



Case Study

“Sunset at Sarsons” Residential Home



PROJECT OVERVIEW

PROJECT:

Residential Home

BUILDER:

Edward West Luxury Homes

CONTRACTOR

Okanagan AeroBarrier

LOCATION:

Kelowna, British Columbia

RESULTS:

Pre-leakage: 2.2 ACH50

Post-Leakage: 0.58 ACH50

Reduction: 75%

BC Home Builder Shrinks Mechanical Costs 20% with AeroBarrier Air Sealing

Like most cities in North America, COVID-19 has brought uncertainty to British Columbia's housing market. Smart builders are using this disruption to their advantage, finding new ways to differentiate their homes by finding the ideal mix of value, quality, and comfort.

Edward West Luxury Homes is a perfect example of this trend. This family-owned, custom home builder is based in Kelowna, BC. Just 90 miles from the United States border, the city sits on Okanagan Lake and offers homeowners world-class vineyards, great weather, beaches and even ski hills.

Making Air Sealing a Non-Issue

“In addition to offering comfort and beauty, our homes are sustainable and efficient,” said Edward West's Sebastian Motora. “We knew air sealing was critical to achieving this goal. But we had to make sure our approach would be efficient, affordable, and effective.”

As a result, Motora experimented with several varieties of air sealing before settling on AeroBarrier.

“We spent thousands of dollars and hundreds of labor hours on expensive tapes and mechanically fastened air barriers,” said Motora. “But the results were inconsistent and, often, ineffective.”



The consistency and precision of AeroBarrier air sealing eliminates many unknowns from the home building process. We use it to air seal every home we build. Air sealing ensures a home exceeds code requirements and reaches efficiency goals using a smaller HVAC system. This reduced our mechanicals cost by 20 percent, saving us \$10,000.

Tadashi Shiga – Owner

Evergreen Certified



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Thanks to AeroBarrier, offering a high-performance home is no longer a trade-off requiring you to sacrifice a homeowner amenity to cover the cost. In fact, by not having to upgrade the HVAC system and other benefits, air sealing is now a competitive advantage

Anthony Maschmedt – Principal
Dwell Development



The AeroBarrier system can dial in and measures building envelope performance. Once the building envelope has been pressurized, AeroBarrier atomizes precise levels of non-toxic sealant mist that is automatically drawn to any leaks. The process is proven safe, using a water-based sealant that has no off-gassing.

Once desired tightness has been achieved, the system's software prints out a certificate to verify results and shows before and after ACH levels. It is faster, simpler and more effective than the imprecise and inconsistent nature of manual envelope sealing and provides guaranteed results.

“The consistency and precision of AeroBarrier air sealing eliminates many unknowns from the home building process. Knowing this technology will deliver allows us to plan around air sealing. AeroBarrier has given us a new level of flexibility and cost savings; we use it to air seal every home we build.”

Air Sealing Impacts HVAC Design

A recent Edward West project showed the impact of AeroBarrier air sealing on HVAC system design. Two spec homes were being built next to each other, one with a more modern design and the other a more traditional aesthetic. The HVAC contractor would not initially right size the HVAC system based on the lower ACH from a tighter building envelope.

“The traditional home's HVAC system was sized based on an ACH greater than five,” says Motora. “It was a larger system, designed to compensate for envelope leakage. The modern home's HVAC system was right sized based on an ACH of 0.59. Air sealing ensures the home exceeds code requirements and reaches efficiency goals using a smaller HVAC system. This reduced our mechanicals cost by 20 percent, for a savings of \$10,000.”

In addition to cost-savings, a smaller HVAC system fits better in the floor joists, eliminating the need for space wasting bulkheads.

Air Sealing: A Builder's Competitive Advantage

Increased:

- Comfort
- Open Space in the Home
- Indoor Air Quality
- Energy Rebates

Decreased:

- Noise and Odors
- Space Wasting Bulkheads
- Dust and Pollutants
- Utility Costs

In addition to cost savings, air sealing has brought Edward West several other benefits. The housing market will always fluctuate. And codes will continue to change, increasing the builder's requirements. But Edward West Luxury Homes is ready.