Biodiversity

COMPONENT GOALS

UBC will develop highly functioning landscapes at the building and site scales to contribute to biodiversity and natural ecosystem processes.

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UBC will engage campus teaching and research opportunities to enhance biodiversity management capacity.



CONTEXT

Biodiversity is the richness of plant and animal species, their ecosystems, and the ecological processes that sustain them.

Ecological processes cross scales beyond the boundary of a building site. Enhancing biodiversity by nurturing natural systems provides for a range of ecological services: local and global climate regulation, water supply retention, erosion and sediment control, hazard mitigation, pollination, habitat functions, waste decomposition and treatment, human health and wellbeing, food and renewable non-food products, and cultural benefits. The natural systems of UBC are a critical component of the University's identity and support community health and well-being.

The neighbourhood areas of campus are comprised of both private and public landscape areas. Thoughtful master planning of these landscape areas offers the greatest potential to maintain or re-establish the natural systems that are essential to the health of environments. As owner of the public realm, and planner and regulator of campus neighbourhoods, the University can achieve a systems-based approach to incremental landscape development within the framework of private sector development.

Through REAP and the neighbourhood plans, UBC has set out requirements related to biodiversity. Requirements for drought-tolerant and -adapted landscapes are mandated in REAP. Elements like greenways (connection to larger habitat areas), green edges, tree retention and parks, and bird-friendly design guidelines for buildings are integrated into existing neighbourhood plans.

The forests around UBC are valuable ecological assets **PHOTOGRAPHER:** PHILIP BERTOGG PHOTOGRAPHER: PHILIP BERTOGG

Pathway to Net Positive

A net positive approach involves nurturing UBC's natural systems that provide for a range of important ecological services, which are typically undervalued. The Green Building Action Plan supports and is expected to integrate with an emergent Biodiversity Strategy for the campus as a whole. This strategy will identify principles, objectives and metrics that will inform site-specific building and landscape requirements for integration in updates to the GBAP. The strategy will leverage partnerships with Metro Vancouver and City of Vancouver to ensure alignment with their biodiversity strategies.

Natural systems are a critical component of the University's identity and support the place and experience component. The biodiversity that these systems support is part of community health and wellbeing and helps to sustain mental and physical health. The ability of natural systems to help UBC adapt to climate change is an additional co-benefit.

Key Directions

Priority actions for biodiversity focus on ensuring that major residential project address ecological assets identified in neighbourhood site assessments, developing principles for landscapes and green roofs, and improving bird-friendly design guidelines.

Updated credits in REAP Version 4 and future neighbourhood plans will be based on review of best practices and guidelines, such as the Sustainable Sites Initiative. Specifically, the GBAP will provide guidance for landscapes and green roofs that consider the ability for the planted installations to support regional biodiversity priorities and provide other co-benefits.



FIVE-YEAR IMPLEMENTATION PLAN - SHORT-TERM PRIORITY ACTIONS

- Require all major projects to address a neighbourhood-wide site assessment that identifies important ecological assets, endangered and vulnerable species and environmentally sensitive areas.
- Establish partnerships between research and operations through participation in CBIRD (Campus Biodiversity Initiative: Research and Demonstration) and related Level 1 and 2 SEEDS projects.
- Develop a set of principles for neighbourhood landscapes and green roofs that consider the following: ability to adapt to climate change, ability to attract pollinators, microclimate suitability (sun, shade, etc.), ability to support passive solar strategies (e.g., provide shade, reduce wind), irrigation zones (green/brown areas), and regional biodiversity priorities.
- Further develop UBC Bird Friendly Design Guidelines for Buildings and create a mandatory policy in order to reduce the number of bird collisions with buildings.

TARGETS AND INDICATORS

Target: Require 100% compliance to UBC Bird Friendly Design Guidelines for Buildings for new residential buildings by 2025.

Indicator: Increase opportunities to provide habitat for birds, pollinators and other species.

Note that, based on foundational studies and data gathering identified in the GBAP actions, further targets and indicators will be integrated into future updates of the GBAP.