



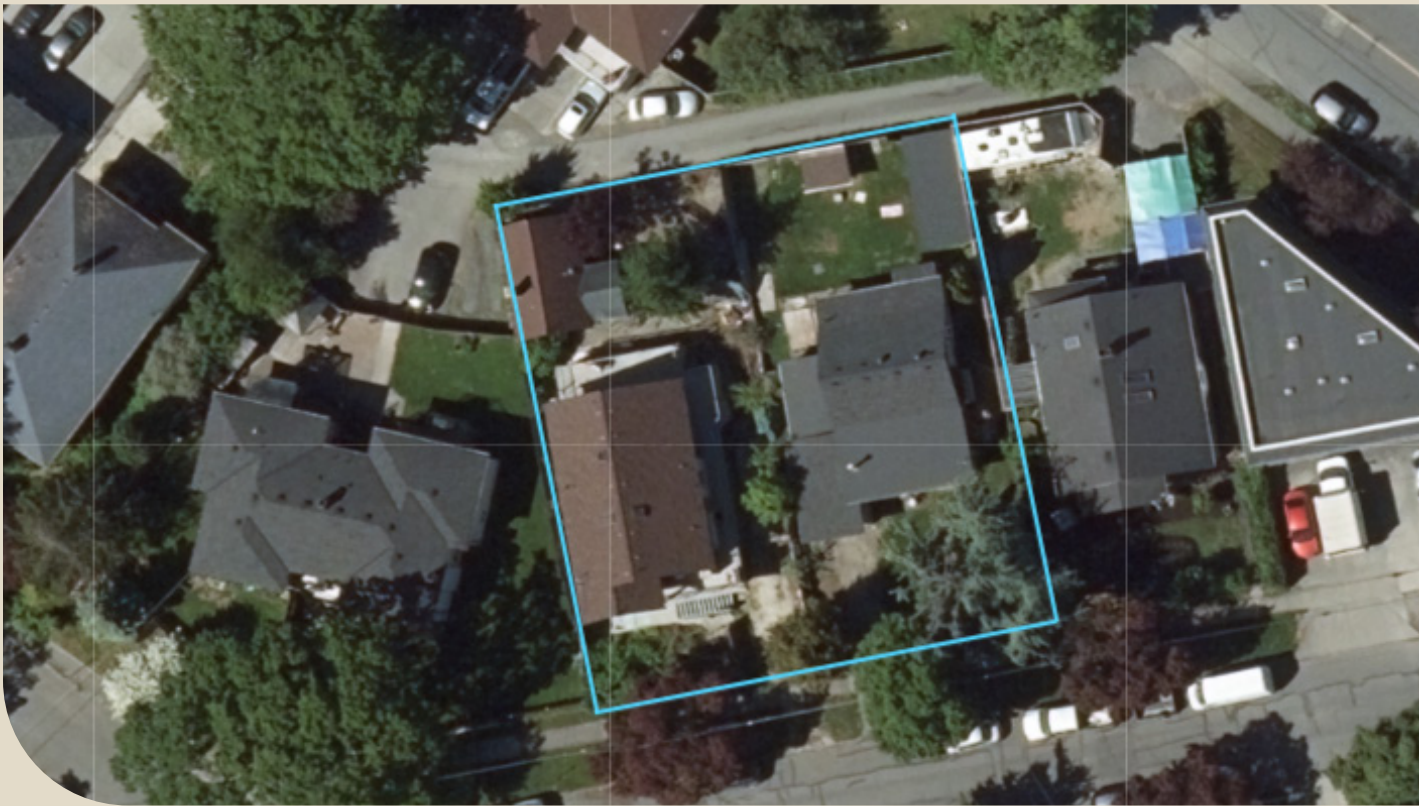
**Scotty Tree & Arborist Service Ltd.**

# Tree Protection Plan and Development Report

Prepared for 624-628 Manchester Rd, Victoria BC

SUBMITTED

Sept 22, 2022



Scott Mitchell  
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To whom it may concern,

By request, Scotty Tree & Arborist Service Ltd has assessed the trees on the properties of 624-628 Manchester Road, Victoria BC for a multi-property demolition and development proposal.

### **Executive Summary:**

The proposal combines two properties (624 and 628 Manchester Rd), whereby the two existing houses will be demolished, and a multi-unit complex development will be constructed. Three bylaw protected trees are on this property that require removal for this subdivision project. Three municipal trees are near these properties, two of which require removal for development plans. All property bylaw and non-bylaw protected trees will require removal for the development plans. With appropriate protective measures, the remaining municipal tree should not be negatively affected long-term. Replanting of trees is specified by Victoria tree bylaws. See tree inventory table for complete tree summary.

### **Tree impact summary table (see tree impact table for more details)**

Tree status	Total	retained	removed	planted
On site bylaw protected	3	0	3	*5
On site non bylaw protected	4 substantial	0	4, + >5 small	0
Municipal trees	3	1	2	As directed
Neighboring bylaw protected	0	0	0	0
Neighboring non bylaw protected	0	0	0	0
total	10	1	9 + >5 small	As directed

\* Insufficient room is currently available for 5 medium or large trees. Two small and one medium can be accommodated within Victoria parks planting guidelines. See soil volume calculation table.

### **Introduction:**

Scotty tree was contracted to assess the trees on this property to determine the impact of developing the multi-unit complex. The entire property was assessed, including neighboring and municipal trees.

### **Methodology:**

Detailed analysis of the proposed development plan was used to inform analysis of the trees, particularly in terms of the underground service excavation locations. Scotty Tree used standard arboricultural observation and physical examinations to determine tree health and confirm rooting areas. Soil analysis was conducted by physical exploration. Consultation with the leading reference book (*Trees and Development*, Nelda Matheny and James R. Clark) was used to determine protected root zones and tree suitability for development on this property.

## **Observations and Discussion:**

### **1. Three bylaw protected trees require removal for development plans:**

Given the footprint of the proposed multi-unit complex, three bylaw protected trees require removal (#96, #97 and #98). Their close proximity to excavations and resulting damage to critical root zones will result in rapid decline. See attached tree management plan.

NOTE: Tree #97 likely requires removal regardless of development due to its declining health.

### **2. Four smaller non-bylaw protected trees require removal for development plans:**

Four plus multiple small volunteer non-bylaw protected trees will require removal on the property as well. This is due to the development footprint. See attached tree management plan.

### **3. The municipal trees (M1 and M3) require removal for the development plans:**

To accommodate the proposed driveway location and paving for this development, the municipal trees M1 and M3 require removal.

NOTE: Removal of M1 also facilitates the excavation and installation of the underground services as per the proposed development plans.

### **4. Victoria municipal tree bylaws indicate a minimum of 5 replacement trees be planted on the property based on the combined lot size:**

According to Victoria municipal tree bylaws, Schedule E, p. 41 this combined property measures at approx. 961 M<sup>2</sup>. As such, this lot size requires a minimum of five trees. Based on remaining soil volumes post construction, two small and one medium can be accommodated. If two small trees do not serve as a replacement for one medium tree, the development will be short four medium sized trees. See soil volume calculation table.

## Conclusions and Recommendations:

This demolition and development proposal is viable from a tree management perspective. Other than the removal trees (two municipal trees, three bylaw protected trees and non-bylaw protected property trees), this project poses little threat to the neighboring or municipal tree M2 if due-diligence measures are adhered to. The remaining municipal tree M2 is generally healthy. The proposed construction location is suitably distant from the neighboring and municipal trees whereby few significant roots are expected to be encountered.

### 1. Remove municipal tree M1 and M3:

The development plans require this Plum tree to be removed for the driveway and servicing. Paving and curb work in the lane way will require M3 to be removed.

### 2. Remove all bylaw protected trees: #96, #97 and #98:

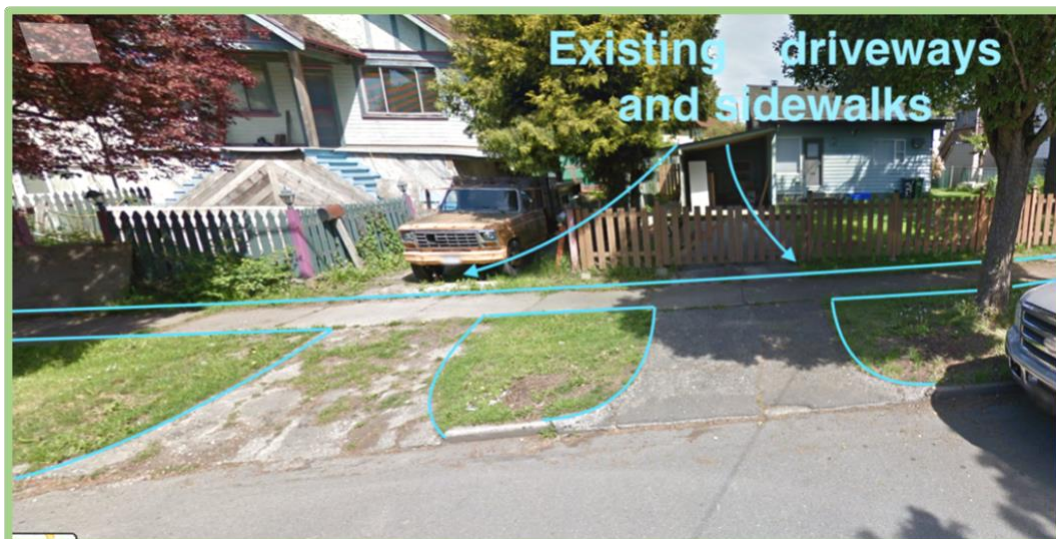
The development plans require these trees to be removed.

### 3. Remove four non-bylaw protected trees and multiple smaller trees on the property:

The development plans require these trees to be removed.

### 4. leave existing driveways and sidewalks for demolition and construction activities:

The existing driveways and sidewalks provide good access points to the development and good anti-compaction surface for the PRZ's of the municipal tree M2. As such, they should remain until the demolition and construction of the new multi-plex is near completion – or as excavation demands on the property. Sidewalk and boulevard driveway portion can likely remain for a longer portion of the development. Otherwise, specific anti-compaction will be required to access the front of the property that contains tree PRZ's.



**5. Three planting zones have been identified to accommodate two small and one medium tree:**

While not specifically required, for medium sized trees it is recommended to use columnar form trees. These trees typically grow tall and thin with a narrow upright shape and have upright branches. The tight spaces in this development will benefit from having trees of this type.

One suitable option is the Quaking Aspen, (*Populus tremuloides*), which has a narrow upright growth form with an open canopy.

NOTE 1: The tree management plan site map indicates 1 potential location for medium sized tree replacements. They require 4 meters of separation from other trees and must be planted no closer than 1 meter from the property line and 2 meters from the building foundation wall. The planting location 3 indicated just meets these requirements (Schedule E, section C, part 4).

NOTE 2: Small trees can be accommodated in planting sites 1 and 2. Two small trees may count for one medium replacement tree. *Cornus kousa* var. *satomi* or *Cornus xvenus* var. *venus* would work in these spots. Fees can be applied for insufficient replacement trees.

NOTE 3: Replacement trees will become bylaw protected.

**6. Replace removed municipal bylaw protected trees:**

As directed by the municipality, the boulevard tree M1 shall be replaced. This will be done by the municipality. As M3 appears to be a small volunteer or citizen planted tree, replacement may not be required.

**7. Install protective fences that cordon off municipal tree M2. If demolition will take place before development approval, protective fences will be required for all municipal or bylaw protected trees:**

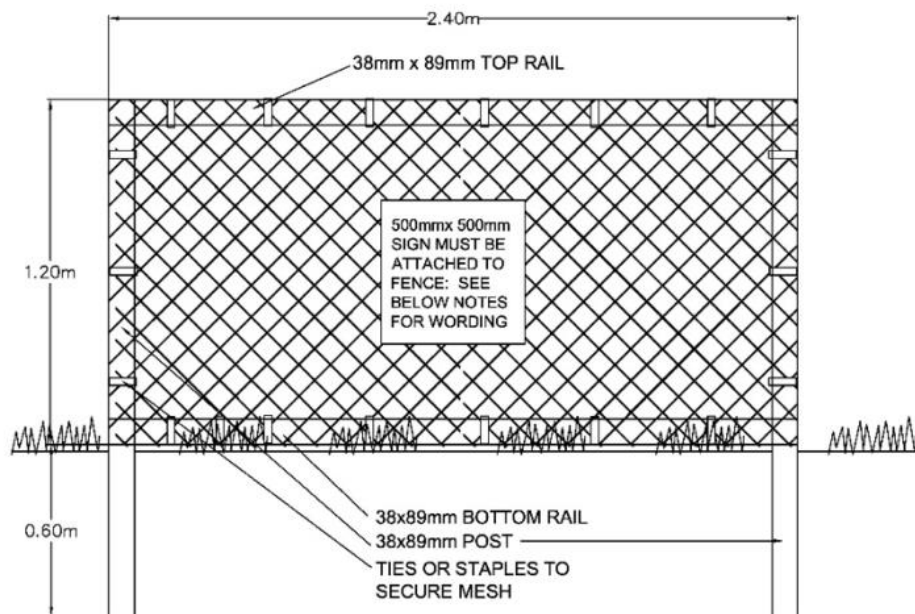
Protective fences and signage should be installed around bylaw protected trees as specified by Victoria municipal guidelines. Protective fence dimensions, although not necessarily representative of the critical rooting zones will serve as a visual reminder to workers of the importance of not impacting these areas. These fence recommendations should be installed to ensure foot traffic and lumber / material storage on the lawn areas do not infringe on the protection zones around all trees.

## SCHEDULE "D" TREE PROTECTION BARRIER REQUIREMENTS

1 The requirements for tree protection barriers are as follows:

- (a) The barrier must be placed around the outside of the protected root zone of the tree, or as approved by the Director; and
- (b) The barrier must meet the following specifications: (i) it must have a minimum height of 1.2 m,
- (ii) 38 mm x 89 mm timbers must be used for vertical posts, top and bottom rails (in rocky areas, metal posts (T-bar or rebar) drilled into rock will be accepted), and cross-bracing (in an "X"),
- (iii) spacing between vertical posts must be a maximum of 3.0 metres on center,
- (iv) the structure must be sturdy with vertical posts driven firmly into the ground,
- (v) there must be continuous plastic mesh high visibility screening (e.g. orange snow fencing), and
- (vi) it must have visible all weather 500 mm x 500 mm signage on it with the wording "Warning – Tree Protection Area".

2 Below is an example showing an acceptable barrier:



- a. **Establish a protective fence box that extends five meters to the east of tree M2 and west to the driveway then between the sidewalk and Manchester Road. This fence will be for the duration of the development.**

**If demolition will be undertaken before tree removal is granted temporary protection fences should be established.**

M3 should have a protection fence that is 1 meter to the east and south of where property lines allow

M1 should have fence 5 meters to the west, east to the driveway edge and bordering the road side and driveway.

#96 should have a temporary fence that borders the two driveways, the side walk and travels 3 meters to the north.

#97 should have a fence that is contained by the property lines and two fences 3 meters to the north and west.

NT 30cm cedar should have a fence that is contained by the property line and 2 meters to the south, west and north.

See tree management site plan below.

For further clarifications feel free to text 250-220-9298.

Sincerely,



Scott Mitchell  
Submitted  
22 September, 2022

ISA Arborist, PN-6138-A, PNW CTRA 309, TRAQ certified  
Pacific Northwest Hazard Tree Assessor, CTA 309

Scotty Tree & Arborist Service  
#7 10075 Fifth St, Sidney BC, V8L-2X8



**Tree Inventory Table:**

Tree ID	Species	Status	DBH (cm)	PRZ * Factor	PRZ* (m) Radius	Canopy Spread (m) Dia	Health	Structural Condition	Site specific Construction Tolerance	No or: removal - Reason	Remarks / Recommendations
M1	Plum	Municipal	46	12:1	5.5	7	Good	Good	Good	Driveway	Municipal tree
M2	Maple	Municipal	45	12:1	5.4	7	Good	Good	Good	NO	Municipal tree
#96	Cedar	Bylaw	68	12:1	4.8**	5	Good	Good	Good	In excavation	Three stem 22, 22, 24 = 68 cm
#97	Atlas cedar	Bylaw	71	12:1	8.5	10	Poor-mod	Moderate	Good	In excavation	Declining health Bylaw protected
M3	Maple	Municipal	11	12:1	1.3	1.5	Good	Good	Good	Road paving	Municipal tree
No-tag	Maple	NBL	12	12:1	1.4	3	Good	Good	Good	In excavation	
No-tag	Doug Fir	NBL	25	12:1	3.0	4	Good	Good	Good	In footprint	
No-tag	Apple	NBL	4	12:1	.5	2	Good	Good	Good	In footprint	Part of clump of small volunteer trees
#98	Cedar	Bylaw	32	12:1	3.6	1.5	Good	Moderate	Good	In excavation	Twin stem 18cm and 14cm
No-tag	Cedar	NBL	14	12:1	1.7	1	Good	Good	Good	In excavation	

\*PRZ - Protected Root Zone (12 to 1 for Good-Moderate construction tolerance & healthy trees / 18 to 1 for Poor construction tolerance or poor health)

NBL = Non-Bylaw protected tree. \*\* - adjusted root zone for multi stem trees.

**Soil Volume Calculation Table:**

				Replacement trees Proposed			Soil volume required (m3)			
Planting area ID	Area (m2)	Soil Volume multiplier	A. Estimated soil Volume (m3)	B. Small	C. Medium	D. Large	E. Small	F. Medium	G. Large	Total**
1	8	1	8	1			8			8
2	8	1	8	1			8			8
3	25	1	25		1			20		20

\*\* Total must not exceed A. If Total exceeds A, then the number or size of proposed replacement trees must be reduced.



**TREE REPLACEMENT TABLE:**

	COUNT	MULTI-PLIER	TOTAL
<b>ONSITE Minimum replacement tree requirement</b>			
A-Protected trees removed	3	X1	A=3
B-Replacement trees proposed per: schedule E Part 1	1	X1	B=1
C-Replacement trees proposed from: schedule E Part 2	2	X.05	C=1
D-Replacement trees proposed from: schedule E Part 3	0	X1	D=0
E.-Total replacement trees proposed (B+C+D) <i>Round down to E. near whole number</i>			E=2
F-Onsite replacement tree deficit (A-E) <i>Record 0 if negative number</i>			F=1
<b>ONSITE Minimum trees per lot requirement (onsite trees)</b>			
G-Tree minimum on lot*			G=5
H-Protected trees retained (other than specimen trees)		X1	H=0
I-Specimen trees retained		X3	I=0
J-Trees per lot deficit [G - (B + C + H + I)] <i>record 0 if negative number</i>			J=3
<b>OFFSITE Minimum trees per lot requirement (offsite trees)</b>			
K-Protected trees removed	0	X1	K=0
L-Replacement trees proposed per schedule E Part 1 or 3	0	X1	L=0
M-Replacement trees proposed per schedule E Part 2	0	X.05	M=0
N-Total replacement trees proposed (L+M) <i>Round down to E. nearest whole number</i>			N=0
O-Offsite replacement tree deficit (K _ N) <i>Record 0 if negative number</i>			O=0
<b>Cash-in-lieu requirement</b>			
P-Onsite trees proposed for cash-in-lieu. <i>Enter greater number of F or J</i>			P=3
Q-Offsite trees proposed for cash-in-lieu. <i>Enter line O</i>			Q=0
R-Cash-in-lieu proposed [(P + Q) X \$2,000]			R=\$6000
<b>*Refer to schedule F</b>			



# TREE MANAGEMENT SITE PLAN

MODIFIED FROM CLENT PROVIDED SITE PLAN  
For informational purposes only  
Sep 22, 2022  
Scotty Tree and Arborist  
#7 10075 Fifth St  
Sidney, BC, V8L 2X8

- Canopy Spread
- Protected Root Zone
- Tree to be removed
- Protective Fencing
- Temporary Protective Fencing
- Potential Tree Replacement Zone
- Replacement Tree

