

PRINCIPLE 3

USE NATURE AS A GUIDE

WOODLAND PARK ZOO

“The roof changes dramatically from spring to summer to fall: brown to green to gold. Our design response was to create a very strong, open connection between the forest and interior exhibits – to blur that line between inside and outside literally using nature as the educational guide.”

—Brendan Connolly, AIA, Mithun



WOODLAND PARK ZOO

Seattle, Washington

May 2006

“Native northwest forest meadow lifted to the sky”

It is a place that changes with the seasons – a created place, dramatizing the cycle of life, death, rebirth. The vegetated roof over Seattle’s LEED® Gold Zoomazium features more than twenty thousand plants (grasses, ferns, flowers) native to the Puget Sound region and a six-inch layer of soil that simulates a Northwest forest floor. This roof is also a thriving habitat for microbes, insects and bird life. The 8,300-square-foot building itself is a purpose-built, “naturalistic” play space recently added to the Woodland Park Zoo to connect kids and their parents to the wonders of nature.

With the Zoo organized into a series of bioclimatic regions, this area represents the native Northwest temperate biome – so it only made sense to recreate a forest floor edge/meadow for all the world to see. Zoomazium’s roof system also serves as a reminder of the building’s sustainable focus: to keep its temperature constant, mitigate storm water, and create habitat. Seattle Public Utilities and the Zoo continue to measure the roof’s performance (weather monitoring, soil temperature, storm water runoff, water quality, and wind microclimate data) over a two-year period to assess the viability of future green roof projects.

For Mithun, using nature as a guide is a premise central to the firm's growing body of work in building, interior and landscape design and master planning. In the Northwest, Mithun's design signature has long been nature – true to form, raw, respectful, responding to time and location. It becomes the shape of buildings to reflect the geology of a site. Or solar meadows as a clearing in the forest to optimize the performance of PV arrays. Or a street design that mimics the natural drainage of a pristine landscape.

Can we understand how to use nature from an ecological or ecosystems standpoint? And what does that teach us in designing our buildings and communities?

Using the natural forces on a site informs a neighborhood, campus or building architecture in a way that is at once sensory, biophilic, experiential. And presenting those forces – whether wind, water, sun, geology or vegetation – makes it somehow more authentic, focused, reinforcing the story of a place.

Nature minimizes toxicity. Reduces demand. Illustrates the natural progression of a community. Expresses materiality. It is science that helps to make those connections: of the nutrient cycle, the interface between aquatic and terrestrial habitats, water evaporation and transpiration. It is design that interprets how a developed place can function in a forest or an upland valley or an urban high-rise. The process to reach that understanding, too, is guided by nature – through resource modeling, the percolation rates of soil, analysis of building materials. Ultimately, it is an interdisciplinary team, with experts, that offers the best design insight: interdependent, comprehensive, thinking like an ecosystem.



