

Benefits of Building with Wood: Biophilia and the Human Value of Wood Construction

Alex Nott, P.Eng. – Mass Timber Engineer
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What is Biophilia?

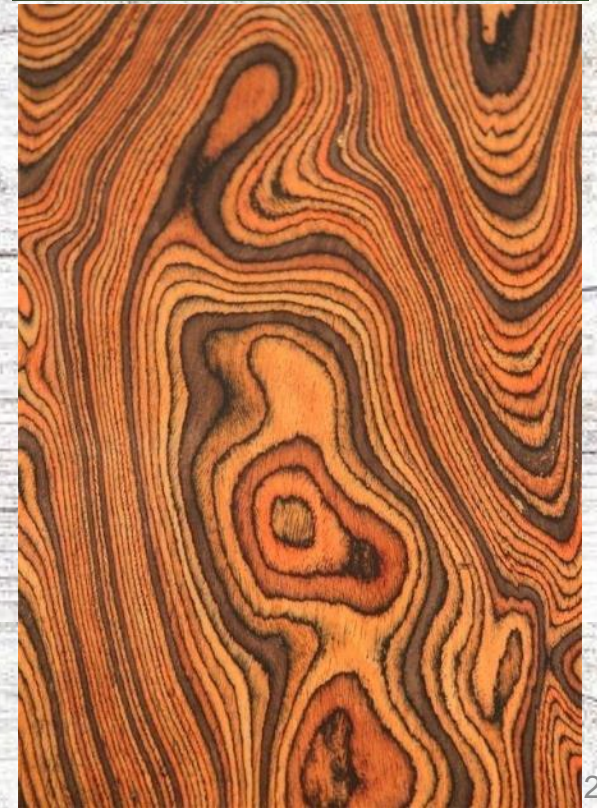
We've all (hopefully) been struck by the beauty and complexity of natural forms at some point.

“The innate attraction that humans have to living organisms and life-like processes”

(E.O. Wilson, 1984)

Through Biophilic design we form a connection with nature within our built environment

In 1995, Canadians spent over 88% of their time indoors and a further 6% in their cars (Leech *et al.*, 1997).



How does Biophilic Design Help?



Biophilia Study Findings Over the Years

60s 70s and 80s:

- Faster Healing
- Reduced Pain
- Preference for Natural Scenes vs. Urban Scenes.

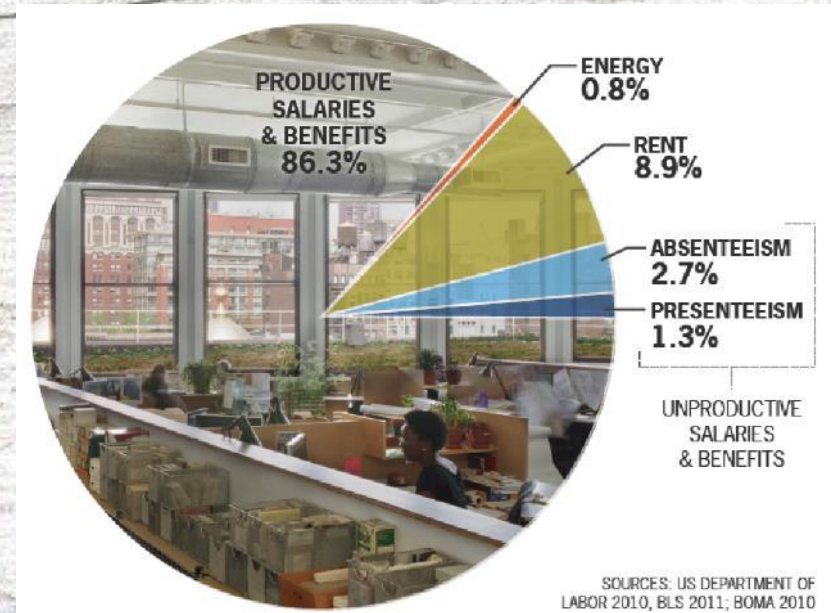
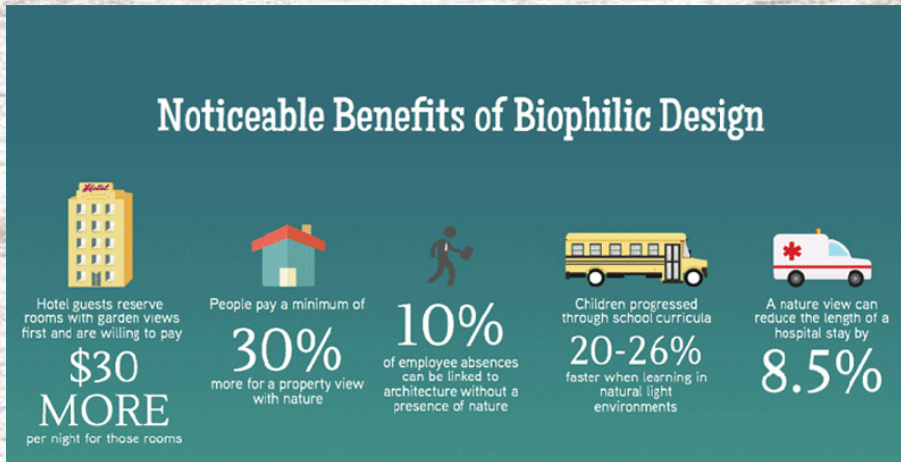
90s and 2000s:

- Lower Stress Levels
- Improve Task Performance
- Lower Heart Rate & Blood Pressure
- Decrease Health Complaints
- Reduce Perception of Pain

2010s:

- Reduced Sympathetic Nervous System Activation
- Alpha and Beta Wave Response

Biophilic Design Goes Beyond Just Feeling Better



- Lower Stress
- Lower Absenteeism
- Staff Retention
- Faster Learning
- More Creativity



- More Customers Served
- Increased Revenue
- Increased Billable Hours
- Market Share Gained

Hospitals & Care Facilities



(Surrey Memorial Hospital Emergency Department – ThinkWood)



(Duke University Student Wellness Centre – ThinkWood)

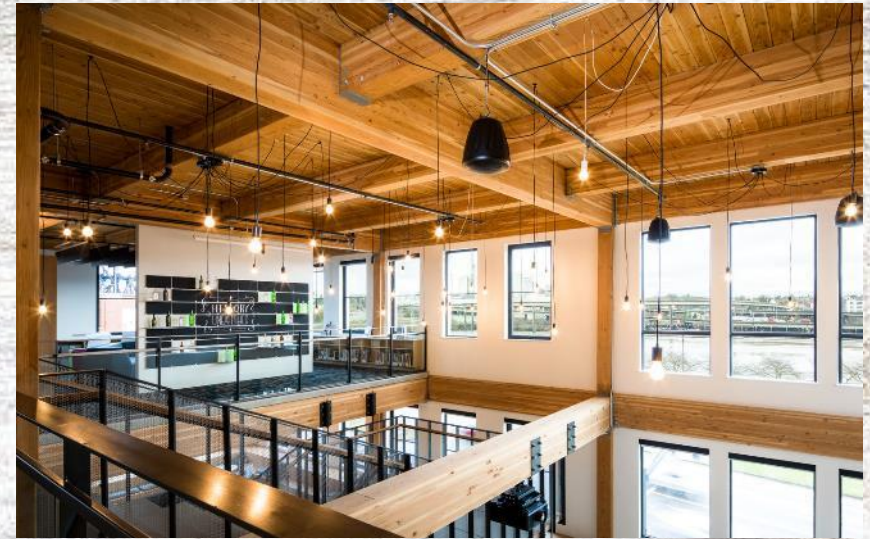
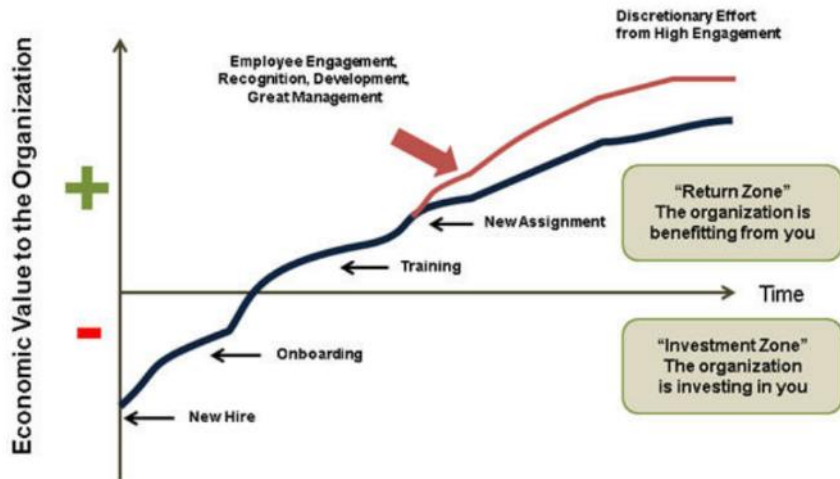
- **Faster Healing**
- **Lower Pain**
- **Lower Stress for Doctors & Patients**
- **Combination biophilic & structural material**



- **Faster Discharge and More Available Beds**
- **Lower Drug Costs**
- **Reduced Ongoing Care**
- **Less Cost for Other Biophilic Materials**

Office Buildings

Cost to Value of an Employee



Economic Value of an Employee over Time
(Bersin by Deloitte)

(38 Davis – Portland, Oregon)

- **Lower Absenteeism**
- **Improved Attention, Focus and Creativity**
- **Better Staff Retention**
- **More Billable Hours**
- **Better Quality Product/Service**
- **Reduced Training & Onboarding Cost**

Schools & Educational Buildings



Westview Elementary School, Powell River, B.C.
(NaturallyWood)

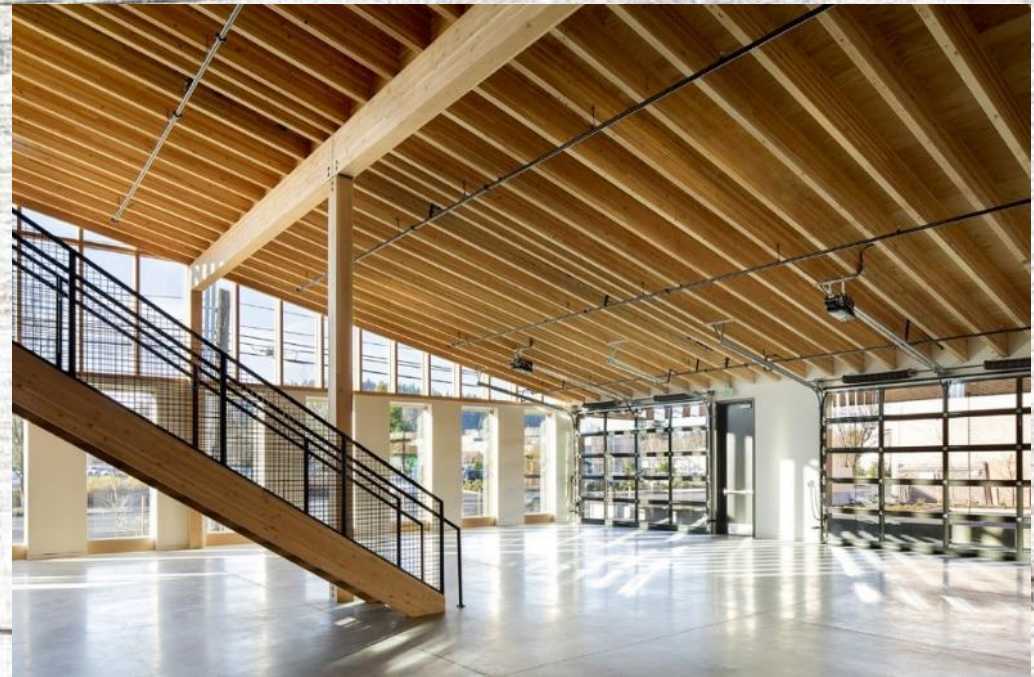
- **Lower Absenteeism**
 - **Improved Cognitive Development and Faster Learning**
- 
- **Less Tax Dollars Spent on Students Home Sick**
 - **Smarter Future Workers and Stronger Future Economy**

Retail & Commercial Buildings



(McDonalds – Chicago, Illinois)

- **Lower Stress**
- **Feeling of Healthful Wellbeing**
- **Perception of Sustainability and Stewardship**



(‘FLEX’ Commercial Retail Units – Portland OR.)

- **More Time Spent In-Store**
- **More Return Customers**
- **Customers Willing to Pay More \$\$\$**
- **Reflects Well on Brand**



North Bay Regional Health Centre



- **390 Acute Care Beds**
- **First Wood B-2 Occupancy & First LEED Hospital in Ontario**
- **Feels less institutional**
- **Reduces stress for patients and staff**

77 Wade Ave. Office Building

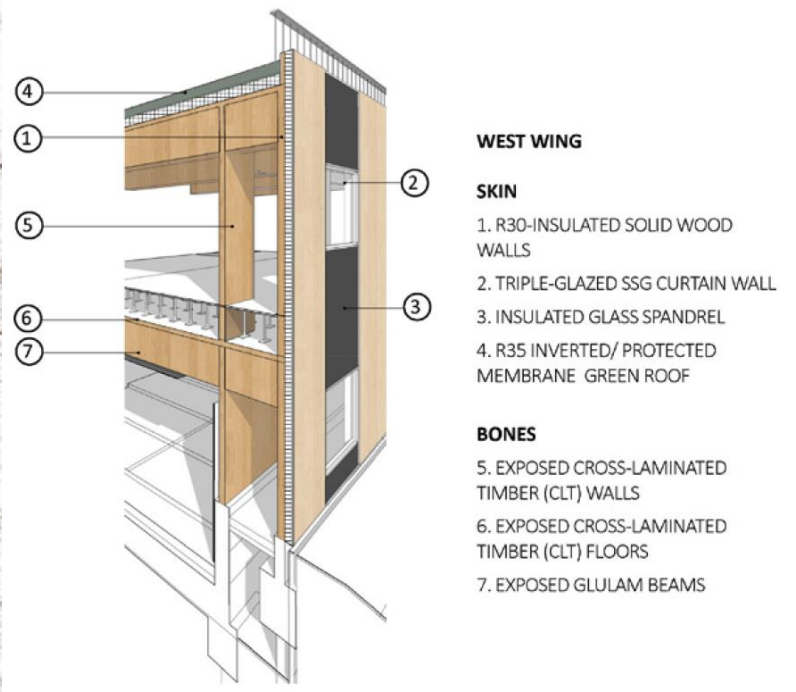
- **90% of Wood Exposed**
- **First Approved Tall Wood Building Alternative Sol'n in Ontario**
- **Office workers will benefit from stress reduction and productivity boost**



McEwen School of Architecture



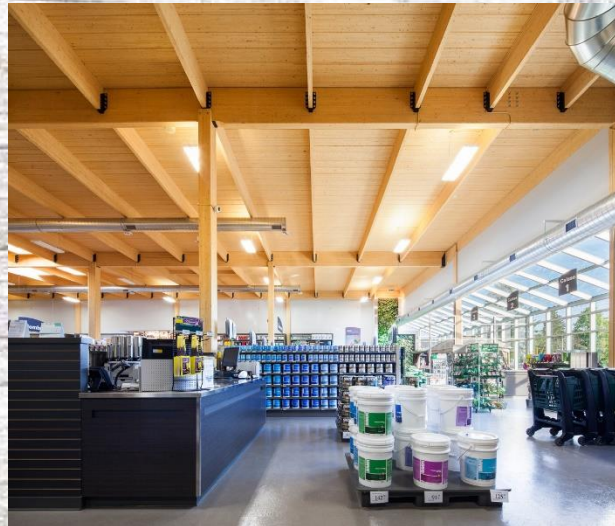
- Designed to be an example for Architectural students
- Incorporates heritage post and beam structure
- Designed to reflect local ecologies and for 'passive survivability'



BMR Building Supplies



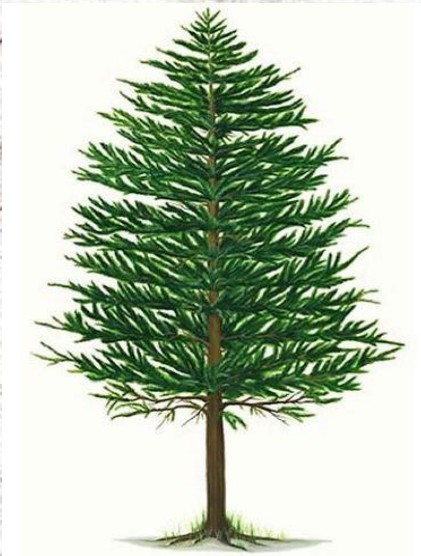
- **Wood use reflects culture and heritage of BMR brand**
- **Aligns with BMR's 'Eco Attitude' initiative**
- **More energy efficient**
- **Noted sales increase attributed to wood structure**



Thank you!

Please visit our website at:

www.ontario.ca/page/building-with-wood



Questions?



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