

BUILDING SUSTAINABLY

Building a campus is equivalent to building a community. And, as the campus develops, it becomes an increasingly valuable resource that will serve many other communities in turn.

UBC's Okanagan campus has undergone major growth, tripling in size from 0.5 million square feet to a vast 1.5 million in just five years.

At the core of this growth has been a commitment to responsible and sustainable expansion. Any unsustainable features or practices in original infrastructure are being redressed and all new buildings have energy emissions reduction targets of 40 to 50 per cent to attain LEED® Gold certification (Leadership in Energy and Environmental Design).

LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health. UBC's Okanagan campus is excelling in all five areas, some highlights include:



Aerial shots of campus Above: 2004; Below: 2010



1. SUSTAINABLE SITE DEVELOPMENT

Where possible, the selection of a building's location and orientation prioritizes the use of the external environment for temperature control, ensuring minimal solar gain in summer and low heat loss in winter. During the construction process measures are also taken to control erosion and mitigate environmental impacts.

2. WATER EFFICIENCY

Water conservation is a high priority on campus: water conserving features of many buildings include dual flush toilets and ultra low-flow bathroom fixtures, reducing water consumption by 30 per cent or more when compared to conventional systems.

3. ENERGY EFFICIENCY

Plans are well underway to outfit and connect all buildings with the campus' geo-exchange system. Many classrooms and labs are equipped with occupancy sensors for lighting and ventilation to conserve energy when rooms are unoccupied. Carbon dioxide (CO₂) sensors are also in place to increase or decrease the amount of fresh air intake, as necessary.

4. MATERIALS SELECTION

Many building materials, which are manufactured locally whenever possible, have high recycled content, reducing the embodied energy in the building and limiting the demand for raw materials. Highly durable materials are used in order to minimize future maintenance and replacement. Construction crews are championing waste reduction, ensuring at least 75 per cent of waste material is diverted from the landfill.

5. INDOOR ENVIRONMENTAL QUALITY

Interior finishes, from paint to carpets, are selected for their low VOC (Volatile Organic Compound) levels to preserve the indoor air quality. In many buildings occupants can easily adjust the conditions of their environment with access to operable windows, lighting, and temperature controls.

Although much of the focus on sustainable energy comes from a physical infrastructure perspective, the social energy of the space is equally important.

Buildings are designed to foster a sense of community, including four newly established collegia spaces, which offer students a comforting and comfortable place to gather, interact, and socialize with each other. Plans are in place to expand this program to include faculty and staff spaces.