

## PARKS & GREEN SPACE

The Metro Vancouver Regional Growth Strategy aspires to “achieve what humanity aspires to on a global basis – the highest quality of life embracing cultural vitality, economic prosperity, social justice and compassion, all nurtured in and by a beautiful and healthy natural environment.”<sup>1</sup> Urban parks, natural areas, trees and vegetation – which provide benefits such as improved air and water quality, reducing urban heat and encouraging recreation - are increasingly becoming necessary green infrastructure.

In the UEL, more than half of the land consists of parkland, the majority of which is in Pacific Spirit Regional Park, composed of mature second growth forest. Park-like streetscapes, gardens, and natural forest vegetation contribute to the character and liveability of the areas.

Area D is one of the oldest neighbourhoods in the UEL. Once a natural forest ecosystem, Area D is now a developed landscape with green spaces such as street trees, private gardens, the Jim Everett Memorial and Rick Genest Parks and **lelorn** Forest and Pacific Spirit Regional Parks at the eastern border.



Figure 1 and 2. Canopy cover in Area D  
(Source: UBC 2017 Stadium Neighbourhood Tree Inventory Project)<sup>1</sup>

<sup>1</sup> Metro Vancouver. Metro Vancouver 2040 Shaping Our Future. <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/RGSAAdoptedbyGVRDBoard.pdf>

As Area D grows, it will be important to preserve and enhance the features that support our community. Area D does not have any 'natural areas' that developed through natural growth rather than design, but there are many opportunities to enhance the environment through new and existing parks and green space. This includes preserving and enhancing existing trees, parks and green spaces, and adding new green infrastructure to cool streets and buildings, to capture stormwater and to provide habitat for birds and pollinators.

## **HOW CAN WE PRESERVE, ENHANCE AND EXPAND HEALTHY PARKS AND GREEN SPACES?**

## KEY FACTS

- Tree canopy covers 16% of Area D
- Paved surfaces cover more than 50% of Area D (higher than the average for the UBC Campus)
- Area D has the highest concentration of multi-family homes in the UEL
- Water consumption for irrigation in Area D is the lowest among the UEL neighbourhoods
- Area D has 2 parks: Jim Everett Memorial Park, a formal park space with low canopy cover, and Rick Genest Park, a park with coniferous forest canopy and walkways.

## KEY DEFINITIONS

**Urban forest** refers to all the trees, vegetation, soil and associated natural processes across our city's landscape, both on public and private land.

**Canopy cover** is the extent of the urban forest, determined by measuring the area of tree canopy when viewed from above.

**Green infrastructure** refers to natural vegetation and soils as well as bioengineered solutions that make use of nature to manage rainwater runoff, such as a rain garden or green roof. In the context of rainwater management, green infrastructure is often defined in opposition to grey infrastructure, which refers to conventional pipes and drains put in place to collect and carry runoff.

**Impervious cover** refers to surfaces such as paved roads or buildings, which prevent rainwater from infiltrating, unlike pervious surfaces that allow rainwater to infiltrate the soil.

## RELATED POLICIES & PLANS

- Metro Vancouver 2040 Shaping Our Future, 2011
- Official Community Plan, 2005
- Land Use, Building and Community Administration Bylaw
- Integrated Stormwater Management Plan, 2018
- Works and Services Bylaw

## TRENDS & ISSUES

- **Warmer, drier summers and extreme heat and rainfall events will impact our parks, green space and natural features.** Metro Vancouver's climate change projections<sup>2</sup> for the 2050s are:
  - The hottest day temperature may increase by 4°C and extreme heat events will become hotter. Green space and green infrastructure will be important to cool buildings and communities on hot days.
  - Rainfall may decrease by 19% in the summer. Seasonal lack of water will make it hard for some plants and trees
  - Rainfall may increase in fall, winter and spring, mostly through extreme rainfall events. Green space can catch and store rainwater.
- **Paved cover is relatively high due to our denser multi-family and commercial land uses.** As the area redevelops, paved surfaces and underground parking may increase on private land, which will reduce surface permeability and the volume of native soils, and the area's capacity to capture and store rainwater and support trees and vegetation at ground level.
- **Canopy cover has been relatively low.** Canopy cover in Area D is approximately 16%, lower than the average for Vancouver (18%), UBC (26%) and West Point Grey (28%). Area D's low canopy cover is likely due to the high proportion of paved (impervious) surfaces; and parks and green spaces having low numbers of trees. This may worsen with future redevelopment but there are opportunities to plant trees along streets and in existing parks and green spaces and to identify and select trees species that are best adapted to the changing climate. Requirements for watering in summer months can be anticipated as regular operating costs.
- **Area D was converted from a natural forest ecosystem to a developed landscape that includes street trees, private gardens and landscaped parks.** Area D's proximity to remnant natural forests in Pacific Spirit Regional Park as well as the park-like streetscapes and landscaped parks of other UEL neighbourhoods provides opportunities to improve the connectivity of green space and vegetation to provide habitat for wildlife and insects such as pollinators.
- **Food security is a challenge and opportunity.** Food security means all community members have access to nutritious, safe, ecologically sustainable and culturally appropriate food at all times. While there are limited opportunities for residents to be involved in a local food system, there is increasing interest in community gardening, backyard chickens, farm-gate sales, beekeeping, etc.

<sup>2</sup> <http://www.metrovancouver.org/services/air-quality/AirQualityPublications/ClimateProjectionsForMetroVancouver.pdf>

## GOALS

The UEL can work towards the following goals and objectives:

### Goal 1: Protect parks and green spaces

- Preserve Jim Everett Memorial Park, Rick Genest Park and the bridle path
- Preserve existing healthy trees and shrubs

### Goal 2: Enhance natural features and their connectivity

- Increase canopy cover over streets, parks and other green spaces
- Plant trees and understory plants to develop pollinator pathways that connect to other UEL and UBC areas and the Pacific Spirit Regional Park
- Plant native vegetation and large trees whenever suitable
- Create open drainage features to support urban wildlife
- Promote the use of parks and public space for food security

### Goal 3: Sustain environmental quality

- Use green infrastructure to increase stormwater infiltration, encourage natural drainage, support healthy vegetation and provide summer cooling
- Design landscapes to respond to climate change, provide ecological function, provide adequate soil volume and enhance biodiversity
- Select plant species that will be well adapted to local conditions and a changing climate
- Select plant species that encourage biological diversity

## IDEAS

*To support parks and green space, the UEL can explore a range of policies, projects and partnerships. The following provides a range of options to spark discussion about the best way forward for Area D. It is not a complete list of options and no decisions have been made.*

### WE WANT TO KNOW WHAT YOU THINK!

Share your thoughts on the future of Area D by:

- Visiting us at [AreaDPlan.ca](http://AreaDPlan.ca)
- Telling us what you think in an online survey
- Coming to one of our events

**Protect And Preserve Green Space.** Identify, plan, and protect trees, parks, wildlife nesting sites and habitat for species at risk by requiring tree protection and management plans, nesting surveys, and erosion and sediment control for building / development permit applications.

**Increase Biodiversity And Control Of Invasive Species.** Control invasive species and increase plants suitable for the area that are waterwise, native and support biodiversity.

**Protect Views And Landscapes.** Identify cherished landscapes and views and create guidelines to protect them as we develop.

**Improve Stormwater Management.** Improve the target for stormwater runoff reduction, and continue to require developments to submit stormwater management plans to achieve this commitment.

**Plan For Tree Canopy Cover.** Develop a target for tree canopy cover or 'leaf area', along with requirements for developments to develop and implement landscape plans to achieve the target.

**Establish Public Realm Landscape Design Guidelines.** Establish goals for sustaining environmental quality and enhancing natural features and their connectivity in the public realm.

**Establish Private Realm Landscape Design Guidelines.** Develop guidelines for sustaining the environmental quality of natural features in the private realm. Guidelines could encourage climate-adapted trees, soil preservation and replacement, and green infrastructure like green roofs and walls, stormwater harvesting and wildlife habitat features like nesting boxes, water features, cover and forage habitat.

## CASE STUDIES

### LUSH 3.0, SINGAPORE

Singapore’s Urban Redevelopment Authority manages the Landscape Replacement Programme, which requires developers to replace greenery lost from a site with greenery on other areas of the development. LUSH was introduced in 2009 to guide the program. The current standard is LUSH 3.0, which defines numerous types of greening as landscape replacement, including ground landscaping, vertical greenery and extensive green roofs, rooftop urban farming and mid-level sky terraces. Development must also set aside land along its boundaries and public roads as green buffers and planting strips.

The amount of greenery required is assessed with a Green Plot Ratio calculated by dividing the total leaf area of greenery on a site by the development site area. The site’s Green Plot Ratio is pegged to each development’s landscaping requirements as the minimum standard they need to provide in Landscape Replacement. Developers are also given an incentive to implement innovative or larger communal rooftop or ground level spaces by being eligible for bonus floor area or gross floor area exemptions.

#### LUSH & LUSH 2.0

#### LUSH 3.0



Overview of the LUSH programme (Source: [Singapore Urban Redevelopment Authority](https://www.ura.gov.sg/our-work/landscape-replacement-programme))

## STORMWATER MANAGEMENT REQUIREMENTS FOR NEW DEVELOPMENTS, CITY OF NORTH VANCOUVER

As part of their work on an Integrated Stormwater Management Plan, the City of North Vancouver adopted a source control target of up to 70% of the peak annual average daily rainfall. To achieve this target, they adopted requirements for all new developments to develop a Stormwater Management Plan that would demonstrate how they will meet the target. New developments that include three units or more are required to provide a report from a qualified engineer. Larger developments can make use of the street right-of-way to implement green infrastructure such as rain gardens, bioswales or below-grade soil cells, which manage stormwater runoff, provide habitat for wildfire and pollinators, and contribute to cooling the area during the summer.

## MORE INFORMATION

[Metro Vancouver's Urban Forest Climate Adaptation project.](#)