.ca/zeroenergybuildings



1 A BETTER SWEATER

To keep heat in during the winter and out during the summer we added more insulation to the cabin roof, walls and under the floor. It's like we wrapped the cabin in a cozy wool sweater. Wool was actually used to insulate the roof! Wool is non-toxic and improves air quality, manages moisture (like it does on sheep) and absorbs sound. We added wood fibre insulation to the front wall and rigid polystyrene foam to other walls and under the floor.

2 AIR TIGHT

An airtight building is an efficient building, because it traps heat inside. The outside of the cabins is wrapped with an air barrier (a special membrane) and all the seams carefully sealed with specially-designed tape. Doors and windows are especially important, as buildings tend to leak there. Membranes and gaskets were added to stop the flow.

3 BREAKING THE BRIDGE

Heat from inside a building can find a road, or thermal bridge, to the outside through things like window frames or wood studs. Before the renovation, the cabins were one big thermal bridge, as they were mostly wood. By adding insulation to the outside of the buildings and using fibreglass frame windows, the thermal bridges were broken, so heat stays trapped inside.

4 WISER WINDOWS

We gave the cabins new high-performance windows to keep heat from escaping through the glass and to stop summer heat from coming in. They are triple-paned glazed with inert gas between each pane of glass. Even the window frames are working hard to keep heat from escaping. They are fibreglass and filled with insulation. An E-coating on the glass reflects heat from the sun.

5 A BREATH OF FRESH AIR

Breathe deep. High-performance buildings have a system for bringing fresh air in without letting too much heat out. The air inside stays healthy and fresh. The cabins each have two pairs of ceramic ventilation units in the walls. The units send old warm air out through an exhaust vent and bring new fresh air in with an intake vent. The smart design flips the air intake and exhaust sides of the vent every few minutes. The cool air coming in gets pre-heated in the ceramic vent, which has been pre-warmed by the warm air going out.

DONORS & PARTNERS



CASCADIA
WINDOWS & DOORS



BASF
We create chemistry

475 HIGH
PERFORMANCE
BUILDING SUPPLY

BC Hydro



The Jenkins family

Canada