



Replicating the Arctic

PROJECT:	Edmonton Valley Zoo – Arctic Shores
LOCATION:	Winter Retreat Building, Edmonton Valley Zoo, 13315 - Buena Vista Rd
BUILDING TYPE:	Commercial – Zoo exhibit
TOTAL ROOF AREA:	223 m ²

Ecoroof details

ECOROOF AREA: 205 m²
DIRECTION: South facing
STOREY: 1
YEAR INSTALLED: 2011
NEW BUILD OR RETROFIT:
New build
TYPE OF ECOROOF: Unknown
ECOROOF SYSTEM: Planted
in place
SUBSTRATE DEPTH: 20 cm
PLANTS: A variety of low
growth grasses and arctic
style perennials.
INTERESTING FEATURES:
Designed to replicate the
polygonal forms found in
the Arctic
ACCESS: The slope behind
the building allows walking
access to the ecoroof. Not
accessible to the public.

Description

The Edmonton Valley Zoo Arctic Shores ecoroof is unique in that the design goal was to replicate the landscape shapes and plant species found in the Arctic.

Although this ecoroof is not accessible to the public, it provides aesthetic appeal and helps to hide a large building. It was also installed to provide enhanced stormwater management at the site.

Challenges

During the design phase, the designers had to conduct research to determine the proper soil mixture and to ensure the species planted met the design criteria (replicating the arctic landscape). This ecoroof is not irrigated, but is for the most part, drought tolerant. There have been occasions during dry, hot periods, that the ecoroof has needed to be watered, which the maintenance staff were able to facilitate with a hose and sprinkler. The plant community on this ecoroof has not changed much but the grasses will sometimes out-grow the perennials.

Benefits

The Arctic Shores ecoroof not only retains rainfall that lands on the roof but also offers shade and insulation benefits. This is also combined with the aesthetic benefits provided to patrons of the Valley Zoo. Another motivation of this ecoroof, similar to many other ecoroofs, was installation to obtain points towards LEED certification of the building.

Lessons Learned

Monitor ecoroofs during dry periods as they may require some additional watering, especially in the early years of plant development.