

2014 WOOD DESIGN AWARDS - WINNER

Wood Innovation

Gord Macdonald, Macdonald & Lawrence Timber Framing

WildPlay, Kelowna, BC



"Can't believe this is in wood. All innovative engineering. Kicks open the door and blows away assumptions about wood's possibilities."

- jury comments

High resolution images
available. Please e-mail
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WildPlay Kelowna features a Monkido® high ropes adventure course, ten DragonFLY ziplines, five suspension bridges, and a large Primal Swing for a thrilling pendulum ride above a canyon. Working with project partners ISL Engineering on this design-build project, Macdonald & Lawrence provided design and build services from conceptual planning and design through to construction and administration.

The adventure park was designed to fit into the natural setting, making use of existing site trees, and using timber as the main construction material. The longest zipline is 195 m, and the longest canopy bridge is 36 m and up to 15 m off the ground. The swing is one of the largest timber swings in the world with a 30 m swing line and a 37 m long timber structure.

One of the main challenges of this project was the use of timber in the swing design; the aim was to build a large two person swing using the maximum length of timber that it is possible to transport, and with extremely slender diameter. The design of the swing involved the configuration of the 37-metre long, eight-sided, tapered coastal Douglas

fir timbers into three dimensional trusses to maximise the efficiency of the slender timber members. For additional strength, the whole structure was reinforced with steel and cable trussing.

The truss timbers were milled in the M&L workshops using a custom built sawmill that would cut to an octagonal taper on the very long spar timbers. The octagonal profile and the alignment of the taper on the logs with respect to the diameter of the trees was an important part of the engineering of the swing. The precise milling and the quality of timber selected by M&L was an intricate part of achieving a successful design.

The collaborative design and engineering of this project created an impressive tall and slender structure that explores the limits of the structural potential of the timber used. However, the connection detailing, the layout and the installation process was all equally important to making this project possible, and the result is an impressive and fun structure made from local wood.