

## COUNCIL POLICY

<b>SUBJECT:</b> GREEN BUILDING POLICY	
<b>DATE:</b> JUNE 13, 2005	<b>REFERENCE:</b> 05/219

### 1. Policy Statement

#### Purpose

The purpose of a municipal green building design policy is to demonstrate the District of Saanich's commitment to environmental, economic, and social stewardship and to provide leadership and guidance to encourage the application of green building practices in private sector development. Adherence to the policy will yield long-term cost savings to Saanich's taxpayers due to the considerable savings in life-cycle performance and reduced life-cycle costs for municipal buildings.

#### Background

Buildings consume large amounts of resources (materials, water, energy) and generate significant volumes of solid waste, sewage and air emissions through their lifecycles. It is estimated that, in Canada, buildings consume 35 to 40 per cent of secondary energy use and generate 30% of total Canadian greenhouse gas emissions. Construction and demolition waste is a major component of the solid waste stream, and accounts for approximately 17% of the tonnage at the regional Hartland landfill.

In 2004, the average residential user in Greater Victoria consumed 380 litres of water per day — higher than the Canadian average of 340 litres and more than twice the per capita European daily average.

Green building practices provide a framework and set of tools to build in a more efficient, healthy and ecologically-responsible manner. Encouraging green building practices is in the public interest because they:

- promote Saanich's land use, environmental and growth management policies
- conserve energy, water and other natural resources
- support Saanich goals related to increased density, mixed use development, stormwater management, reducing reliance on automobile use, and enhancing pedestrian, cycling and public transit environments
- result in cost savings through increased operation and maintenance efficiencies
- improve indoor air quality and the health, well-being, and productivity of occupants
- help reduce public infrastructure costs related to development
- help minimize ecological degradation (habitat, air, water, soil)
- support local economy and create new local jobs and industries.

#### Integrated Design and Environmental Goal Setting

Successful green buildings depend on an integrated approach to design. In a "whole-building" design process, every decision is made in the context of others that are related to it. This means that a variety of building issues can be resolved synergistically and the best efficiencies can be gained. Early on in the process, the team should establish environmental goals which the building should target. Green building practices should include:

- establishing an integrated, cross-disciplinary design team, made up of all those impacted by the building, to begin working together at the pre-design phase; and
- holding a pre-design workshop among facility managers and other staff to establish environmental performance targets for the building.

### **Life-Cycle Analysis**

The benefits of green building initiatives must be looked at from a long-term perspective. Initial capital costs are only part of the total cost of a project, and should be considered within the context of the cost to operate and maintain. Life-cycle costing includes all related costs and brings them to a common comparative basis. Green building practice should include:

- undertaking a detailed life-cycle analysis to help assess the net present value of the design, construction, operation and maintenance of the facility along with the health and productivity of its occupants.

### **Why the LEED™ Building Rating System?**

Leadership in Energy and Environmental Design™ (LEED™) is a voluntary, consensus-based rating system for high-performance, sustainable buildings. A Canadian version of the rating system has been developed and is being administered by the Canada Green Building Council (CaGBC).

LEED™ is an appropriate rating system for green buildings because it:

- has significant momentum as the industry standard
- offers the credibility of third-party verification
- promotes whole-building, integrated design
- has an administering body that ensures the system will be maintained, revised and updated as necessary
- is relatively simple to implement
- is not overly prescriptive
- takes into account local climate and standards.

LEED™ has been adopted by a number of jurisdictions in Canada and the US including Vancouver, White Rock, Surrey, Whistler, Calgary, Seattle, King County WA, Clark County WA, Portland, Sacramento, Boulder, Austin, San Francisco, and Long Beach.

## **2. Saanich Commitments**

The District of Saanich will show leadership in green building design by:

- incorporating green building practices into municipal facilities of all sizes that are developed, owned or managed by the District
- undertaking life-cycle costing analysis prior to tendering for all construction and retrofit projects larger than 500 square metres undertaken by the municipality

- providing opportunities for additional design and capital costs for green municipal projects provided life-cycle costing can demonstrate a minimum annual 10% return on the capital investment
- meeting a requirement of LEED™ Silver or Gold (including full registration and certification under the Canada Green Building Council) for all new construction and additions larger than 500 square metres of civic buildings
- continuing to undertake operational retrofits of existing facilities to improve energy and water efficiencies
- considering LEED™ certification for major renovations of existing buildings under LEED™-NC or the new category LEED™-EB (existing building)
- working cooperatively with other jurisdictions to promote green building design and practices in a consistent way in the region
- encouraging learning and awareness of green building activities both within the organization and throughout the wider community
- considering the development of incentives to encourage the private sector to adopt green building practices
- revising Saanich processes and policies as appropriate
- recognizing achievement and excellence in private sector green building initiatives.

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## GLOSSARY OF TERMS

**Canada Green Building Council (CaGBC)** – was founded in 2002, and is the license holder for LEED™ in Canada. The CaGBC is the developer of LEED™ Canada, and administrator of the LEED™ Canada Green Building Rating System for New Construction and Major Renovations (LEED™ Canada NC). Saanich became a member of the CaGBC in 2004.

**Green building** – integrates building materials and methods that promote environmental, economic and social benefit through the design, construction and operation of the built environment. Green building design encompasses the following areas: strategic site location, appropriate management of land, efficient use of energy and water resources, management of materials and waste, protection of environmental quality, and protection of occupant health/wellness and indoor air quality. Other terms used to describe green buildings include sustainable buildings and high-performance buildings.

**Integrated design** – a whole-building design approach. It uses a multi-disciplinary team of building professionals who work together from the pre-design phase through to post-occupancy to optimize the building's environmental sustainability, performance and cost savings. This design approach recognizes that a successful green building is best achieved by planning the site, structure, components and systems as interdependent parts.

**LEED™ Green Building Rating System** – Leadership in Energy and Environmental Design™ (LEED™) is a voluntary, consensus-based system for developing high-performance, sustainable buildings. It was created by the United States Green Building Council (USGBC) in 1993 largely to stimulate green building market transformation. It is a recognizable "brand" that is also used to recognize industry leaders, and raise consumer awareness.

**LEED™ Certification** – different levels of green building certification are attainable in the LEED™ Green Building Rating System – certified, silver, gold, and platinum. They are awarded based on the total number of credits earned in the categories of: sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. This certification is granted after a thorough review of the project characteristics by the CaGBC.

**Life-cycle costing analysis** – is an evaluation tool that assesses the net present value of the design, construction, and operational costs of a building. It can also include qualitative measures such as the health and productivity of occupants, cost of environmental impacts and costs of social impacts.

**Triple bottom line** – means the economics of the project (both short- and long-term) are taken into consideration with social and environmental costs and benefits. Environmental objectives include consuming fewer natural resources and generating less waste. Strategies include strategic site location, appropriate management of land, efficient use of energy and water resources, protection of environmental quality, and management of materials and waste. Social objectives relate to the protection of occupant health and wellness, and maintaining high indoor air quality.