

A wide-angle photograph of a grassy field in the foreground, with a line of trees and houses in the background. The sky is a clear, bright blue. The trees are mostly green, with some showing autumn colors. A few people are visible in the distance near a playground.

Town of Sidney

# **URBAN FOREST STRATEGY**

## ACKNOWLEDGMENTS

Barefoot Planning would like to acknowledge the important and on-going contributions of Town staff, key stakeholders, and all participating community members in the development of this Urban Forest Strategy. We would also like to thank Town Council for their support and involvement.

## PROJECT TEAM

### From Barefoot

Evan Peterson, Principal

### From Talbot MacKenzie Arborists

Graham MacKenzie, Principal

Michael Marcucci, Consulting Arborist

### From Town of Sidney

Tim Tanton, (Former) Director of Development Services, Engineering, Parks & Works

Kevin Webber, Planning Analyst

Mike Pryor, Arborist

Public Works & Parks Staff, including Cliff Halliday and Brian Robinson

Development Services Staff

### Prepared for:

Town of Sidney

2440 Sidney Avenue, Sidney, BC, V8L 1Y7

sidney.ca

### Prepared by:

Barefoot Planning

Victoria, BC

barefootplanning.com



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**Note:** This document is best viewed in “two-page” mode, as facing pages tend to correspond to each other.



# URBAN FOREST STRATEGY AT A GLANCE

## What is this?

The purpose of the Urban Forest Strategy (UFS) is to [a] establish a clear vision and objectives for the future of our urban forest and [b] identify the policies and actions to achieve those objectives.



## Why plan for the urban forest?

The benefits of urban trees are numerous – from beautification to traffic calming to habitat creation to stormwater management – and these benefits extend beyond more natural forested areas. See pages 8-10 for more details.

## What did the community say?

Some key community input included:

- » Protect trees and enhance natural areas adjacent to the bird sanctuary
- » Promote adequate growing conditions and healthy soils
- » Support residents and volunteers on enhancement programs
- » Increase street tree plantings throughout the Town
- » Reduce the impacts of development on mature tree

See pages 11-13 for more details

## What are the existing conditions?

Sidney's urban forest is primarily characterized by a compact, highly urbanized development pattern and a lack of large natural areas. As a result, the existing Tree Canopy Coverage is relatively low 14.4%. See Chapter B for more details.



## What are the UFS goals?

Three primary goals were established that the strategy seeks to achieve:

- » Urban Forest Protection & Enhancement
- » Beautification & Placemaking
- » Implementation Framework

See page 14 for more details, including UFS Values and Principles.

# WHAT ARE THEY KEY RECOMMENDATIONS?

Below is a list of the high priority actions of the UFS

## ON-GOING ACTIONS

- » Strengthen policies (e.g., OCP) relating to tree retention, landscape design, and identifying opportunities for ecological connectivity
- » Create and maintain a public tree inventory using GIS technologies
- » Work to meet an interim canopy coverage target of “no net loss”
- » Utilize park planning and local area plans to improve urban forest health
- » Improve the Development Review process to improve mature tree retention and growing conditions
- » Explore external funding sources for urban forest initiatives

## SHORT-TERM ACTIONS

- » Develop a Street Tree Planing Plan based on a block-management approach
- » Undertake an initial pilot program to determine success of identified native species
- » Improve the Tree Preservation Bylaw to better mitigate impacts on the urban forest
- » Conduct a review of staff and resources dedicated to urban forest management
- » Improve the Boulevard Maintenance Bylaw and clarify related responsibilities
- » Undertake an urban forest awareness campaign to raise public awareness and understanding



## MEDIUM- AND LONG-TERM ACTIONS

- » Develop incentives and/or requirements to improve the ecological integrity of development
- » Develop a Boulevard Tree program

See pages 42-46 for the full implementation plan, including all actions.

# A

## INTRODUCTION, PROCESS, AND PROJECT FRAMEWORK

### **A1. Chapter Overview**

This chapter reflects the first phase of the project process, which consisted of an assessment of existing conditions; community, stakeholder, and staff consultation; and the development of a project framework. Together, the outcomes of this phase form the platform on which the recommendations and implementation strategy are built. Inside, you will find...

- » An introduction to the project – including background, rationale, and key objectives;
- » An overview of what an urban forest is, along with an explanation of the multi-faceted benefits of and rationale for urban trees;
- » An overview of the project process and a brief summary of the consultation outcomes; and,
- » An description of the project framework, including project goals, values, and principles – which serve to inform the development of recommendations and the implementation strategy.





## A3. About Urban Forests

### What is the “Urban Forest”?

The urban forest is the sum total of all trees (and related biotic and abiotic elements) within an urbanized community. This forest includes all publicly and privately owned trees, such as those in parks, on school grounds, in residential yards, and along streets.

These trees may have very different appearances – from remnant forests, to small tracts preserved during development, to designed landscapes to leftover, untended

collections of vegetation. Collectively, and through planned connections of green spaces, the urban forest provides critical “green infrastructure” on which communities depend.

Urban forestry, then, involves the planning, planting, protection, and maintenance of trees, forests, green spaces, and related resources in and around cities and communities for economic, environmental, social, and public health benefits for people.

### What makes a successful Urban Forest?

A successful urban forest is defined by its quality as much as its quantity. In a compact city context, a high quality urban forest should be both productive and abundant while also supporting and accommodating a range of other community needs and functions. This results in a sunny, open forest structure

with a diversity of treed environments throughout all parts of the community – varying by neighbourhood, land use, and local growing conditions – to provide a breadth of functions and benefits to human, other species, and natural systems (see diagrams on pages 9 and 10).



Urban forests are critical in cooling the urban heat island effect, beautifying streetscapes and neighbourhoods, providing urban habitat, and improving air and stormwater quality.



**An urban forest is all of the trees, vegetation, soil, and associated natural processes throughout the Town’s landscape, including:**

Trees within parks & open spaces



Trees on private property and boulevards



Street trees and landscaping



Green infrastructure, such as rain gardens



Forested areas and vegetated buffers



**Benefits: Why an Urban Forest?**

Urban trees and quality urban forests provide many benefits to communities. These include the following:

**Social and Community Benefits**

- » Urban forests improve our quality of life and help to beautify communities.
- » Trees and well-landscaped grounds are among the most important factors considered when individuals choose a place to live.
- » Green spaces entice neighbours outdoors on a regular basis, where they build friendships and community ties.
- » Workers with a view of nature from their desk were found to have better overall health, increased job satisfaction, less frustration with tasks and overall higher feelings of life satisfaction.

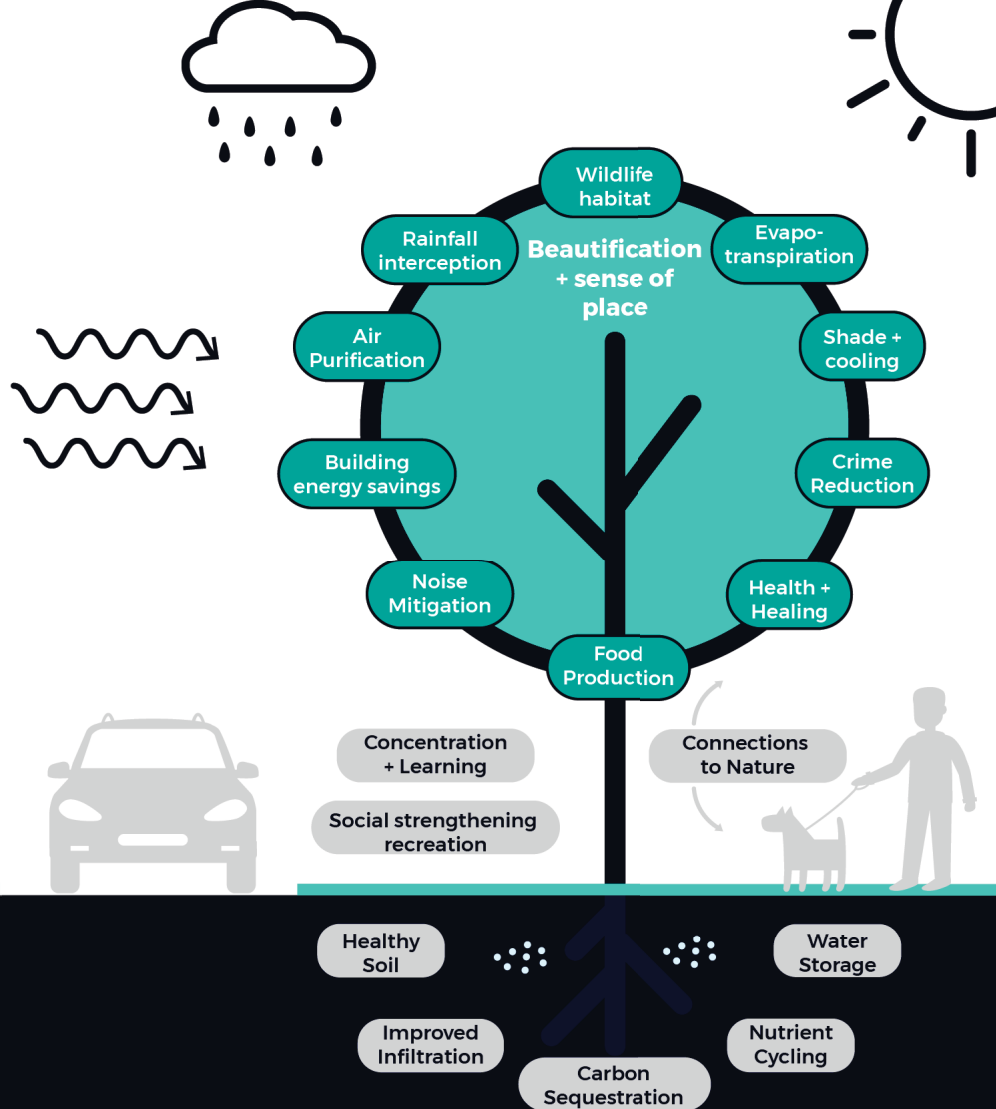
**Health Benefits**

- » Trees and green spaces can help ease the everyday pressures of life.

- » Even brief encounters with nature can improve one’s ability to concentrate.
- » Attention Deficit Disorder (ADD) symptoms in children are relieved after spending time in nature.
- » Roadside plantings and landscaping can reduce driver stress.
- » Patients with views of trees from their hospital bed spend less time in the hospital than those with no view.

**Crime and Safety**

- » In a study of inner city neighbourhoods in the U.S., greener residences had lower crime rates.
- » Inner city families with trees and greenery in their immediate outdoor surroundings have safer domestic environments.
- » Neighbourhoods with well cared for landscapes contribute to reduced feelings of fear and violence.



## Diagram of Tree Benefits

Urban trees provide many environmental, social, and economic benefits:

### Air Quality

- » Trees improve air quality by removing atmospheric carbon dioxide, absorbing air pollutants and producing oxygen. The average Canadian urban tree is estimated to remove about 200 kg of carbon over an 80 year period.
- » An analysis of the Washington D.C. metro area concluded that tree cover generated annual air quality savings of \$49.8 million.

### Reduced Energy Costs

- » Trees properly placed around buildings can reduce air conditioning needs by 30 percent and can save 20 - 50 per cent in energy used for heating.

### Environmental Benefits

- » Trees prevent runoff and erosion, resulting in improved water quality and reduced stormwater runoff or flooding.

- » For every 1000 trees, nearly one million gallons of stormwater run-off is prevented.

- » Trees are a critical source of habitat for many wildlife.

### Economic Benefits

- » Property values of well-landscaped homes can be increased by 5-20 per cent.
- » A study of urban forests shows that for each \$1 invested in urban forest management, up to \$3 in benefits is returned to residents through increased property values, removal of air pollutants, and energy savings through shade.
- » Shoppers have indicated that they would be willing to spend up to 12 per cent more for products in business districts with attractive urban forests.

## A4. Project Process

The planning process for the UFS included two public open houses, three surveys, two staff workshops, and multiple expert interviews. Thank you to all of those who contributed!



September 2018

### Preliminary Analysis | Project Team

The Project Team undertook analyses of the urban forest, including identification of areas of significance, opportunity areas, existing conditions and canopy coverage, and related Town policies.



October 2018

### Engagement Round 1 | Public & Town Staff

Dedicated interactive events (and an online survey) with community, stakeholders, and Parks staff will set the stage for deeper analyses and developing the key elements of the Urban Forest Strategy.



Nov-Jan 2019

### Early Draft Strategy | Project Team

The Project Team will analyze the engagement data from community, stakeholders, and staff in order to create an early draft of the Urban Forest Strategy, including vision, goals, and recommendations.



Jan-Feb 2019

### Engagement Round 2 | Public & Town Staff

Another round of events with public, stakeholders, and Parks staff will provide opportunity for feedback on the draft Urban Forest Strategy.

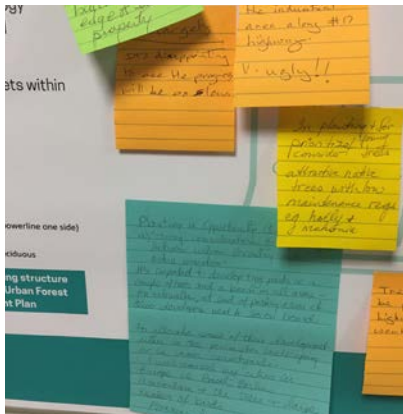
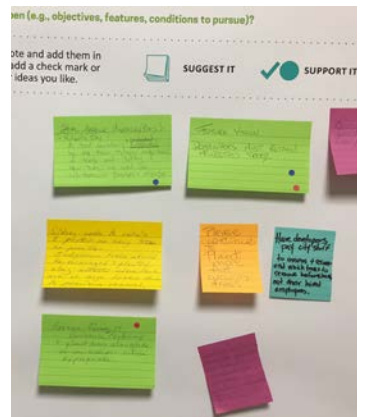


May 2019

### Finalize & Present | All

Following the second round of engagement, the Project Team worked with Town staff to iteratively refine the final UFS. Once complete, Barefoot presented the final UFS to Council at a public meeting.

## A5. Community Consultation



Community consultations included a two large-scale public events, two surveys, and engagement with local youth.



## A6. Consultation Outcomes

A collaborative engagement process integrated public engagement with focused consultations with key stakeholders and school groups, along with dedicated workshops with Parks and Development Services staff. As a result, the project process progressed from guided but open-ended public feedback to a refined set of implementable recommendations. The key outcomes from the engagement process are summarized briefly below:

### **Key features and conditions to pursue for an enhanced urban forest are...**

- » Pursue funding and partnerships
- » Strengthen policy and awareness to protect and improve areas adjacent to the bird sanctuary
- » Strengthen regulations impacting loss of trees due to development
- » Create a strong vision for the future
- » Map and inventory existing (significant) trees and new plantings
- » Protect nesting trees and adjacent trees
- » Prioritize trees over surface parking
- » Better protection from construction and public works (e.g., underground)
- » Recognize carry-on impacts of removing large stands of trees

- » Respect private property rights with regard to the impact of policies and regulations

### **Key tree planting strategies are...**

- » Select native species and species that create maximum benefit and habitat
- » Ensure adequate growing conditions and utilize gator/watering bags
- » More flowering trees
- » Developing a boulevard tree plantings plan
- » Support residents (particularly within ESAs) with incentives, such as watering allowances or tax breaks
- » Establish a boulevard tree program (i.e., free trees with owner maintenance)
- » Denser plantings in public parks

### **Key areas of protection or opportunity for enhanced urban forestry are...**

- » Strengthen protection within Allbay peninsula
- » Expand Roberts Bay ESA to include properties further inland
- » More plantings / buffering around Mary Winspear Centre
- » Increase street tree plantings throughout Sidney, including Ardwell Avenue, Orchard Avenue, Ocean Boulevard, Bowerbank Road, Resthaven Drive, etc.



## A9. Project Framework

Based on the analyses and consultation phases of the project, a framework was created from which to build the resulting recommendations and implementation strategy. The project goals, values, and principles inform all the subsequent plan content; and, this content must speak to the framework in order to achieve the project goals.

### Project Goals

Based on past initiatives, project team analysis, and public, stakeholder, and staff consultation, the following goals were developed to represent the key objectives that the strategy seeks to achieve.



#### Urban Forest Protection and Enhancement

Provide guidance for the restoration, maintenance, and expansion of the urban forest and natural areas.



#### Beautification & Placemaking

Provide direction for the integration of street trees in the creation of high quality streetscapes and well-defined, beautiful, and “green” urban places.



#### Implementable Framework

Identify the necessary amendments and next steps to create a comprehensive policy and regulatory framework to guide the future of Sidney’s urban forest.

## Project Values

Similarly, based on consultation and analysis, the following represents the most important, core values that the project should speak to and embrace in all aspects of planning.



### Ecological Health & Resilience

Working to enhance the integrity and resilience of the natural environment.



### Green Infrastructure

Integrating built and natural assets to increase ecological and infrastructure functioning, simultaneously.



### Connection & Well-being

Fostering a community connection with the natural environment and facilitating related recreational activities.



### Urban Design & Placemaking

Utilizing trees and landscaping to enhance and better define streetscapes and public spaces.



### Learning & Collaboration

Fostering collaboration and learning about the urban forest via education, funding, and partnerships.

## Project Principles

Finally, the project principles represent the guiding 'rules' that the recommendations and priority actions should speak to in order to achieve the project goals.



### Commitment & Investment

Demonstrating an on-going civic and financial commitment to a healthy and ever-improving urban forest.



### Systems Integration

Incorporating multi-functional solutions, such as landscaping that looks nice but also helps manage stormwater and provide species habitat.



### Future-Oriented & Adaptive

Looking to the municipal and climatic futures to ensure recommended actions that prepare for an uncertain future.



### Actionable and Strategic

Focusing on implementable policy amendments and next steps, rather than high-level policy directions.

# B

## ASSESSMENT OF EXISTING CONDITIONS

### **B1. Chapter Overview**

This chapter provides a high-level qualitative and quantitative assessment of the existing urban forest in Sidney. The content is representative of the outcomes from project team analyses, – including GIS, site visits, and a review of relevant policy and regulations. Inside, you will find...

- » An overview of historical conditions of the urban forest in Sidney;
- » An overview of existing urban forest vulnerabilities and opportunities;
- » An assessment of existing tree canopy coverage, including comparison to similar municipalities;
- » An overview of setting tree canopy coverage targets, with example best practices from other communities;
- » A summary of existing areas of significance and areas of opportunity in Sidney's urban forest; and,
- » An overview of the existing urban forest policy framework in Sidney.







1969



2000



1980



2017

**Reay Creek and area** – showing canopy cover changes over time from farm and small forested areas to new, bare subdivision to maturing suburban form with preserved park area and some increases in canopy coverage.



1969



2000



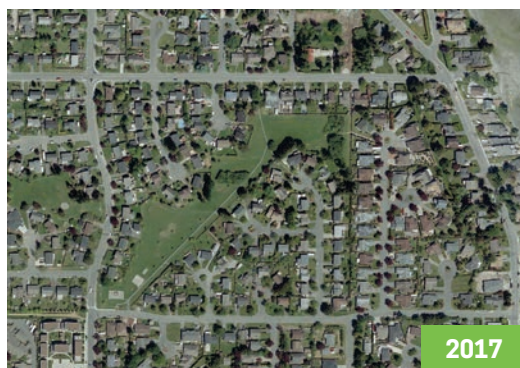
1980



2017

**Robert's Bay, Mermaid Creel to Beaufort Road** – showing canopy coverage changes over time, including gains around Mermaid Creek and some losses adjacent to Beaufort Road.





**Rathdown Park area** – showing canopy coverage changes over time, including significant losses near Ardwell/Resthaven as well as some gains in maturing areas.

### B3. History of Our Urban Forest

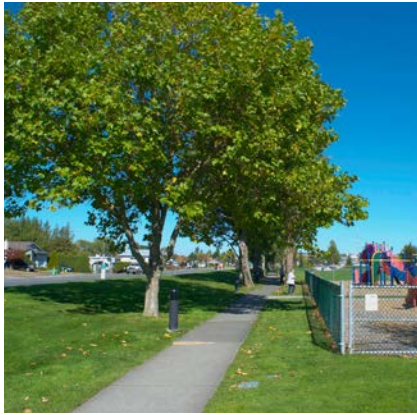
Sidney is situated within the coastal Douglas Fir ecosystem and was a winter village site for the WSÁNEĆ People for thousands of years. The WSÁNEĆ are believed to have cultivated the landscape as a productive kwetlal (camas) meadow or “Garry Oak savannah”. Over the past 150 years, since the arrival of the first settlers, the Town rapidly transitioned from its natural or culturally modified state to predominantly farmland to

increasingly urbanized community. The natural forest was decimated by logging in the late 1800s and early 1900s.

On pages 18-19, you can see some of the changes (losses and gains) to our urban forest and tree canopy cover over time. As reference, Town staff have planted over 300 trees, over the past 5 years.



Coastal Douglas-fir Biogeoclimatic (CDF) Zone is the smallest and most at-risk biogeoclimatic zone in British Columbia and is of great conservation concern (Biodiversity BC, 2008). It is home to the highest number of species and ecosystems at risk in BC, many of which are ranked globally as imperiled or critically imperiled (BC Conservation Data Centre, 2012)



## B4. Existing Conditions

Sidney's urban forest today is characterized by a number of strengths and weaknesses:

### Threats & Vulnerabilities

- » Flat topography and historical use as – for example – agricultural/cultivated and industrial land;
- » Highly urbanized development pattern and policies typically limit plantable space in most areas;
- » Degraded watersheds and biodiversity as a result of historical uses and development;
- » Very limited areas of existing mature forest (e.g., Reay Creek Park);
- » A general lack of large street trees in neighbourhoods and downtown;
- » Development pressure has led to removal of mature trees in favour of young replacement trees with less benefits;
- » Existing tree replacement rate (due to plantable space, growing conditions, staff resources, and development impact) is not increasing its overall canopy cover;
- » Only 1 arborist on staff, deployed in a variety of non-tree tasks while also managing tree permits and inspections.

### Strengths & Opportunities

- » Some areas of strong ecological value and potential to build upon (e.g., Beaufort Grove, Reay Creek);
- » Significant opportunity to enhance urban forest on public (e.g., parks) and private/institutional lands (e.g., schools, private yards);
- » Significant potential to establish community partnerships and engage volunteers to co-manage urban forest;
- » Well-coordinated and motivated parks staff (in need of additional resources and policy direction);
- » Strong ecological and naturalist history (e.g., John Macoun) that can be built upon and celebrated in creative ways;
- » First Nation history and knowledge that may be recognized and applied to support cultivated, functioning landscapes.

Together, most of these factors reduce the health and scale of our urban forest – and specifically limit the overall tree canopy coverage. Moreover, a number of essential – if not challenging – opportunities for improvement as a result of improved urban forestry are present (e.g., enhancing local biodiversity and watershed health).



## B5. Tree Canopy Coverage

### Existing Canopy Coverage in Sidney

Tree canopy coverage is an important metric of the scale and health of the urban forest. Sidney’s existing average tree canopy coverage is 14.4%, excluding foreshore areas and airport lands.

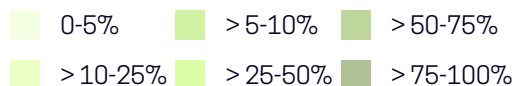


This coverage estimate was calculated using over 900 data points via the iTree Canopy (v6.1) application. The tool randomly generates sample points on a defined area of Google Maps aerial photography (2018) and allows you to determine the degree of tree cover at increasing levels of accuracy.

### Tree Cover Density

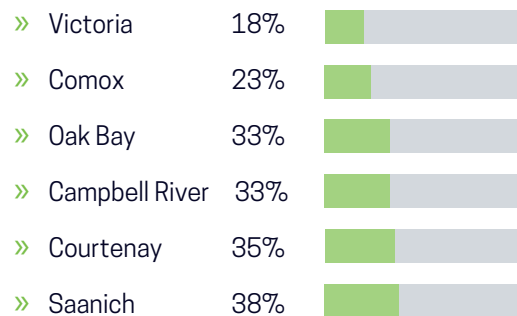
The adjacent map shows tree cover density in 2005 (note that this data was not used to calculate existing tree canopy coverage) and provides a rough visual representation of Sidney’s urban forest.

Tree cover density is calculated using GIS analysis, in which the percentage of tree cover is calculated for 1 hectare polygons across the entire CRD (and therefore should only be considered an approximation). The lightest green represents 0-5% tree density, and the darkest 75-100% tree density.



### Canopy Coverage Comparisons

For comparison, here are the reported existing canopy covers in some nearby and comparable municipalities:



Base image: CRD Regional Map tool



## B6. Setting Targets – Trends

There are a number of best practice strategies that municipalities can take to establishing long-term goals to increase their tree canopy coverage. For example:

- » Not Net Loss: The District of Saanich has set a goal of “no net loss”, with an undefined long-term goal, which can be defined as OCP policies are reviewed and updated.
- » Based on Plantable Spaces: Based on that 27% of its land is plantable space, the City of Kelowna set a goal to increase its canopy from 13% to 25%.
- » Site-level Canopy Coverage: The City of Tacoma, among others, is moving toward a specified minimum canopy coverage on all new development sites “at maturity” – as opposed to focusing on replacement trees.
- » The City of Lake Forest Park, Washington, has similarly adopted site-level canopy

target guidelines, using lot size as a basis for analyzing canopy and establishing targets.

- » By Land Use: The City of Duncan set a city-wide target of 40% canopy cover by 2050, with an interim target of 30% by 2020. These targets are derived from land use-based recommendations by the non-profit American Forests. An additional 3,729 trees are required to meet the 40% canopy cover target.

At the operations level, the Town is not presently equipped to increase the canopy coverage. Therefore, clear actions, strategies, and priorities – including resource allocation – need to be established to achieve a healthy urban forest in the long-term, which is the purpose of this plan.

See Section C4A (Page: 40) for recommendations related to tree canopy coverage.



Sidney’s compact built form and lack of large natural areas mean that high canopy coverage targets are unrealistic.



## B7. Areas of Significance & Opportunity

While some key factors limit the potential to greatly expand the Town's urban forest, there is a big opportunity to [a] provide greater

protection to existing areas of significance and [b] capitalize on areas of opportunity.

### Urban Forest: Areas of Significance

Several areas of significant ecological value in the Town have already been identified via Environmental Sensitive Area policies in the Official Community Plan. Yet, their critical importance to the urban forest (and other critical assets, such as the Migratory Bird Sanctuary) are not particularly well-recognized in policy. These areas include:

- » Roberts Bay
- » Mermaid Creek
- » Lochside Waterfront
- » Beaufort Road
- » Reay Creek

### Urban Forest: Areas of Opportunity

In addition to these existing areas of urban forest, there are multiple areas and types of spaces (e.g., boulevards, parks, institutional land) within the Town that provide opportunity to contribute to the urban forest in a meaningful way. Through this process, the project team identified suitable areas,

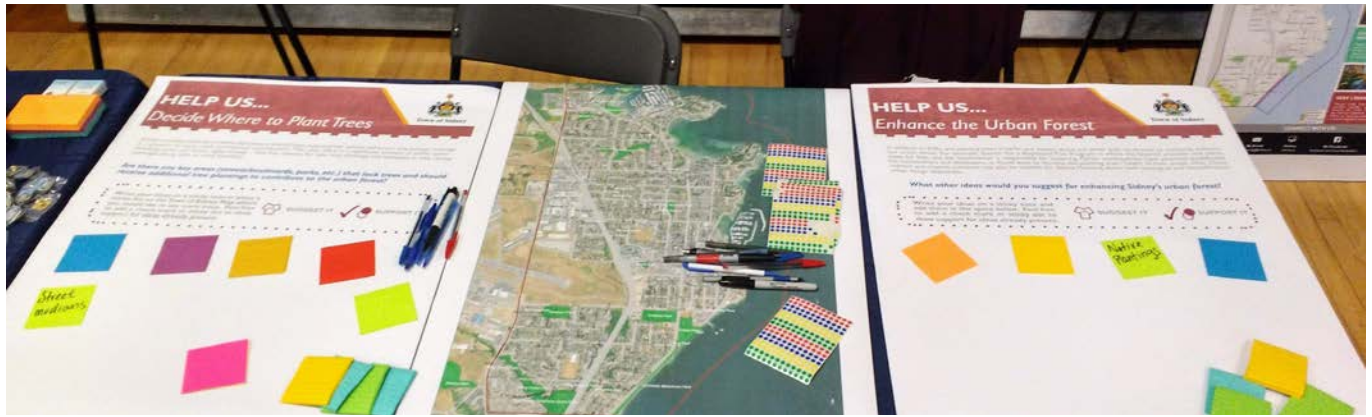
Other areas in the Town that critically contribute to the Town's urban forest have not been formally designed or protect. These include:

- » All Bay
- » Resthaven Island
- » Brethour Park
- » Armstrong Point (All Bay Road)

Section C3A (Page: 34) provides specific recommendations with regard to improving the protection of already identified areas and establishing protecting for these unidentified areas of significance.

high-level guidelines, and key next steps for implementation.

Section C4A (Page: 40) provides specific recommendations with regard to these areas and how they could be better utilized to enhance our urban forest.



## B8. Review of Existing Policy & Regulation

The Town of Sidney currently has some relevant policies and regulations that help define, protect, and enhance the urban

forest. However, generally speaking, these are limited and do not reflect the directions of this strategy.

### Official Community Plan

#### General Policy

The Official Community Plan (OCP) contains a fairly generic policies that relate to the urban forest, both from a streetscape and environmental (and climate change) perspective. These include:

- » Section 13.3.11 Enhancement of streetscapes throughout the Town is encouraged through tree preservation and tree planting on public open spaces and boulevards, where possible.
- » Section 14.3.4 The Town will continue to protect trees within the Town using the Tree Preservation Bylaw.

These basic, enabling policies will need to be expanded upon to serve an aspirational strategy for the future.

### Downtown Streetscape Standards

The recently approved Downtown Streetscape Standards provides recommendations for tree

#### Environmentally Sensitive Areas

Further, the OCP identifies several Environmentally Sensitive Areas (ESAs) and contains related policies to protect and manage these areas. The Roberts Bay and Beaufort Road ESAs include policies specific to tree preservation; whereas, the Mermaid Creek, Reay Creek, and Lochside Waterfront ESAs lack urban forest-related policies.

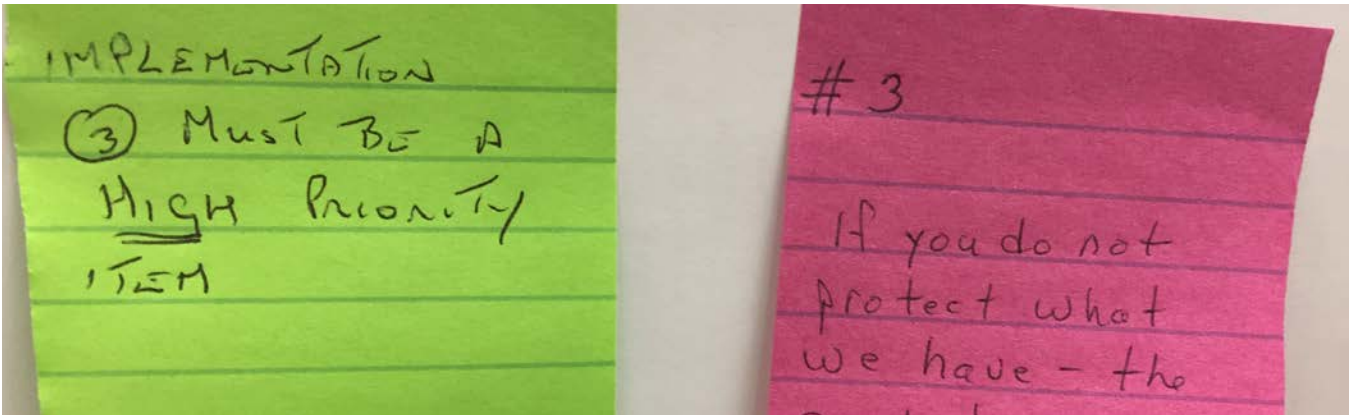
#### Development Permit Areas

Development Permit Area (DPA) guidelines within the OCP identifies also include some minimal policy direction for tree retention and replacement. These generally relate to the retention of trees outside the proposed building envelope and creation of attractive streetscapes.

Section C3A (Page: 34) provides related recommendations on amending and approving these policies.

plantings and other landscaping elements (e.g., rain gardens). Emphasis is placed





on species selection and placement with regard to suitable tree characteristics (e.g., height, crown diameter, spacing) and growing conditions.

### Tree Preservation Bylaw

The Town's Tree Preservation Bylaw defines protected trees, details the relevant regulations and procedures for the protection and replacement of protected trees, provides high level guidelines for the

Notable recommendations include the use of structural soil cells and recommended tree species for both downtown, in general, and specifically along Beacon Avenue,

planting and watering of trees, and identifies a handful of Significant Trees. Section C3A (Page: 28) provides recommendations on amending the Tree Preservation Bylaw.

### Climate Change Adaptation Best Practices

The BC Ministry of Community, Sport and Cultural Development published a guide to help communities better utilize the capacity of their urban forests in adapting to climate change. Best practice include:

- » Placing groves of large-leaved trees and shrubs upwind of heat island areas, so that evapo-transpiration from the vegetation will create cooler, moister air that blows into the 'hot spots'.
- » Planting green roofs and green walls, which help to cool the air through evapo-transpiration of plants.
- » Shading large areas of asphalt (e.g., parking lots), which reduces polluting emissions from cars, extends the life of the asphalt, as well as providing a more pleasant environment for parking. In winter, these trees and their roots can be designed to be part of the rainwater management system.
- » Selecting tree species that are adapted to expected future climates.
- » Making it easy for water to soak into the ground, through raingardens (especially with trees), or where a generous unpaved area has been left around the trunk area (perhaps planted with shrubs).
- » Plant large shade trees in public spaces, including clusters or groves of trees, preferably with multiple canopy layers, amplify the benefits.
- » Plan for successive plantings that produce a diversity of hardy species, age classes and growth rates, to ensure continuous canopy cover over time.
- » Planting evergreen species where managing stormwater is a prime concern, to maximize water uptake during the raining seasons.

# C

## URBAN FOREST RECOMMENDATIONS

### **C1. Chapter Overview**

This chapter provides a detailed set of recommendations, directions, and next steps that directly inform the implementation strategy found in Chapter D (Page: 42). Inside, you will find...

- » Recommendations, directions and next steps for improving the protection and management of the urban forest – including policy and regulation, staffing and resources, restoration and invasive species, and management of hazardous trees;
- » Recommendations, directions and next steps for improving the planting and enhancement of the urban forest – including inventories and planting plans, canopy and planting targets, planting guidelines and programs, and utilizing opportunity sites; and,
- » Recommendations, directions and next steps for improving the stewardship and learning related to the urban forest – including community partnerships and volunteerism, community education and communications, and integration of First Nation partners, knowledge, and cultural practices.





## A. Policy & Regulation

### 1. Official Community Plan Policy

A review of the Official Community Plan (OCP) is a key priority for Sidney's Council. The review should be utilized to work toward the following recommendations:

- a. Develop directional objectives and enabling policies consistent with this strategy.
  - b. Strengthen Environmentally Sensitive Area (ESA) policy by:
    - i. Supporting the protection of mature trees, heron and eagle nests, habitat features (e.g., vegetation overhangs, perches), other types of native vegetation (e.g., understory, shrubs), and beach ecology adjacent to the Shoal Harbour Migratory Bird Sanctuary;
    - ii. Strongly encouraging the retention and planting of native trees and habitat creation when properties redevelop;
    - iii. Strongly encouraging the use of conservation covenants within ESAs;
    - iv. Reviewing existing ESA boundaries for potential additions to better capture high value ecosystem assets and tree clusters in the Town, such as [a] the southern extension of Mermaid Creek and [b] upland areas adjacent to Tsehum Harbour, All Bay, and Resthaven Island;
    - v. Ensuring – at minimum – consistency with the Capital Regional District's
- Green/Blue Spaces Strategy, which identifies Roberts Bay as a “Blue Space Core Area”.
- c. Identify opportunities for connectivity between areas of natural habitat through strategic greenways and neighbourhood urban forest enhancements;
    - i. Determine related investment, policy, planning, and management needs.
  - d. Improve Development Permit Area (DPA) guidelines with regard to urban forestry by:
    - i. Integrating the tree planting and landscaping guidelines from this plan (see page 36) and developing area-specific requirements for streetscapes, parking areas, and the integration of natural habitat in development design and developing complementary regulations in zoning or other bylaws (e.g., Subdivision Bylaw);
    - ii. Incorporating policies that address the impact of building setbacks and setback projections on plantable space and loss of protected trees;
    - iii. Considering the inclusion of habitat-based (e.g., eagle nest, heron nest) DPAs, such as Campbell River's Bald Eagle DPA.
  - e. Consider the establishment of urban forestry and green infrastructure policies

as conditions of building or development permits, such as minimum permeable area coverage (or maximum effective impervious area), minimum tree canopy coverage, and urban habitat creation.

## 2. Other Policy & Regulations

A number of recommendations in this chapter impact existing Town policies, procedures, and regulations. In addition to those already identified elsewhere:

- a. Ensure future Local Area Plans include policies, plans, and designs to support the Town-wide recommendations of this plan (e.g., block-/area-based planting plans) and facilitate the creation of green infrastructure.
- b. More effectively promote the use of conservation covenants with private

### Urban Forestry in a Growth Centre

Protecting individual trees and small forested areas is of great environmental and community value. However, when developing policy and regulations, it is important to evaluate trade-offs between facilitating urban infill – and so protecting rural areas – versus sprawled development. Infill tends to have more visible but significantly less environmental impacts. Therefore, an integrated perspective that considers environmental impacts and sustainable development patterns is needed when thinking about urban forestry.

landowners as a protection and incentive tool, particularly within ESAs.

- c. Review existing bylaws and related charges to ensure that they sufficiently fund the planting and long-term maintenance of trees in new development and subdivisions.
- d. Review and consider amending the Zoning Bylaw to require greater setbacks for underground and surface parking areas to create more plantable space in multifamily and mixed use zones.
- e. Review Zoning Bylaw regulations for zones R1 and R1.1 and consider limiting the buildable area to offer greater protection to trees.
- f. Investigate the use of tools and levers that provide incentives and support to homeowners within ESAs (e.g., watering allowances, free tree plantings).

## 3. Tree Preservation Bylaw

The existing Tree Protection Bylaw could be improved to better protect trees through the development process, ensure replacement trees proportionately compensate for canopy loss, permit fees cover administrative costs. As a result, the following is recommended:

- a. When disagreements occur between the applicant's and Town's arborists, require a third party arborist opinion on removal of mature trees on private property.
- b. Protect all (native and non-native) trees with a DBH (diameter at breast height) of 45cm or greater.



### Protected Tree Replacement Ratios

Protected Tree Species	Size of Tree to be Cut (DBH)	# of Replacement Trees
<b>Garry Oak, Arbutus, Pacific Dogwood, Pacific Yew, and Shore Pine</b>	<4 cm	0
	4 cm to 20 cm	1
	20 cm to 40 cm	2
	>40 cm	3
<b>Douglas Fir, Grand Fir, Western Red Cedar, and Big Leaf Maple.</b>	< 1.2 m tall	0
	1.2 m to 6 m tall	1
	6 m to 12 m tall	2
	>12 m tall	3
<b>All other tree species</b>	45 cm to 60 cm	1
	> 60 cm	2

- c. Amend protected species regulations to reflect the following tree species and minimum size requirement table as presented above.
- d. Amend replacement tree regulations to:
- i. Require that replacement tree ratios are applied to all protected trees within the footprint of a proposed building or structure for which the Town has issued a building permit;
    - » Strongly encourage on-site replacement tree, but only accept trees in locations with sufficient space to sustainably accommodate replacement trees in the long-term – otherwise, accept cash-in-lieu;
  - ii. Require replacement tree bonds be held for a period of two years and only released upon inspection by a Town employee to ensure the health and structure of the tree is sufficient for reimbursement;
    - » Off-site replacement trees should be planted within the same neighbourhood as the removed tree;
    - » Town arborist to inspect all newly-planted replacement trees to ensure quality, suitable growing conditions, and planted in approved plan location;
    - » Town to maintain records of and periodically inspect replacement trees, while helping landowners be aware of replacement/protected trees located on their property.
  - iii. Ensure replacement tree deposits are part of the Building Permit process, including the identification of suitable locations on site plans.
  - iv. Ensure the following guidelines/protocols are met:
    - e. For pruning branches and roots, increase the minimum size that requires a permit to 10cm for all protected trees.

- f. Town to seek legal advice prior to finalizing Tree Preservation Bylaw amendments.
- g. Develop a Tree Preservation Bylaw Guide.

#### 4. Mitigating Impact of Works

- a. Develop an internal policy regarding the location of key infrastructure with respect to the goals of protecting and enhancing the urban forest.
- b. Develop a protocol based on a critical root zone (based on trunk diameter) to initiate municipal or contracted arborist review or supervision of underground works by Town staff or Fortis BC and their contractors.
- i. Work with BC hydro in a similar manner with regard to tree pruning and maintenance.
- c. Work with Fortis BC, BC Hydro, and their contractors to have their proposed works reviewed by a Town arborist to determine whether the project requires supervision by an ISA Certified Arborist.
- d. Improve coordination and communications between Town departments to ensure permitting staff and operations staff know when to involve an arborist

### B. Staffing & Resources

The Town arborist (1) is over capacity and tasked with responsibilities beyond tree permits and inspections. Moreover, the wider Parks staff is stretched in its capacity and resourcing – as identified in the Parks Master Plan. As a result, the current tree removal / replacement rate is roughly equal – with no increases to the overall canopy cover. In brief, the Town needs to commit more staffing and resources to urban forestry by:

#### 1. Operational Resources

- a. Conduct an internal assessment of and then dedicate the identified operational and staffing resources for improved urban forest management (based on this plan) in order to:
  - i. Better support development reviews, service calls, maintenance, plantings,

assessments, database development and maintenance, and administrative duties;

- ii. Ensure resourcing levels keep pace with increases to the urban forest and its related demands over time.
- b. Explore the installation of sprinkler systems in strategic locations to support new boulevard tree growth.
- c. Explore options for staff to address the prevalence of English Ivy on private lands in key urban forest areas (e.g., ESAs).

#### 2. Development Review

- a. Improve the development and development review process by:
  - i. Establishing a formal interdepartmental Tree Review Process that works with

applicants in the pre-application phase to identify existing trees and ensure building and landscape design protect soils and retains as many large, healthy trees as possible.

- ii. Work with proponents to ensures appropriate species selection,

adequate soil health and volumes, and other factors identified in this plan;

- iii. Increasing oversight of landscape design and construction to ensure that guidelines, policies, and approved plan elements are being implemented.

## C. Inventories & Mapping

The successful assessment, monitoring, and planning of the urban forest in Sidney will be significantly aided by contemporary GIS-based inventory and mapping work.

### 1. Tree Inventory & Database

- a. Create a functional database of the Town's urban forest via a Town-wide GIS-based inventory of:
  - i. Existing publicly-owned trees, including an assessment of tree health, species, and size.
  - ii. Plantable space on streets and public spaces in order to identify priority streets and spaces with low tree cover, high plantable space, and limited conflicts (e.g., utilities, airport) and support the tree planting in Section C4A (Page: 34).
- b. Maintain the database through regular tree inspections and clear internal procedures.
- c. Consider procuring GIS-based mobile data collection technology to improve the development and on-going maintenance of the urban forest inventory.

- d. As per section C4A (Page: 34), use this database to create a planting plan, ensuring species and age diversity and the selection of appropriate species.
- e. Maintain a public record of all replacement trees and related cash-in-lieu funds.

### 2. Significant Trees List

- a. Adopt a public process (e.g., physical and digital form) for nominating significant trees as part of a Town-wide inventory (currently exists within Tree Preservation Bylaw).
- b. Develop related policy for maintaining, managing, and emphasizing the protection of these significant trees.

## D. Restoration & Invasives Management

A number of areas in the Town present the opportunity for restoration and management by Town staff and/or community groups, which would enhance the quality of the urban forest..

- a. Enhance existing key urban forest nodes and facilitate native plantings and invasive species management by:
  - i. Working to establish community partnerships (see C5A) (Page: 40) to better manage and enhance locations such as Brethour Park, Beaufort Grove, Allbay Road, Mermaid Creek, and Frost Avenue Park – among other possible

locations – with a focus on invasives management and planting of native species (e.g., trees and understory plantings);

- ii. Developing a comprehensive management plan for Reay Creek Park and considering an invasive management plan for Brethour Park;
- iii. Establishing an initiative to create a model, interpretive native restoration area at the Ardwell Beach Access with Garry Oak, Arbutus, Willow, and Ocean Spray.

## E. Hazardous Trees

Together, the public and Town can reduce the risk posed by hazardous trees.

- a. Revise current methods for assessing hazardous trees in order to:
  - i. Reduce the presence of hazardous trees in the Town;
  - ii. Recognize the value of habitat and food-bearing trees in natural and within riparian areas;

iii. Remove invasive species that may contribute to the conditions of hazardous trees.

- b. Develop specific procedural guidelines for managing and responding to the risks associated with natural tree stands and large trees (e.g., slope instability, fire hazard, windfall protection and hazards).
- c. All trees of concern identified by the public should be assessed by a certified arborist within 24 hours for imminent hazards or two weeks in all other cases





## C4. Planting & Enhancement

### Overview

Sidney needs to increase both the quantity and quality of its urban forest. While smaller, ornamental trees are tempting to plant – easier to maintain, lower nuisance, more sunlight – they provide significantly less benefit in terms of stormwater management, carbon sequestration, climate buffering, energy conservation, and filtration of air and water.

Therefore, the Town needs a plan to both increase its tree canopy cover and enhance the resilience and ecological integrity of its urban forest – through appropriate species selection and planting location and practices. To create such a plan, the Town will first need an inventory to properly understand its existing conditions.

### A. Tree Planting & Planting Targets

#### 1. (Interim) Canopy Coverage Targets

Specific and measurable short-term and long-term tree canopy coverage targets are a common and useful yardstick for measuring urban forest change over time. While the quality of the urban forest and related ecosystems go beyond simple canopy coverage calculations, this is a suitable and easy to quantify variable. Further urban forestry assessment work needs to be done before confirming tree canopy coverage or planting targets. Such goals should be based on current and proposed land use conditions, plantable space calculations, and urban design context.

- a. Establish an interim tree canopy coverage target of “no net loss” between 2019 and 2030, maintaining a canopy coverage greater than 14%.

- b. Use the proposed urban forest inventory (see C3C) (Page: 32) to inform the establishment of short- and long-term targets for the Town based on plantable space and land use conditions. Preliminary recommended targets are 18% in 2040 and 25% in 2070.

#### 2. Sub Area Targets

- a. Support the overall tree canopy coverage targets by developing sub area targets via future LAP processes (combining land use planning with the urban forest inventory data).

#### 3. Street Tree & Boulevard Plan

The Town should develop a Tree Planting Plan to properly operationalize the tree planting aspect of the UFS, focusing on enhancing the urban forest, downtown beautification, and creating pedestrian-friendly streetscapes.

- a. Begin with urban forest inventory proposed in C3C (Page: 32).
- b. Develop a Street Tree Planting Plan, based on a block-management approach, that includes:
  - i. Target ranges for the diversity of tree species, age, size, and growth rates to be met throughout the planting plan (see C4E for direction) (Page: 38);
  - ii. A block-based tree planting strategy (see example below), identifying priority blocks and their preferred species, landscaping typology and function, and number of trees to be planted per year (and accommodated in total);
  - iii. Landscaping standard of practice or concept typologies, including suitable tree and other vegetation (e.g., shrubs) species for specific areas within the



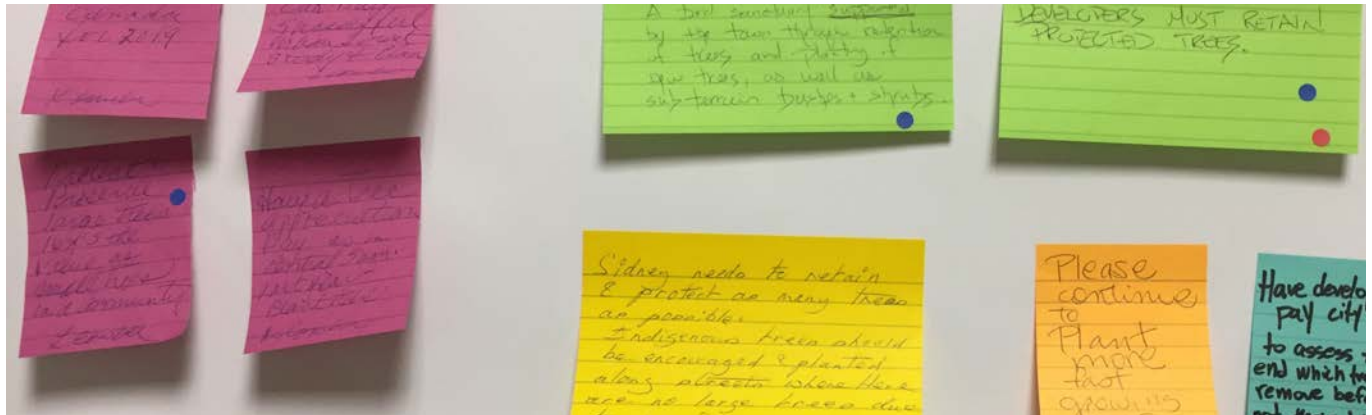
- Garry oak focus
- Large deciduous
- Large/small deciduous (powerline one side)
- Medium deciduous
- Large/medium/small deciduous

Example tree planting structure plan from Oak Bay Urban Forest Management Plan

- town (e.g., downtown, West Side, green corridors, ESAs);
- iv. Conceptual or construction-ready landscaping plans to guide the planting of trees and landscaping of the boulevards identified in the plan – tailored to land use and planting typology.
- c. Give planning and funding priority to streets within COM-1, RES-3, and ESAs.
- d. Prioritize the planting of native tree and other species on streets within ESAs.

#### 4. Planting in Opportunity Areas

- a. Utilize future (park) planning processes to increase tree plantings in local parks and public spaces – giving strong consideration to the trade-offs between urban forestry and other priorities, such as active recreation.
  - i. See Park Concept Plans for Brethour, Rathdown, and Resthaven as precedents.
  - ii. Other identified public spaces that are suitable for increased tree canopy coverage include Beaver Park, Melville Park, Peter Grant Park, and the right-of-way at the end of White Birch Road, leading to Resthaven Park.
  - iii. Consider Peter Grant Park as a future Garry Oak meadow demonstration area.
  - iv. Give priority to the planting of larger, native tree species due to the available



soil volume and lack of potential impacts (e.g., Douglas Fir, Garry Oak).

- b. Develop a strategy to plant native trees and undertake restoration efforts at beach accesses, with a focus within ESAs.
- c. Engage with Washington State Ferries (Department of Transportation) about the potential of increasing tree canopy coverage on and adjacent to their ferry terminal.
- d. Work with the Capital Regional District (CRD) about the potential to increase tree plantings at Greenglade Community Centre.
- e. Engage School District 63 about the potential to increase tree plantings on school grounds, especially Sidney Elementary.
- f. Work with MOTI to increase plantings and urban forest management activity in Highway 19 rights of way, with an emphasis on preserving larger green spaces, enhancing the overall gateway experience to Sidney, and creating vegetative buffers.
- g. Engage the Victoria Airport Authority about [a] facilitating increased plantings

## B. Development Opportunities

In addition to tree planting and landscaping on public property, a number of opportunities exist to facilitate, incentivize, or require increase tree canopy coverage and landscaping

within West Sidney and [b] improving the management of trees in Brethour Park.

### 5. Boulevard Tree Program

- a. Develop a Boulevard Tree or “Adopt A Tree” Program, similar to that offered by the District of Saanich, among many other municipalities.
  - i. Provide and plant boulevard trees for free in exchange for residents watering and caring for trees for a given period of time (e.g., 3-4 summers).
  - ii. Inform the public about the program and young tree care via traditional (e.g., brochures) and digital (e.g., webpages) communications.
  - iii. Develop a preferred species toolkit to aid residents in selecting appropriate trees given the proposed growing environment and location (see Saanich’s Tree Selection Toolkit and Preferred Boulevard Tree Selection List).
  - iv. Consider providing tree watering bags to support residents’ efforts.
- b. Explore external funding (e.g., from BC Hydro) and partnerships to cover costs associated with the program.

on private property – particularly via the development review process and related policies and regulations. Tree canopy policies should be paired with permeable surface

policies to help ensure – among other things – that adequate growing medium is retained to support trees and other vegetation.

a. As identified in C3A (Page: 28), develop urban forestry and green infrastructure policies as conditions of development through land use-, DPA-, or zone-specific policies for tree planting and landscaping on streetscapes, parking areas, and the integration of natural habitat in development design. Accomplish this by:

- i. Establishing incentives or requirements regarding permeable area coverage (e.g., maximum effective impervious area) and/or tree canopy coverage;
- ii. Establishing incentives for the preservation of existing tree stands and significant vegetation (e.g., native shrubs), such as reducing the amount of required parking.
- iii. Considering a requirement to have developers install irrigation on boulevards fronting their properties to water newly planted trees.

### C. Boulevard Planting & Landscaping Guidelines

Street and boulevard trees and landscaping provide a number of benefits to the immediate area, including enhancing the visual appearance and perceived experience of the street. In order to receive and maximize the benefits, these trees and landscaped areas must be well-maintained and healthy. Policies and procedures are needed to ensure related work is carried out sufficiently, by the appropriate party, in an economical manner, and as to maintain public safety and integration with other Town infrastructure (e.g., underground utilities).

a. Until the Town completes the Street Tree & Boulevard Plan that more clearly details tree planting locations (and species) and boulevard landscaping typologies, the following guidelines apply:

i. Downtown street, arterials, and gateways are to have a higher level of

maintenance and irrigation, planted primarily with adaptive non-native (ornamental) tree species (see C4E for recommendations on species selection) (Page: 38).

ii. All other streets and large publicly- and privately-owned open spaces are to have either [a] native species that are as low maintenance as is reasonable or [b] adaptive non-native species. Landscaping will be complementary to the surrounding ecosystems and be primarily native, biologically diverse, and require little maintenance.

b. Through the urban forest inventory and tree planting plan, identify and replace old, damaged, inappropriate, or unhealthy street and boulevard trees.

c. Clarify responsibility and then establish internal policies and amend the



Boulevard Maintenance Bylaw to detail the responsibilities for the care and maintenance of boulevard trees, shrubs, and other vegetation.

## D. Funding

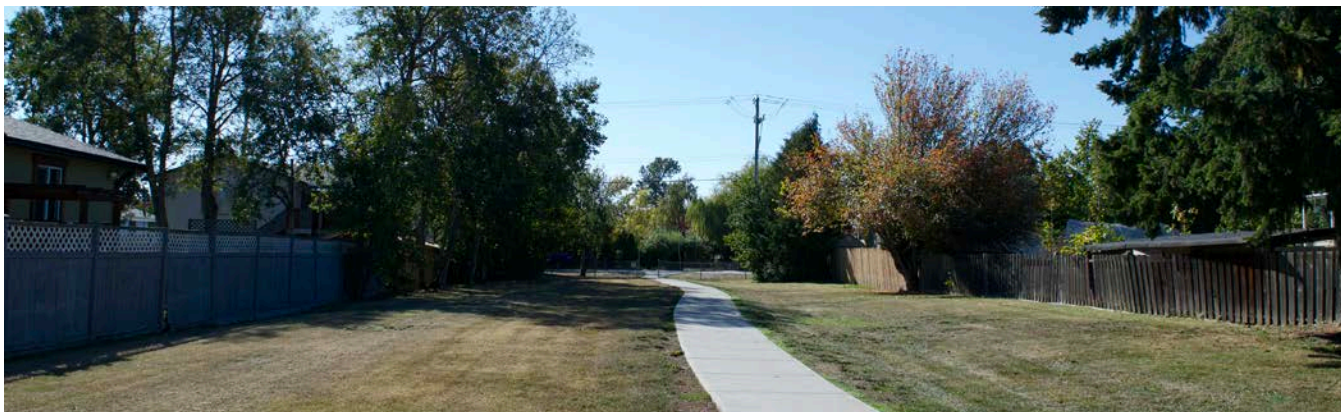
The Town should explore external funding sources to help support future tree planting efforts and initiatives (e.g., a boulevard tree program) recommended in this strategy.

- a. Pursue potential external funding sources, including:
  - i. BC Hydro Community ReGreening Program
  - ii. TD Friends of the Environment Foundation Grant

## E. Species

The Town's current planting practices are more ad hoc than needed to ensure a healthy and resilient urban forest in the future. Age and genetic diversity will create a more resilient urban forest – with genetically similar trees being susceptible to the same stressors (e.g., disease, climate change). Moreover, further direction is needed to select native and adaptive non-native species that can play a key role in creating habitat diversity and contributing to ecosystem integrity – while also enhancing streetscapes and beautification. The following recommendations should be informed by (or enhanced by) the proposed tree inventory.

- d. Consider piloting the use of structural soil cells in the downtown area (e.g., in a curb bulbout).
  - iii. Tree Canada's Community Tree Grants (e.g., Greening Canada' School Grounds)
  - iv. CN EcoConnexions From the Ground Up program
- b. Give strong consideration to developing a tree donation program (see the District of Oak Bay Tree Donation Program), in which donations can be made to plant and maintain a tree in a particular public space, along with a plaque to commemorate, memorialize, or celebrate any person, organization, or event.
  - a. Plant a diversity of tree species, age, and growth rates in public spaces (streets, boulevards, parks) by following the "10, 20, 30" guideline:
    - i. No more than 10% of public trees should be of the same species, 20% of the same genus, and 30% of the same family.
  - b. Place an emphasis on selecting native and historically-cultivated tree species, particularly in RES-1 areas.
    - i. In parks, this may include any of the following: Shore Pine, Douglas Fir, Grand Fir, Cottonwood, Trembling Aspen, Big



- Leaf Maple, Garry Oak, Red Alder, Pacific Dogwood, Western Yew, Black Hawthorn and Arbutus
- ii. On boulevards, this may include Garry Oak, Shore Pine, Arbutus, and select non-native drought-tolerant species
- iii. Undertake an initial pilot program to determine the success of these species in boulevard and park settings.
- c. Consider featuring arbutus trees in significant public locations (e.g., at either end of Beacon Avenue) as a recognition and celebration of the Town's coat of arms.
- d. Use ornamentals in select areas, such as downtown (when natives are not suitable) and the Lochside waterfront, and generally select species that are:
  - i. Non-invasive and maximize species and age diversity;
  - ii. Optimally sized at maturity for its planting context;
  - iii. Resilient within Sidney's present and projected future climate;
  - iv. Low-maintenance, while maximizing green infrastructure and other benefits;
  - v. Tolerant of wind and longer, drier summers;
  - vi. From a healthy, well-formed and defect-free nursery stock; and,
- e. Ensure species selection in downtown includes less invasive root systems to reduce potential impacts on underground servicing and utilities.
- f. Place an emphasis on selecting native and historically-cultivated small trees/shrub species, including:
  - i. Bitter Cherry, Cascara, Choke Cherry, Douglas Maple, Hookers Willow, Pacific Crabapple, Pacific Willow, Red Alder, Juniper, Saskatoon, Scouler's Willow, Sitka Alder, Sitka Willow



## C5. Stewardship & Learning

### Overview

Successful implementation of the Urban Forest Strategy, and the resultant increases in the quantity and quality of the urban forest, will require both [a] partnerships

and collaboration with community partners and [b] education and communication with the public and community agencies.

### A. Community Partnerships & Volunteerism

Sidney has a strong culture of volunteerism and community action. The Town will benefit greatly from working collaboratively with and providing direction and resources to community partners

- a. Work with community partners to create an annual Arbor Day celebration, whereby staff, community partners, and members of the public come together to plant trees and celebrate the urban forest.
- b. Explore potential community partnerships and initiatives with local schools, such as providing free native tree species for students to plant at home or developing an adopt-a-tree program for classes.
- c. Explore a community partnerships to create:
  - i. Beach access restoration initiatives;
  - ii. A volunteer program similar to Saanich's Pulling Together, which works to control invasives and aid in habitat restoration efforts in Town parks (e.g., Brethour, Reay Creek, Resthaven).
- d. Make partnerships with local community groups (such as the The Greater Victoria Green Team) to increase public involvement in stewardship of natural areas;
- e. Offer free native tree plantings (e.g., Douglas fir) to residents within ESAs (e.g., Roberts Bay) to plant on private property.
- f. Explore partnerships with local First Nations and the Garry Oak Ecosystem Recovery Team (or other groups) to restore at least one demonstration Garry oak ecosystems;
- g. Consider utilizing partnerships (e.g., students, volunteers) to conduct the tree inventory (section C3C)

## B. Community Education & Communications

- a. Undertake a communications campaign to raise public awareness and understanding of:
  - i. The value and benefits of the community's collective urban forest;
  - ii. The value and benefits of preserving and planting trees on private land, including any available incentives;
  - iii. The limited municipal resources available to maintain the urban forest and need for community-driven action;
  - iv. Any proposed or initiated community programs in which the community can take part (e.g., boulevard tree program, volunteer parks restoration);
  - v. The proposed tree canopy coverage targets and related actions they can take (e.g., tree plantings and maintenance);
  - vi. The local ecosystem and bioclimate context;
  - vii. The respective roles and related guidelines for caring for young boulevard trees (e.g., proper watering).
- b. Develop a Tree Preservation Bylaw & Replacement Tree Guide.
- c. Develop an information brochure that provide residents and developers with landscaping care tips for trees on private property (e.g., watering, pruning).
- d. Develop a strategy for informing the public about the management of invasive species (e.g., English Ivy) on private property, with a focus on areas such as Beaufort Grove.
- e. If resources allow, long-term, then measure and report on the scope and value of ecosystem services provided by the urban forest on both public and private lands.

## C. Action & Adaptation

- a. Conduct a review and update the UFS on an on-going basis and, where applicable, review targets, guidelines, and performance at appropriate intervals.
- b. Use the OCP review process to establish an official Town tree – with consideration for the arbutus on Sidney's coat of arms.

## D. First Nation Engagement, Knowledge, & Co-Management

- a. Seek to establish partnerships with local First Nations to represent First Nations values and perspectives in management and restoration of the natural environment.
- b. Seek a partnership to establish a demonstration camas meadow / oak savannah on public land.



# D

## IMPLEMENTATION STRATEGY

### **D1. Chapter Overview**

This chapter provides an implementation strategy for the UFS with the intent to guide future staff and Council decision-making with regards to strategic priorities, budgeting, and other initiatives. Inside, you will find:

- » Key notes regarding a strategic approach to plan implementation;
- » A set of priority recommendations, which serves to focus and refine the Town's key park improvements and next steps; and,
- » A phased implementation plan, which sets out clear actions and initiatives for the Town to budget for and undertake over the coming years.



## D2. Strategic Approach

Throughout the UFS process, it became clear that the Town (specifically Council and staff) needs to make a renewed commitment to its urban trees. This will involve developing the necessary plans, processes, and regulations, as well as dedicating the needed resources, to increase the quality and health of Sidney's urban forest.

To be successful, this commitment must be founded in a strategic approach to implementation. Such an approach should involve the following:

First, leverage community enthusiasm through collaborative initiatives, grassroots tree planting programs, and other actions to boost the Town's capacity to maintain and enhance the urban forest.

Second, empower operational staff with the resources needed to keep up with tree maintenance, invasives management, new plantings, and other responsibilities. Without additional resources, implementation will fall short of the UFS objectives or limit other service areas.

Finally, recognize Sidney's role as a growth centre and, with that, the balance and relationship [a] between urban design quality and street trees and [b] between compact built forms and available plantable space. In many cases, it may be more appropriate to focus on urban forest quality and integrity rather than sheer quantity. Complementary green infrastructure, such as green roofs and bioswales, may play an increasingly important and complementary role.

## D3. Implementation Plan: On-Going Actions

On-going actions may be completed over time as part of the Town of Sidney's (ToS) regular operations or addressed opportunistically, as funds or partnerships become available.

Action	Summary	Section	Priority
<b>Strengthen Policies &amp; Review Zoning Bylaw</b>	<ul style="list-style-type: none"> <li>» Develop directional OCP policies consistent with this strategy.</li> <li>» Strengthen OCP, ESA, and DPA policies with regard to tree retention, landscape design, and identifying opportunities for ecological connectivity.</li> <li>» Review Zoning Bylaw to balance urban design and healthy growing conditions</li> </ul>	C3A	High
<b>Public Tree Inventory</b>	<ul style="list-style-type: none"> <li>» Create and maintain a functional database of the Town's urban forest using a GIS-based inventory.</li> </ul>	C3C	High
<b>Tree Canopy Coverage Targets</b>	<ul style="list-style-type: none"> <li>» Work to meet the interim tree canopy coverage target of "no net loss" between 2019 and 2030.</li> <li>» Confirm and then work to meet the recommended targets of 18% by 2040 and 25% by 2070.</li> </ul>	C4A	High
<b>Utilize Park Planning &amp; Local Area Plans</b>	<ul style="list-style-type: none"> <li>» Integrate UFS recommendations into future parks planning and local area planning, including possible sub-area canopy targets, planting plans, and facilitating the use of green infrastructure and urban habitat creation.</li> </ul>	C3A	High
<b>Improve Development Review Process</b>	<ul style="list-style-type: none"> <li>» Ensure the development review process more carefully considers growing conditions, soil health, and landscape design and construction oversight.</li> <li>» Establish a formal interdepartmental Tree Review Process that works with applicants in the pre-application phase to protect soils and retain mature trees.</li> </ul>	C3B	High
<b>Internal &amp; External Funding</b>	<ul style="list-style-type: none"> <li>» ToS to explore external funding sources to support initiatives and tree plantings recommended in this strategy.</li> <li>» Review existing bylaws and related charges to ensure sufficient funding for the planting and long-term maintenance of trees in new development and subdivisions.</li> </ul>	C4D / C3A	High
<b>Protect more Trees on Private Land</b>	<ul style="list-style-type: none"> <li>» More effectively promote the use of conservation covenants with private landowners as a protection and incentive tool.</li> <li>» Investigate other tools and levers to incentivize and support homeowners within ESAs (e.g., watering allowances; free tree plantings);</li> </ul>	C3A / C3B	Medium
<b>Stakeholder Urban Forest Plantings &amp; Management</b>	<ul style="list-style-type: none"> <li>» Work with local stakeholders to promote tree plantings and complementary urban forest initiatives (e.g., Washington State Ferries, MOTI, CRD, SD63, VAA)</li> </ul>	C4A	Medium
<b>Community Partnership</b>	<ul style="list-style-type: none"> <li>» Work with and support volunteers and community groups to carry out restoration efforts and other initiatives identified in this strategy.</li> </ul>	C5A	Medium
<b>First Nations Partnerships</b>	<ul style="list-style-type: none"> <li>» Seek to establish partnerships with local First Nations to better represent First Nations values and perspectives in management and restoration of the natural environment and to establish a demonstration camas meadow.</li> </ul>	C5D	Medium
<b>UFS Review</b>	<ul style="list-style-type: none"> <li>» Review and update the UFS on an on-going basis and, where applicable, review targets, guidelines, and performance at appropriate intervals.</li> </ul>	C5C	Low

## D4. Implementation Plan: Short-term Actions

Short-term actions represent ‘low-hanging fruit’ that are recommended as budget priorities by the Council in the near future (1-3 years) to jump start the process of achieving the key objectives of the UFS

Action	Summary	Section	Priority
<b>Tree Planting Plan</b>	» Develop a Street Tree Planting Plan, based on a block-management approach.	C4A	High
<b>Preferred Tree Species Lists &amp; Guidelines</b>	» Undertake an initial pilot program to determine the success of identified native species in boulevard and park settings.	C4E	High
<b>Tree Preservation Bylaw Updates</b>	» Expand the list of species and size requirements for protected trees and improve the tree removal replacement rates to better mitigate impacts on the urban forest.	C3A	High
<b>Internal Staff &amp; Resources Review</b>	» Conduct an internal assessment of and then dedicate the identified operational and staffing resources for improved urban forest management.	C3B	High
<b>Boulevard Maintenance</b>	» Clarify responsibility and then establish internal policies and amend the Boulevard Maintenance Bylaw to detail key responsibilities.	C4C	High
<b>UFS Awareness Campaign</b>	» Undertake a communications campaign to raise public awareness and understanding of the urban forest, urban tree care, etc.	C5B	High
<b>Arbor Day Celebrations</b>	» Work with community partners to create an annual Arbor Day celebration.	C5A	Medium
<b>Significant Tree List &amp; Procedures</b>	» Adopt a public process (e.g., physical and digital form) for nominating significant trees as part of a Town-wide inventory (currently exists within Tree Preservation Bylaw).	C3C	Medium
<b>BC Hydro &amp; Fortis BC Agreement</b>	» Establish protocol agreements with BC hydro regarding tree pruning and maintenance and Fortis BC regarding underground works.	C3A	Medium
<b>ESA Tree Planting Program</b>	» Offer free native tree plantings (e.g., Douglas Fir) to residents within ESAs (e.g., Roberts Bay) to plant on private property.	C5A	Medium
<b>Develop a Guide to the Tree Preservation Bylaw</b>	» Develop a guide to help homeowners and developers better understand the bylaw, its justifications, and its implications.	C3A	Low



## D5. Implementation Plan: Longer-term Actions

Longer-term actions should be brought forward as budget and planning priorities as appropriate over the next 3+ years to achieve the goals of the UFS. High priorities items, in particular, should be considered Council priorities over the next 3-5 years.

Action	Summary	Section	Priority
<b>Boulevard Tree Program</b>	» Develop a Boulevard Tree or "Adopt A Tree" Program.	C4A	High
<b>Development Requirements</b>	» Work to develop incentives and/or requirements to facilitate increase permeable area coverage, tree canopy coverage, preservation of existing tree stands, and healthier growing/soil conditions (e.g., reduced surface parking requirements; maximum effective impervious area requirements)	C4B / C3A	High
<b>Native Restoration Area</b>	» Work with partners to create a model, interpretive native restoration area at the Ardwell Beach Access.	C3D	Medium
<b>Tree Donation Program</b>	» Consider developing a tree donation program.	C4D	Medium
<b>Value of Ecosystem Services</b>	» Measure and report on the scope and value of ecosystem services provided by the urban forest on both public and private lands.	C5B	Low
<b>Revise Hazardous Tree Policies &amp; Practices</b>	» Develop procedural guidelines for managing and responding to hazardous trees.	C3E	Low

