

3.0 SUSTAINABILITY STRATEGY



Sustainability is an overarching priority of the Arbutus project. The Arbutus buildings are intended to be LEED® Silver equivalent with any civic public use facility achieving LEED® Gold equivalent, in accordance with City of Vancouver policies. The proponent may choose to formalize this green standard with LEED® accreditation.

The following strategies, highlighted by the Eco-Density Charter and LEED® standards, are incorporated in the Arbutus project:

Transportation & Parking Strategy

A Transportation Demand Management (TDM) Strategy is included in this rezoning application. The strategy is inclusive of walking, cycling, public transit, goods movement, and vehicular movement. The priority is on walkability, cycling, and transit options for the residents and neighbours of Arbutus Village. Furthermore, the project is encouraging the use of low-carbon vehicles, electric vehicles, and car-share programs.

Green Energy & Waste Systems Strategy

The buildings have been designed to incorporate green energy and waste systems to minimize waste and energy outputs.

- District energy and geo-exchange systems are also being considered for the site.
- A rainwater management plan that allows for infiltration, retention, treatment and utilization of rainwater will be incorporated, where appropriate, on site. The plan will help minimize the impact on City systems and minimize the use of potable water for landscaping and water features.
- A solid waste diversion strategy will provide the space and infrastructure to divert organics and recyclables from the waste stream. Recycling and composting options will be made available in the buildings. This will help to minimize the vehicle trips required for collection.

Affordable Housing Strategy

Opportunities for the development of affordable housing are included in Arbutus. The project contains seniors housing, rental housing and options such as lock-off suites in the townhouse and city-home market units that can be rented out and serve as “mortgage helpers.” Twenty per cent of the units in the overall development will be available as affordable housing.



Economic Development Opportunities

Sustaining the current retail and office tenants, as well as attracting interesting new retail opportunities, is key to the economic viability of Arbutus.

Green Design

The green design strategy includes a set of guidelines that will help to ensure the sustainability of the project. The architecture and public realm will marry ecological performance with lively, beautiful, accessible, responsible, people-oriented design. The project will incorporate extensive natural and man-made green features in creative ways to maintain connections with nature and mitigate urban heat/greenhouse gases.

Water

On-site rainwater collection, reuse, filtration and infiltration are a major priority in the landscape design. The overall rainwater management plan utilizes horizontal as well as vertical surfaces to effectively maintain on-site water and use it to the advantage of the users of the site, home and business owners, community members, bugs, birds and plants alike. The opportunities are not only to recharge groundwater, filter contaminants and eliminate or dramatically reduce stormwater flow rates, but to also increase the social understanding of the necessity of our landscapes to respond to environmental concerns through thoughtful design practices.

- Rainwater is collected on rooftops and stored in cisterns. Water is then re-used for toilet flushing, irrigation and other maintenance needs. This will limit or eliminate the use of potable water for landscape irrigation.
- Intensive and extensive green roofs collect and use water for plant growth, enhancing biodiversity and reducing the urban heat island effect.
- Pervious asphalt used on off-slab areas allows for higher infiltration on road surfaces.
- Road and sidewalk runoff on the Yew Street extension is diverted into vegetated swales/infiltration planters.
- Water collected from on-slab areas (Arbutus Mews and the Square) is diverted into a large raingarden at the foot of the Square.
- High percentages of planted areas, including green roofs, courtyards, ground level plantings and street trees, store and utilize rainwater.
- Plant selection is specific to the microclimate created on site in order to minimize maintenance and irrigation and to create healthy habitat areas.



Public Realm Strategy

The public realm and infrastructure will be designed to achieve sustainable, attractive, safe, accessible, adaptable, and engaging streets and public places. These designs will use environmentally responsible materials, and consider opportunities for food and energy production. The public realm will be flexible and adaptable, allowing for community-based social, cultural, and environmental initiatives.

Heritage Conservation Strategy

The Arbutus Village project is utilizing a Heritage Conservation strategy to retain the Nanton Street trees.

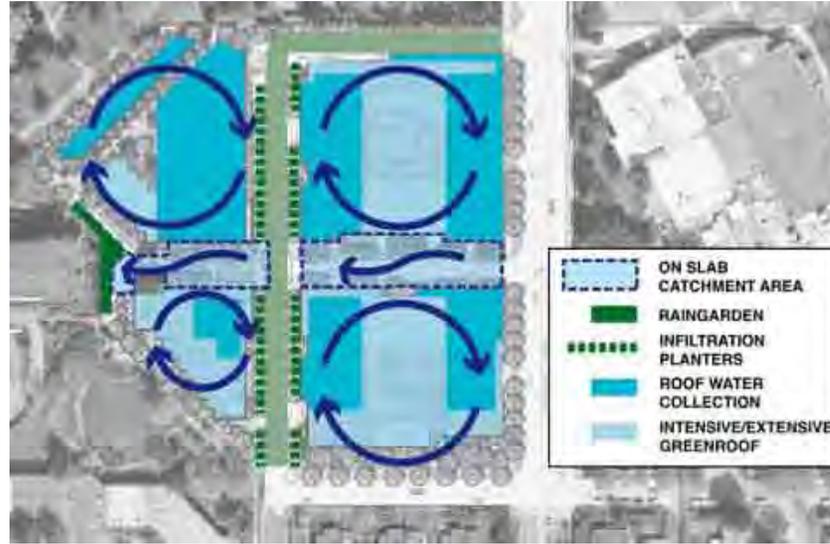
Urban Agriculture & Local Food Access Strategy

The goal of this strategy is to enhance urban food production, access to local food, and waste reuse and recycling. During the first phase of Arbutus a grocery store will be constructed which will encourage less driving and local shopping. Planters will permit tenants to grow herbs or plants for consumption. Greater urban agriculture opportunities will be explored.

Social Planning & Development Strategy

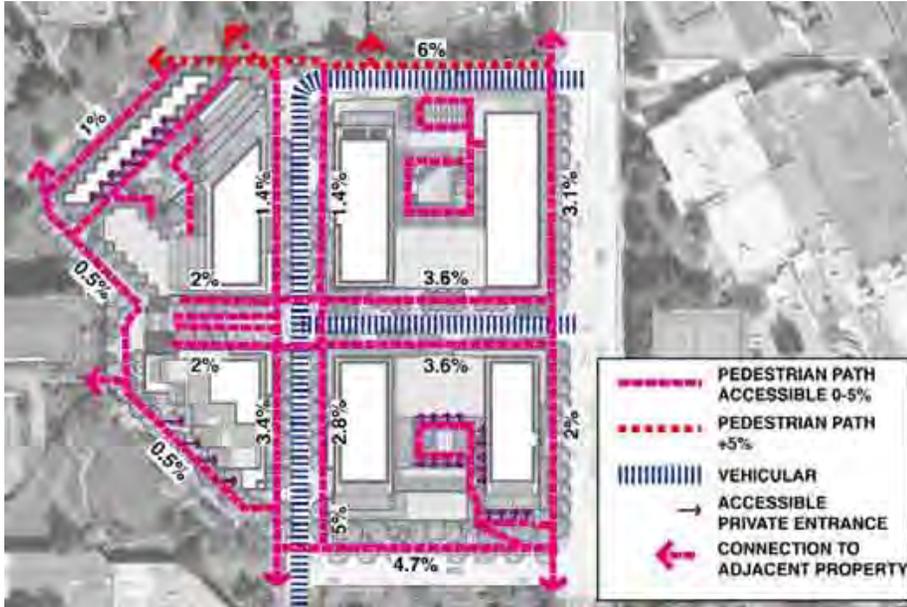
The social planning and development strategy includes the following:

- A seniors drop-in centre and a neighbourhood house will be constructed on the site.
- Educational benefits will be created by sustainable features throughout the project.
- Opportunities for art, culture and creativity will be incorporated in the public realm.
- Crime Prevention Through Environmental Design principles will be applied throughout the project to ensure safety and comfort.
- Public spaces, such as wide exterior walkways, the village square and the shopping mews, create opportunities for social engagement.
- Local neighbourhood values, context, character and identity will be applied to the project.



Site Stormwater Concept Diagram





Site Universal Access Diagram



Biodiversity and Habitat

Our urban landscapes are functioning ecosystems. Every opportunity we create for urban habitat ties into the larger system that allows for a healthier environment, including clean air, natural beauty and ecological learning. A diversity of ecological spaces, connectivity between larger habitat areas such as parks and streams, and sensitivity towards local ecosystems, will be considered in the development of the site.

- A native plant palette not only provides a lower maintenance landscape but also houses local critters necessary to sustain our ecosystem.
- Large shade trees provide habitat for song birds and other urban animals while providing tree top connectivity.
- Dryer planted areas such as sloped planting beds, versus wet areas such as vegetated swales and raingardens, provide a diversity of habitat opportunities through plant selection and conditions.
- Extensive and intensive green roofs add another layer of connectivity and plant diversity.

Social Interaction

The urban ecosystem includes our own social interaction and healthy use of outdoor spaces. Community wellness and participation enhances personal health and happiness as well as promoting economic growth through vibrant commercial spaces.

- Livable streets encourage pedestrian and cycling use while maintaining safe traffic movement.
- Pedestrian links to Arbutus Village Park will be made through a pedestrian walkway, Arbutus Mews and the Square.
- Retail, restaurants/cafés and the community centre spill out into the public realm with open spaces and patio areas.
- The public square design offers two public gathering spaces.
- Three private courtyards encourage social interaction between building residents.
- Private patios offer outdoor spaces for as many units as possible.
- Disabled access provided throughout the site.



Urban Agriculture

In a densely populated urban environment personal outdoor spaces for food growth are becoming increasingly important. Not only is it important for our food security but it also allows residents to connect to the natural systems that feed us in meaningful ways. By placing urban agriculture beds in communal areas community interaction and participation is encouraged.

Materiality

Careful material selection is an important part of sustainable design. Materials that are extracted and manufactured locally support local economies and reduce environmental impacts from transportation. Embodied energy in materials characterizes the energy used through the life of a material. Not only should we be aware of the regionality of our sources but also the life cycle of products through to the stage of disposal, recycling or re-use. Construction waste should be managed and reusable materials diverted to appropriate sites.



Site Landscape Concept Diagram

