



## I have recently become a Garry Oak tree hunter.

As a team member on the VCAN Community Mapping project, it seemed like a good idea to put together some photos and information. The photos provide visual context to the community maps. The comparison of the historical extent of the Garry Oak Ecosystems to their fragmented locations today underscores the merit of this project. Tree canopy density is particularly relevant as mature Garry Oaks can have large mushroom shaped canopies. And as a member of the Garry Oak Meadow Preservation Society (GOMPS), it is a chance to spread the word about available Garry Oak seedlings!

Jacklyn Jolicoeur





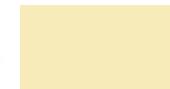
# HISTORICAL MAP OF GARRY OAK AREAS

LAKE DISTRICT

This is an 1858 Land Survey Map Excerpt from the map of the Victoria District, circa 1850s as surveyed by J.D. Pemberton.

Courtesy of the BC Surveyor General's Office.

## COLOR LEGEND



Garry Oak Area

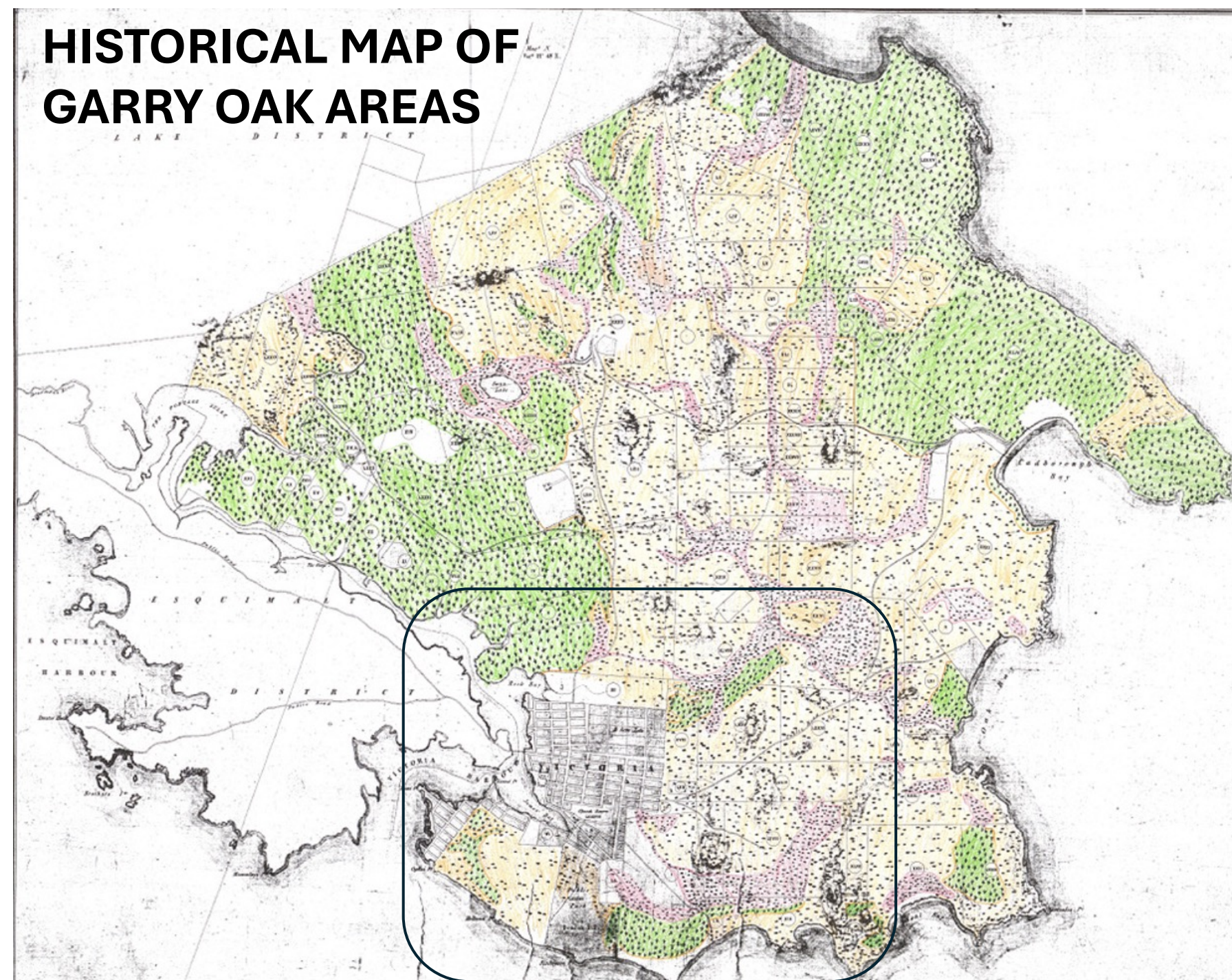


Wetland/Riparian



Mostly Coniferous Forests

Outlined area approximates City of Victoria boundaries

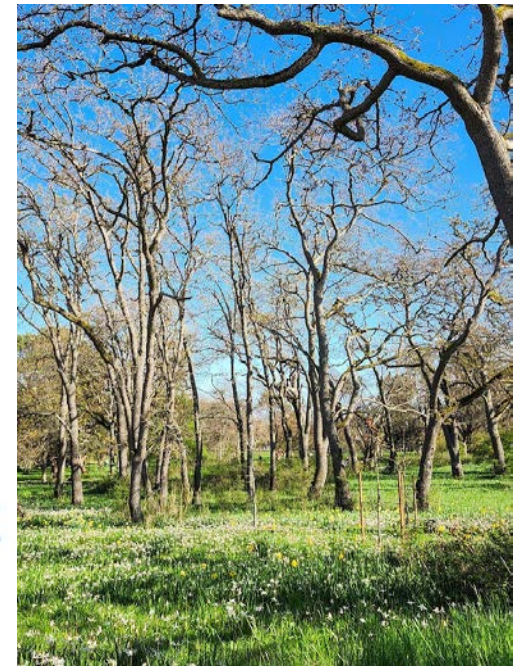


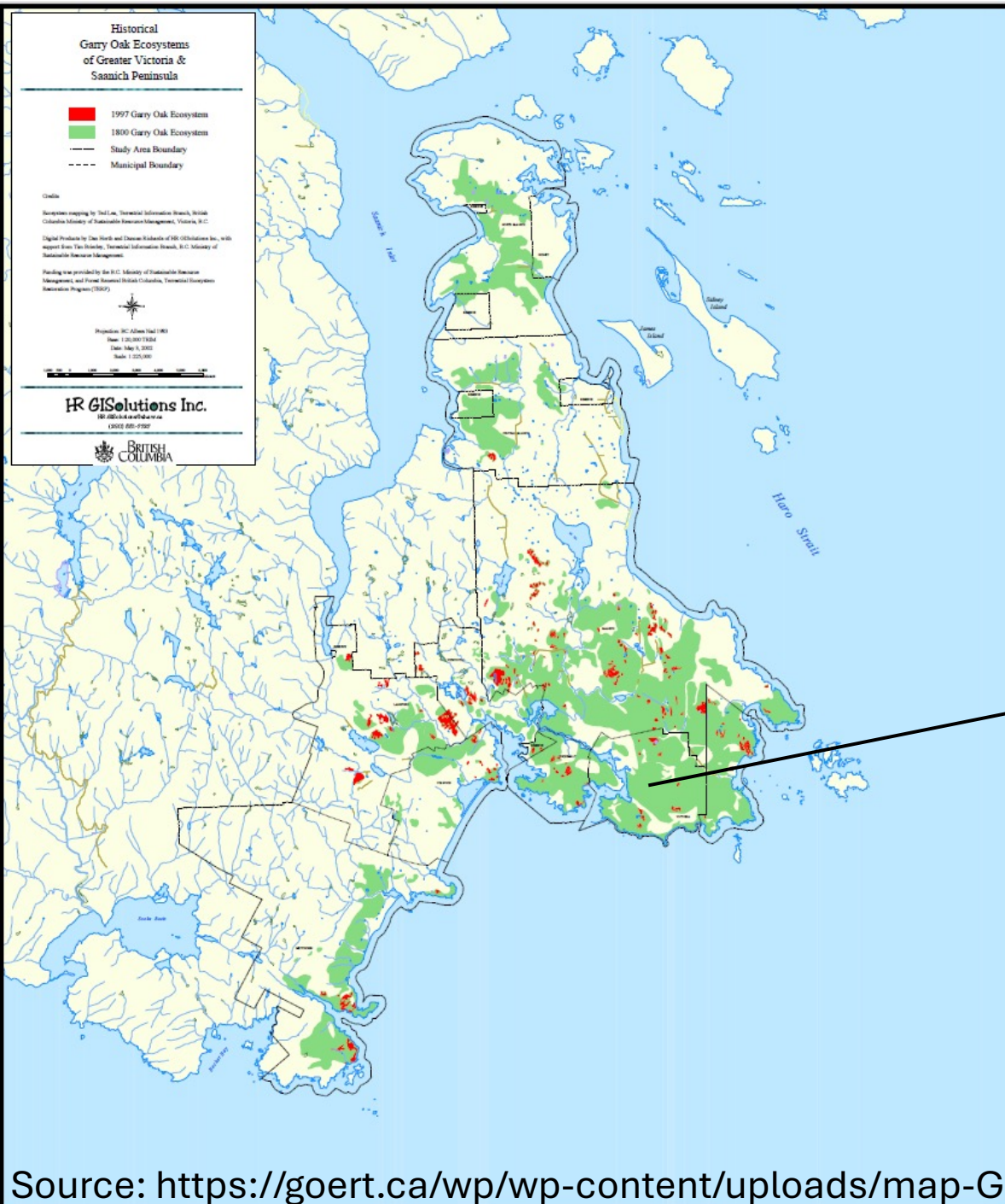




# Ecosystem

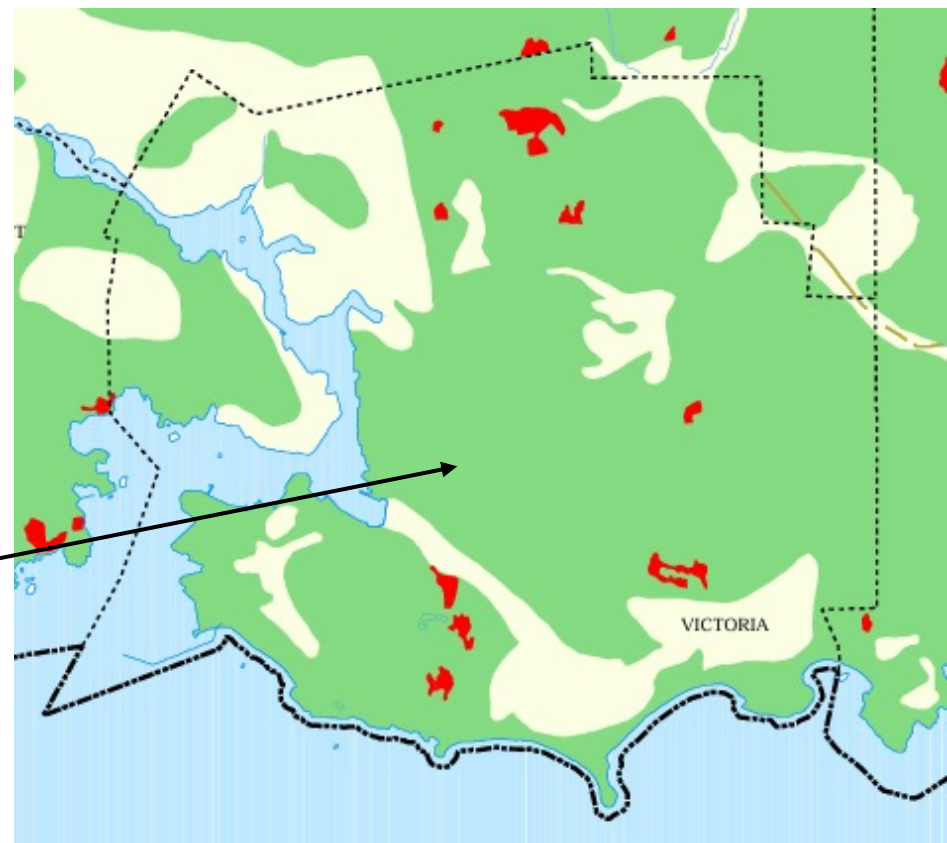
- » Garry oak ecosystems arrived after the glacial retreat approximately 10,000 years ago
- » Garry oak ecosystems in Canada are some of the rarest, and the area they occupy is declining in large part due to development (Fuchs, 2001)
- » At least 1,645 organisms (plants, insects, amphibians, reptiles, birds, mammals, etc.) have co-evolved with GOE.





# HISTORICAL GARRY OAK ECOSYSTEMS for CITY OF VICTORIA

- shows extent of 1880 GARRY OAK ECOSYSTEMS
- shows extent of 1997 GARRY OAK ECOSYSTEMS



Area	Year: 1800 (Cover in hectares)	Year: 1997 (Cover in hectares)
Victoria	1,460	21



# HISTORIC AND CURRENT GARRY OAK ECOSYSTEM AREAS IN GREATER VICTORIA AND SAANICH PENINSULAS

Area	Year: 1800 (Cover in hectares)	Year: 1997 (Cover in hectares)	
Victoria	1,460	21	
Oak Bay	850	25	
Saanich	3,473	192	
Central Saanich	740	7	
Sidney	30	0	
North Saanich	1,040	1	
Esquimalt	470	20	
Colwood	320	16	
Langford	370	105	
View Royal	270	39	
Metchosin	1,180	49	
Indian Reserves	240	37	
Total	10,443	512	5% in 1997

This table compares the 1800 and 1997 distribution of Garry oak ecosystems in the Victoria area. The Municipality of Highlands was not included due to lack of data.

The areas covered are where Garry oak (*Quercus garryana*) was believed to be the dominant tree cover, or co-dominant cover with Douglas-fir (*Pseudotsuga menziesii*) or arbutus (*Arbutus menziesii*). Other areas may have had and still have Garry oak as a minor component of the ecosystem.

Source: GOERT (Garry Oak Ecosystem Recovery Team)  
URL:<https://goert.ca/about/what-remains/>



## **TWO EXAMPLES OF GARRY OAK ECOSYSTEM REMNANTS IN GONZALES**



**More than 12 Garry Oaks on this property, 3 are included in City street tree inventory.**



**Another property –More than 12 Garry Oaks on the property, none are included in City street tree inventory.**



# SOME SAMPLE STREET TREE CATEGORIES USED BY CITY OF VICTORIA



**Large Garry Oak Tree**  
City Tree Category: **Setback Tree**  
Location: 596 Marifield Avenue



**3 Small Garry Oak Trees**  
City Tree Category: **Boulevard Tree**  
Location: Oak Shade Lane



**Small Garry Oak Tree**  
City Tree Category: **Boulevard Tree**  
Location: 647 Michigan Street



**Mature Garry Oak Grove**  
City Tree Category: **Park Trees**



**Mature Garry Oak Trees**  
City Tree Category: **Median Trees**  
Location: 1542 Shasta Place  
  
Only 33 trees in this Tree Category within City of Victoria



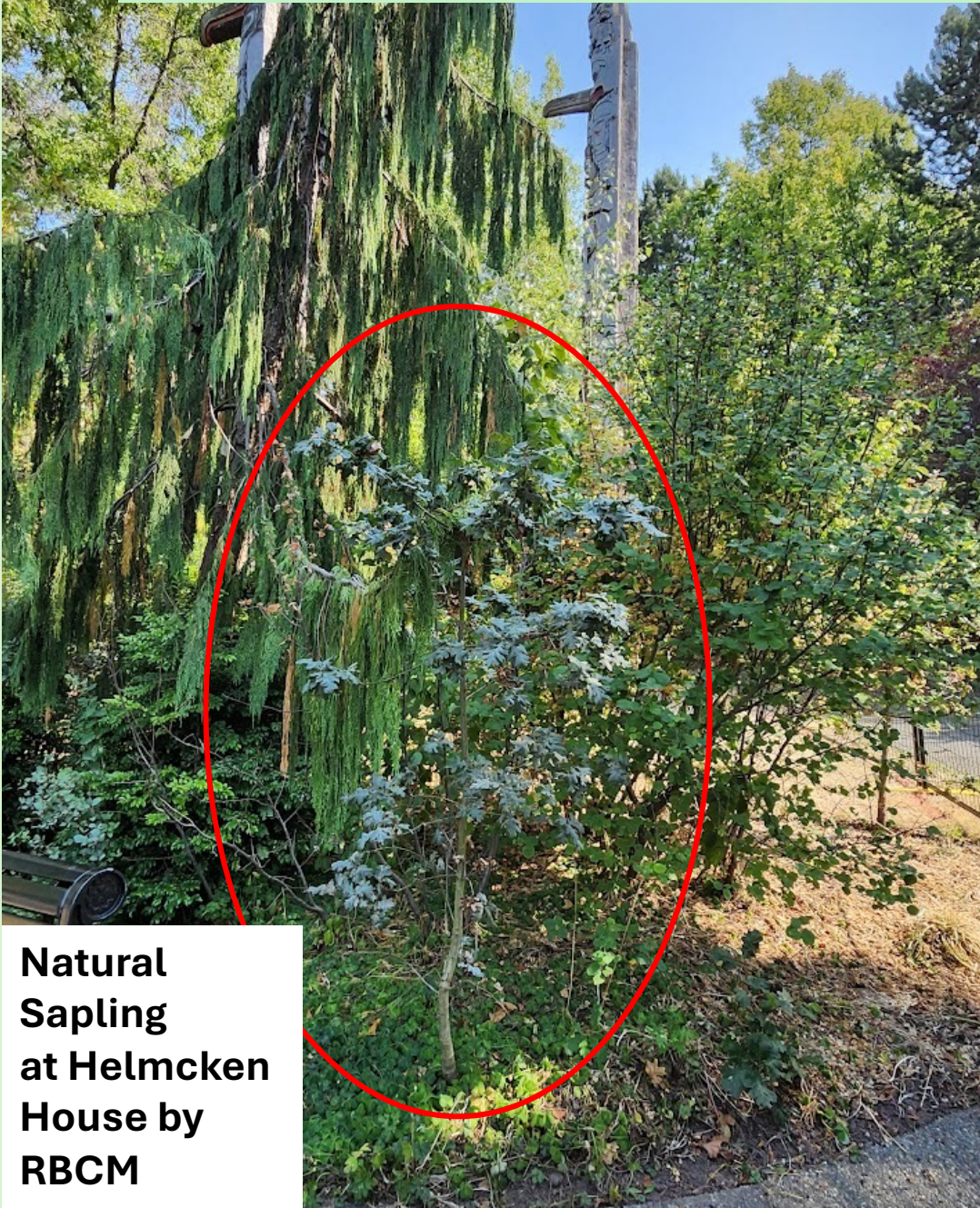
## ROCKLAND AVENUE CORNER LOT



**Left: Two large Garry Oaks in **Front yard** are Private Property Trees** (one is not visible in the picture).  
**Centre: Clump of Garry Oaks on **street corner** are recorded as City Street Trees.**  
**Right: 11 small and medium sized Garry oaks between the Fence and **side street** are Private Property Trees. A great example of planting the next generation of Garry Oaks!**



# SOME GARRY OAK TREES FOUND IN JAMES BAY



**Natural  
Sapling  
at Helmcken  
House by  
RBCM**



**Large  
Garry Oak  
on Private  
Property in  
James Bay**



# GARRY OAK TREES IN THE CITY OF VICTORIA

## 5,125 on CITY LANDS, Smaller number on PRIVATE LANDS?

**Please Note: These Numbers do not reflect actual total Garry Oaks in a Neighbourhood**

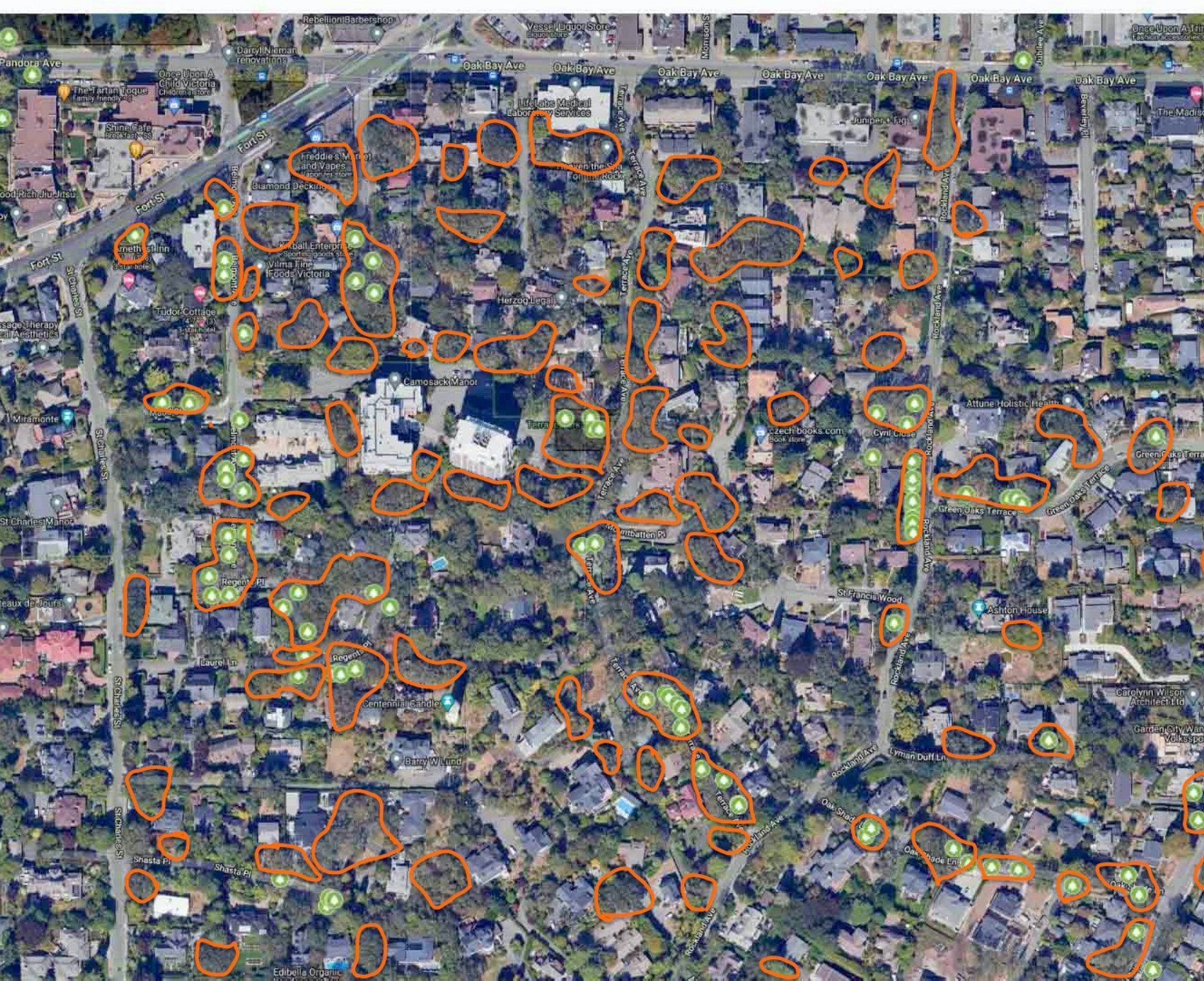
NEIGHBOURHOOD	GARRY OAKS							
	CITY TREE INVENTORY						VCAN	
	Parks	Streets	Private	Co-owned	Subtotal	see notes	TOTAL	
Burnside	45	28		2	75	31	106	
Downtown	5	2			7	3	10	
Fairfield	446	29			475	48	523	
Fernwood	91	60		3	154	35	189	
Gonzales	95	175		14	284	Note 1	284	
Hillside/Quadra	1414	165		15	1594	272	1866	
James Bay	1638	13			1651	15	1666	
Jubilee	44	51	2	8	105	Note 2	105	
North Park	4	6			10	Note 2	10	
Oaklands	197	187	4	7	395	500	895	
Rockland	6	163		14	183	444	627	
Vic West	179	13			192	74	266	
<b>TOTAL</b>	<b>4164</b>	<b>892</b>	<b>6</b>	<b>63</b>	<b>5125</b>	<b>1422</b>	<b>6547</b>	
City Tree Inventory Total for Garry Oak					5,125			
City Tree Inventory Total all Tree Species					34,445			
Garry Oak as % of Total Tree Species in City of Victoria					15%			
<b>VCAN NOTES:</b>								
Note 1: Gonzales Team proposed 4 areas for parks/extensions of parks.								
Note 2: Jubilee/North Park/ Teams have not yet recorded GOs found onto the project website (at time of this compilation)								
Note 3: Rockland Count may not be accurate as polygons on poor quality aerial photos were used for the count, therefore the number used in the table above is believed to be a conservative estimate.								

**OUR PROJECT INTENT WAS TO LOCATE 3 AREAS OF GARRY OAK CONCENTRATION IN EACH NEIGHBOURHOOD TO PROMOTE ADDITIONAL CONSERVATION ACTIONS (PARK EXTENSION, NATIVE GARDENS/GREENWAYS, POTENTIAL GARRY OAK PLANTING SITES, ETC.**

**THEREFORE, NOT ALL NEIGHBOURHOODS COUNTED THE GARRY OAK TREES, NOR DID THEY COVER THE ENTIRE “HOOD”**

**THE TREE COUNTS ON THIS TABLE WERE INCLUDED TO PROVIDE A HIGH-LEVEL COMPARISON TO THE CITY OF VICTORIA GARRY OAK TREE COUNTS ON PUBLIC PROPERTY.**





**TREE COUNTS** (see previous slide)  
**ONLY TELL PART OF THE STORY.**

**TREE CANOPY** measurements are  
the preferred metric used to  
manage Urban Forests.

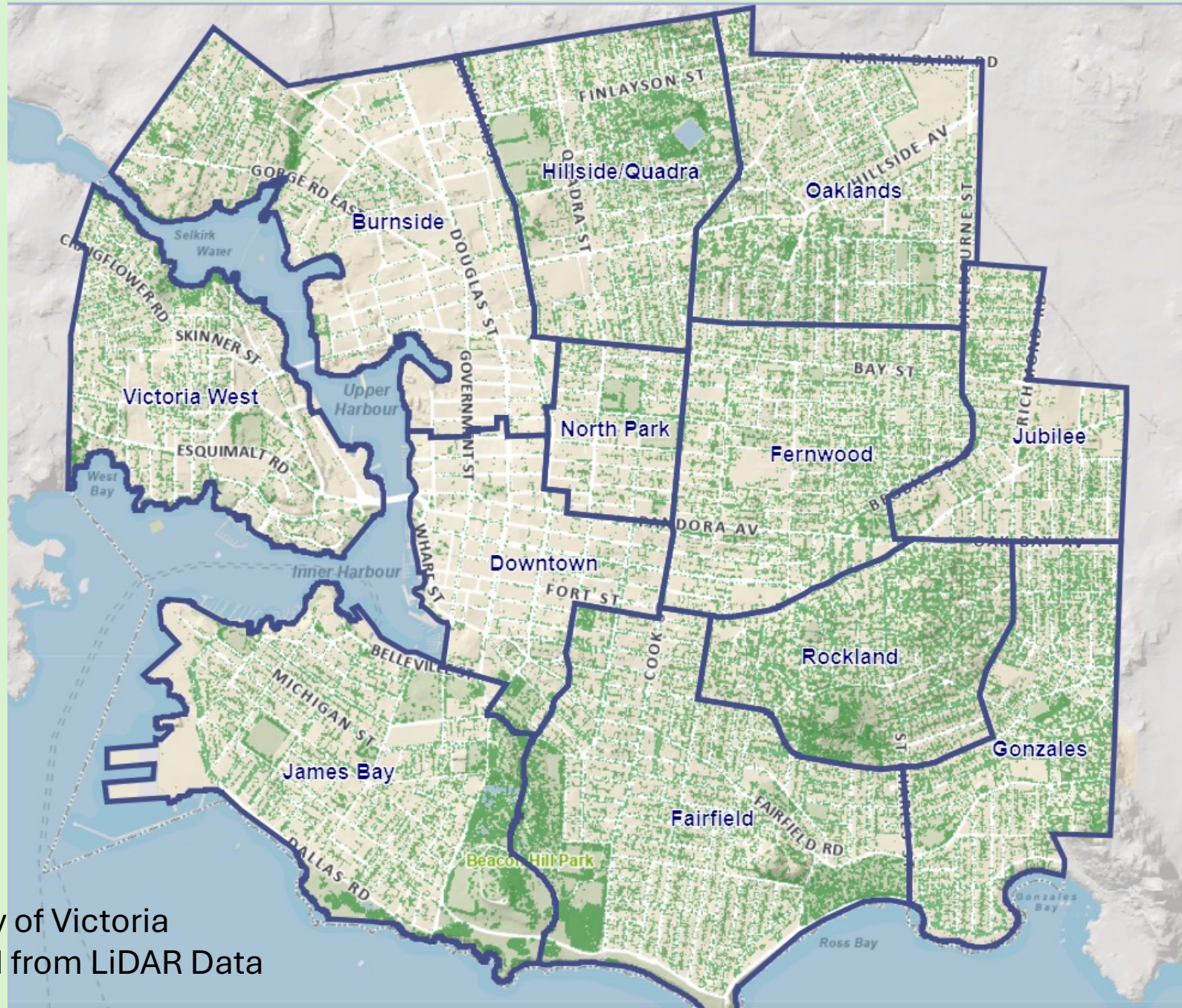
This aerial photo covers a part of the  
Rockland Neighbourhood. Orange  
polygons were drawn to indicate the  
presence of Garry Oak trees.



This symbol  
denotes a tree  
included in the  
City of Victoria  
tree inventory



# CITY OF VICTORIA TREE CANOPY 2019



Source: Map Gallery - City of Victoria  
2019 Tree Canopy derived from LiDAR Data





# Canopy Density Comparison

**Table 1**

<b>Year</b>	<b>2m+ Vegetation Area (ha)</b>	<b>% of City Area</b>	<b>Comment</b>
2007	<b>512</b>	<b>26.41%</b>	Measured at 2m cell size
2013	<b>513</b>	<b>26.46%</b>	Measured at 1m cell size
2019	<b>559</b>	<b>28.83%</b>	Measured at 1m cell size

“the horizontal growth of existing vegetation offsets the effect of vegetation loss from urban development or die off.” (Terra Remote Sensing, 2021)





# Canopy Density Threats

- » Development as currently practiced
- » Climate change: higher heat, longer droughts, increasingly likely severe weather events
- » Destructive insect populations and pathogen
- » Poor age and species composition
- » Loss of plantable space



# **PLANTING THE NEXT GENERATION OF GARRY OAKS:**

## **Infill planting of Garry Oaks within Beacon Hill Park by Goodacre Lake**



**Picture taken April 29, 2024**



# GARRY OAK SEEDLINGS



## Garry Oak Seedlings

Available from Garry Oak Meadow Preservation Society (GOMPS)  
Contact email: [grow.oaks@gmail.com](mailto:grow.oaks@gmail.com)



1 gallon Garry Oak Seedling



7-Year-Old Sapling



GOMPS Nursery Site



## FUTURE ACTIONS TO PROMOTE GARRY OAK PRESERVATION: HERE ARE JUST A FEW EXAMPLES PROPOSED BY PROJECT PARTICIPANTS

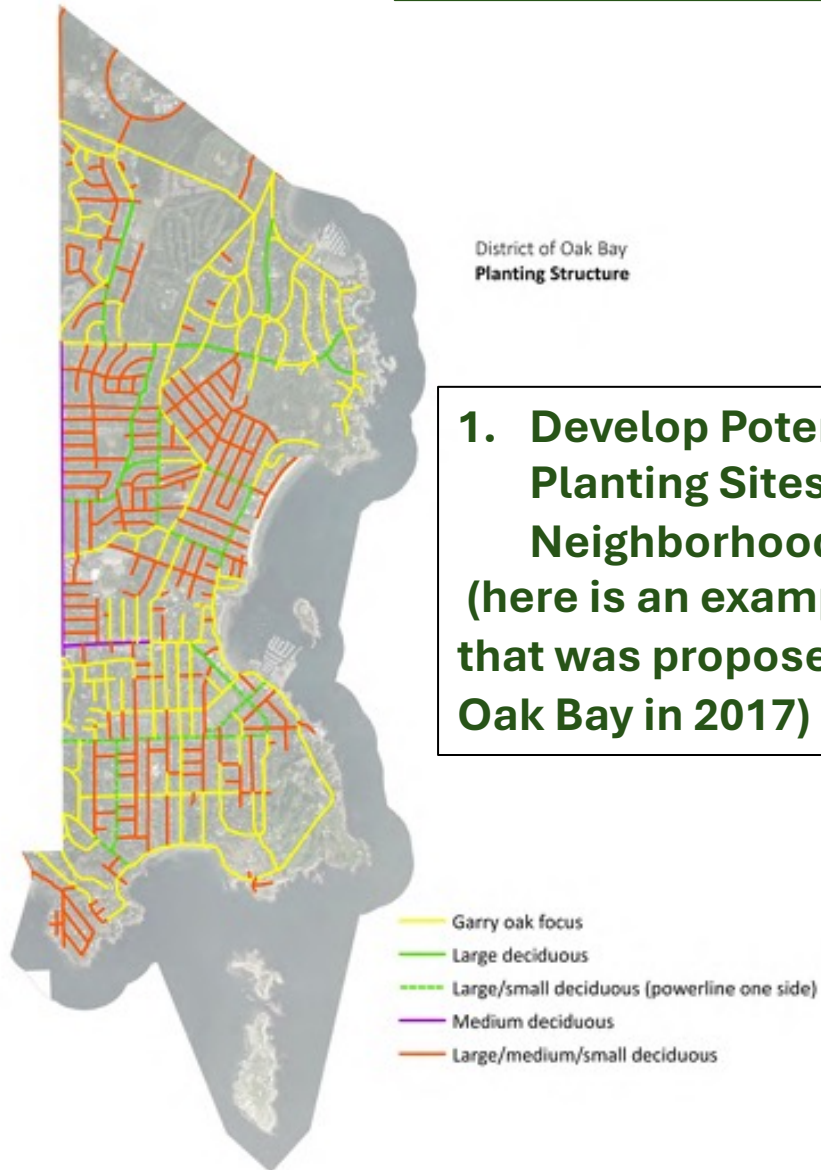
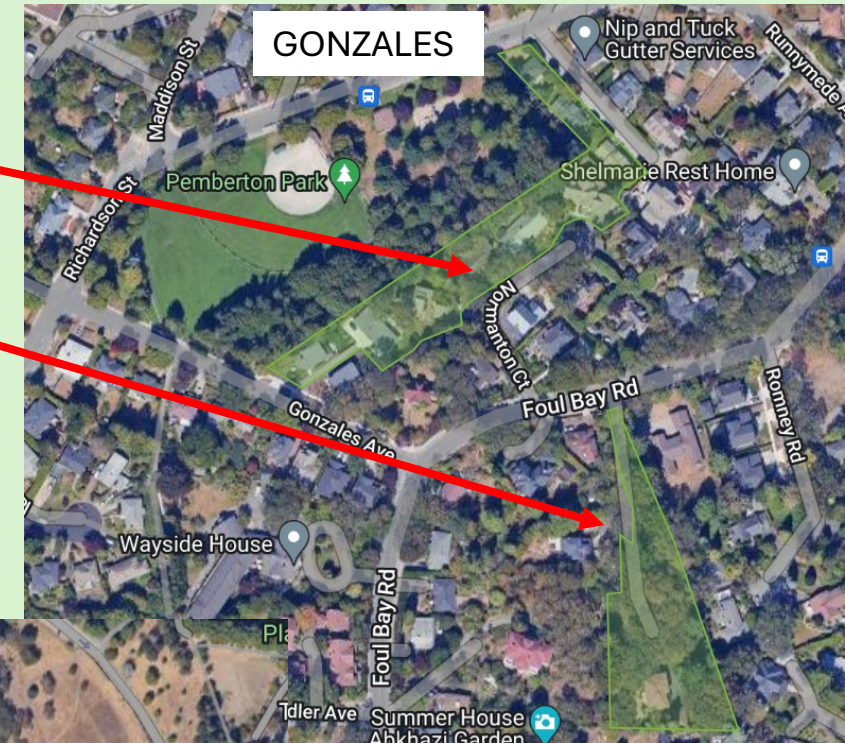


Figure 29. Proposed street tree planting structure for Oak Bay.

Source: <https://www.oakbay.ca/sites/default/files/recreation/documents/final-report-new.pdf>

Proposed Park Extension

Proposed New Greenway



Proposed Enhancement for the Mile Zero Traffic Island