

Tree Management Plan  
for the Proposed Development  
at 903 Admirals Road  
Esquimalt, BC.



January 23, 2024

## Tree Management Plan for the Proposed Development at 903 Admirals Road, Esquimalt, BC.

### Background

The existing site contains one house and several trees. Trees on site have been inventoried, tagged and surveyed. The proposed development will necessitate removal of most trees. This report describes the trees on and adjacent to the site, tree protection fencing for trees to be retained, and replanting opportunities on site.

### Existing Site Conditions

The site contains numerous trees and one single family house. Figure 1 shows the general site as an aerial view.



Figure 1. Aerial view of the existing site.

The trees on site have been inventoried and tagged. Table 1 summarises these inventory data. Trees off site are not tagged and trunk diameters are estimated.

Table 1. Tree inventory data.				
Tag #	Species	trunk diameter (cm)	Bylaw sized Y / N	Notes
023	Douglas-fir	94	Y	
24	Garry oak	73	Y	
25	Arbutus	53	Y	
26	Garry oak	26	Y	
27	Yew	22/7	Y	
28	Douglas-fir	103	Y	

Table 1. Tree inventory data.				
Tag #	Species	trunk diameter (cm)	Bylaw sized Y / N	Notes
29	Garry oak	39	Y	
30	Garry oak	22	Y	
31	Garry oak	30	Y	
32	Garry oak	32	Y	
33	Garry oak	20	Y	
34	not used			
35	Garry oak	42	Y	
36	Garry oak	19	Y	
37	Garry oak	13	Y	
38	Garry oak	21	Y	
39	Garry oak	25	Y	
40	Garry oak	33	Y	
41	Garry oak	36	Y	
42	Garry oak	19	Y	
43	Garry oak	35	Y	Joined at base. Counted as 1 tree.
44	Garry oak	37		
45	Lawson cypress	72	Y	
46	Lawson cypress	74	Y	
47	Lawson cypress	35	Y	
48	Garry oak	37	Y	
49	Garry oak	23	Y	
50	Douglas-fir	60	Y	
51	Douglas-fir	63	Y	
52	Deodar Cedar	48	Y	
53	Garry oak	16	Y	
54	Garry oak	22	Y	

Table 1. Tree inventory data.				
Tag #	Species	trunk diameter (cm)	Bylaw sized Y / N	Notes
55	Garry oak	36		
56	Garry oak	20	Y	
57	Garry oak	16	Y	Joined at base. Counted as 1 tree.
58	Garry oak	16		
59	Douglas-fir	76	Y	
60	Deodar cedar	60	Y	
61	Western redcedar	54	Y	
62	Hawthorn	25/20/10/11	Y	
63	Hawthorn	20/20/18	Y	
64	Hawthorn	25	N	
Off site northwest boundary moving south down along fence line from tag 24				
NT 1	Garry oak	~20	Y	
NT 2	Garry oak	~35	Y	by fence
NT 3	Western redcedar	~40	Y	~ 2 from fence
NT 4	Western redcedar	~40/45	Y	~ 2 m from fence
NT 5	Garry Oak	~ 60	Y	by fence
NT 6	Douglas-fir	~ 80	Y	
NT 7	Arbutus	~ 80	Y	
NT 8	Arbutus	~ 25	Y	
	Western redcedar		Y	Along north side in front of house pick up row of small cedars (17 trees) not tagged not measured
<p>There are eight off site trees. On site there:                      5 Douglas-fir + 23 Gary Oak + 3 Hawthorn + 1 Western Redcedar + 3 Lawson Cypress + 2 Deodar Cedars + 1 Yew + 1 Arbutus. Total on site trees including the row of cedar trees = 56. Of these 55 are Protected Trees under the bylaw.</p>				

Figure 2 shows the tree survey data. Trees are plotted proportional to their trunk diameter.

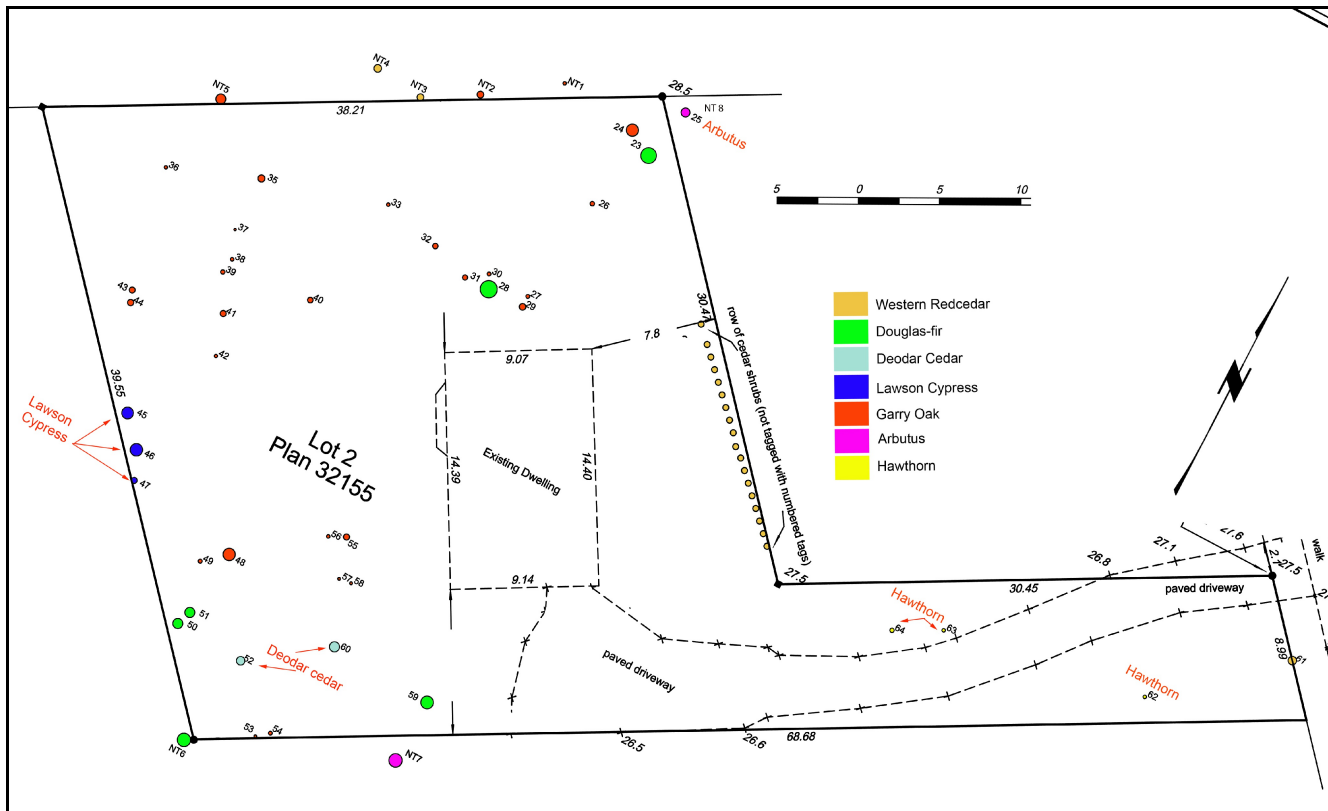


Figure 2. Tree survey data by species.

The south west corner and central area of the site by the south side of the existing house is dominated by outcropping bedrock and shallow soils that extend along the west side towards trees 24 and 23. That is why there are only spindly Garry oaks in that area of the site. It is assumed that the size of trees 24 and 23, and the trees in the south east corner, along with the lack of obvious surface roots in those areas, indicates deeper soils on those parts of the site.

## The Proposed Development

Figure 3 shows the proposed development footprint. Red crosses indicate trees that will be removed. Table 2 summarises the tree data.

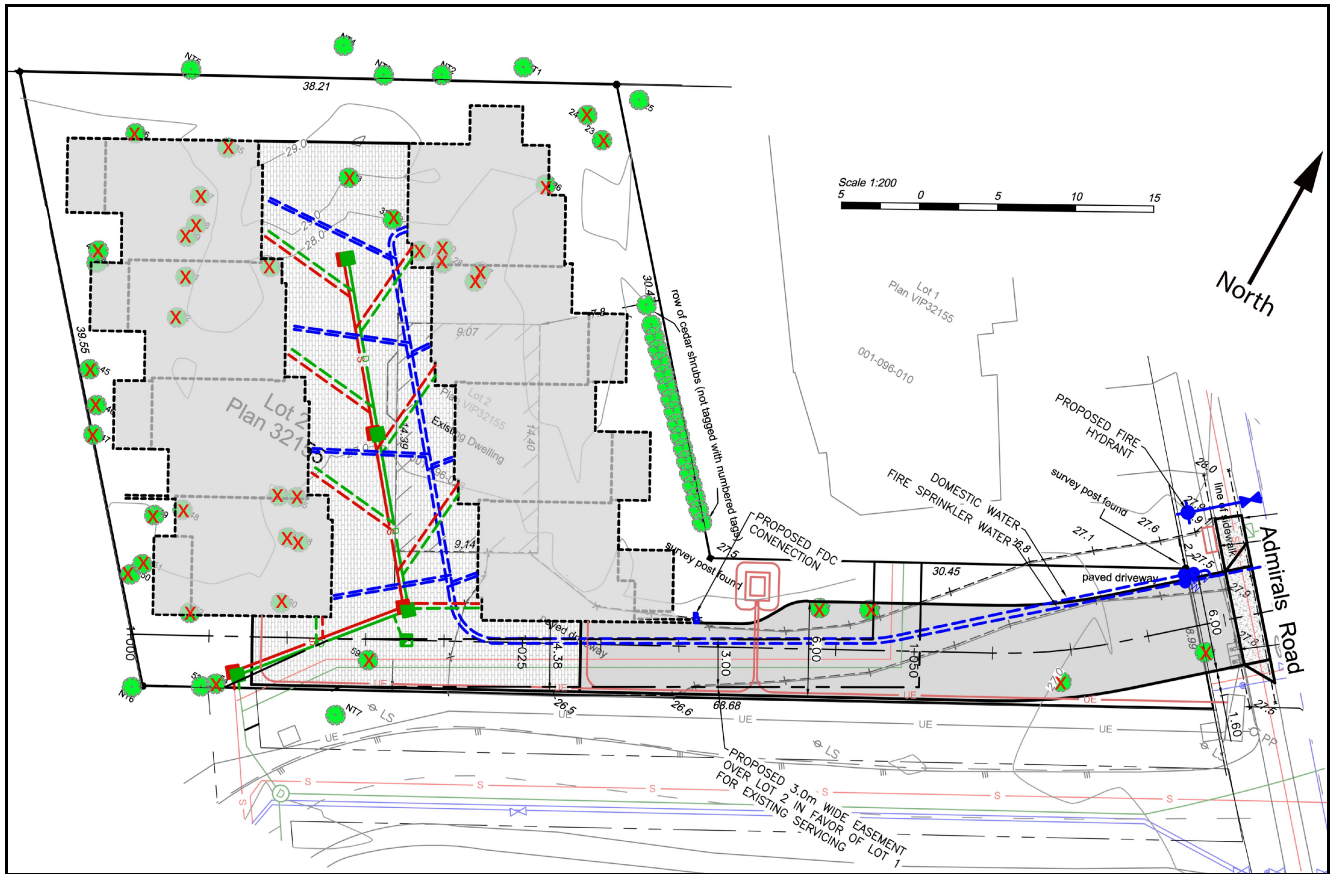


Figure 3. Development proposed and tree data.

The implications of the footprint, site servicing and patio designs has been reviewed in all areas. Even if patio areas were floated over the root areas, the development would be too close to trees and is it not feasible to retain any of them. All but one small oak tree (Tag # 53) in the south west corner would be removed.

Onsite trees		
	Protected	Non protected
	55	1
Removed	35	1
Retained	18	

### Tree Protection Fencing

The one small oak tree to be retained on site (tag # 53), and the row of cedar trees along the north boundary, require tree protection fencing before any other work, including demolition, commences. Several offsite trees should also be considered. The first step will be to remove all trees on site except for the cedars and oak tree 53.

The sequence of fence installation and specifications are as follows.

- 1 The row of cedars along the north boundary shall have a protection fence installed at 1 metre from the

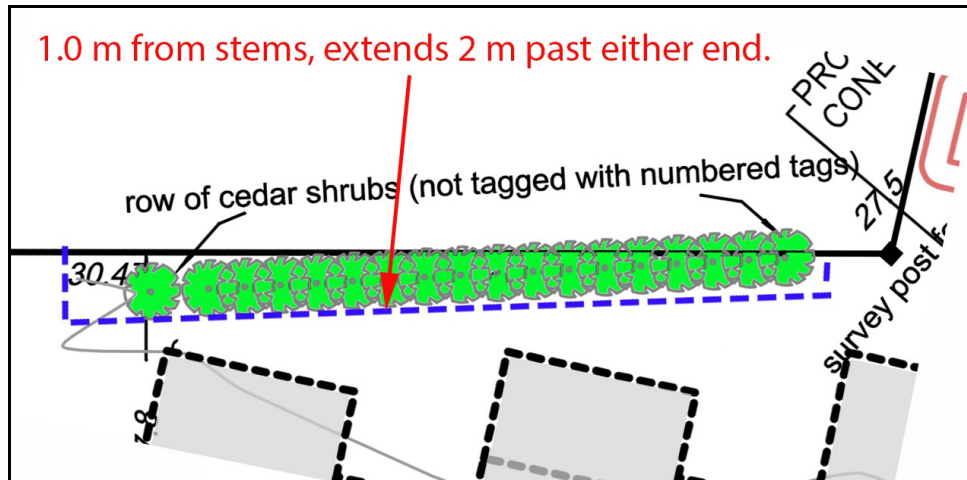


Figure 4. Tree protection fence by cedars along north boundary.

base of the trees, and it shall extend 2 metres beyond either end. See Figure 4. This fence shall be installed before any tree clearing or demolition work commences.

- 2 The offsite tree NT6 and oak tree 53 shall be protected as shown in Figure 5. This fence shall be installed before any tree clearing or demolition work commences.

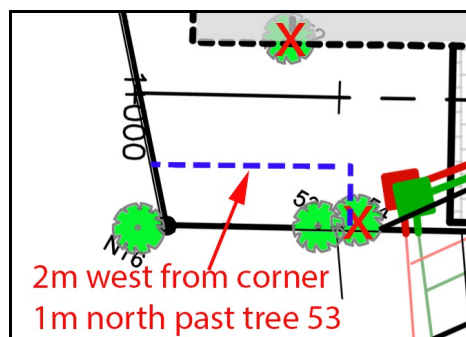


Figure 5. Fence protection south east corner.

- 3 Once tree removal and stump grubbing has been completed, the fence along the west boundary shall be installed. Trees NT1, NT2, NT3, and NT 5 are close to the boundary. In order to protect the roots of these offsite trees a tree protection fence is required at a distance of 1.5 metres from the chainlink fence. It shall extend from 2 metres south of NT5 to the north west corner, and then extend 3 metres east along that fenceline to protect the offsite arbutus tree. See Figure 6.

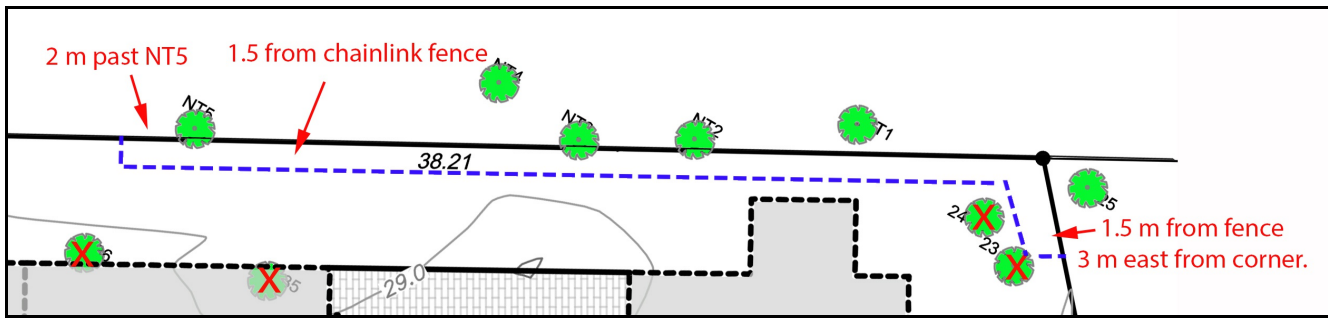


Figure 6. Tree protection fence - west boundary.

All fencing to remain in place in good condition for the duration of the construction work. Any request to move or re align the fences shall be communicated to the project arborist for review before the fence is moved.

Work required to install underground utility lines to the north of tree 53 shall require project arborist to be on site during excavation work to supervise any root pruning required.

## Replanting

The Esquimalt tree bylaw, section 9 (2) lays out the numbers of replacement trees required, as seen in Table 3 below.

Protected Tree Species	Size of Tree to be Cut (DBH)	Number of Replacement Trees Required for Each Tree Cut
Big Leaf Maple, Garry Oak, Pacific Dogwood, Pacific Yew, Arbutus	<4 cm	0
	4 cm to 20 cm	1
	20 cm to 40 cm	2
	> 40 cm	3
Douglas Fir, Western Red Cedar, Grand Fir	< 1.2 m	0
	1.2 m to 6 m tall	1
	6 m to 12 m tall	2
	> 12 m tall	3
All Other Tree Species	< 30 cm	0
	30-45 cm	1
	45-60 cm	2
	> 60 cm	3

Table 3. Replacement tree requirements.

Based on the development proposed the number of trees removed and the replacement numbers required is shown in Table 4.

Table 4. Replacement trees required.				
Species by size class of trees removed		Number removed	Replacement number required	Totals
Garry Oak (22), Yew (1), Arbutus (1)	4 cm to 20 cm	6	6	48
	20 cm to 40 cm	15	30	
	> 40 cm	4	12	
Douglas-fir (4), Western red cedar (1)	6m to 12 m tall	6	18	18



Other species. Deodar Cedar (2 ) Hawthorn (3 ) Lawson Cypress (3)	<30 cm	1	0	15
	30-45 cm	1	1	
	45-60 cm	4	8	
	>60 cm	2	6	
Total number of replacement trees based on Bylaw requirements =				81

There is not room on site to plant 81 new trees. In fact there are limited opportunities to plant any new trees and most will need to be small to medium in size. These opportunities are :

- close to the west property line (at least 1 metre away) by the existing chainlink fence, but note that soils in the central part are shallow and bedrock is close to the surface, so the planting areas are mainly restricted to the northwest and southwest corners.

- along the south boundary (at least 1 metre from fence), but space is limited especially if trees are planted away from the fenceline.

- along the west side of the access road, or right in the northeast corner of the property by the access road.

**Summary**

There are 56 trees on site : 5 Douglas-fir + 23 Gary Oak + 3 Hawthorn + 1 Western Redcedar + 3 Lawson Cypress + 2 Deodar Cedars + 1 Yew + 1 Arbutus plus a row of 17 cedar trees. Fifty five of the onsite trees are Protected Trees under the bylaw. There are eight off site trees.

The proposed development will remove 55 trees on site. It will not affect any of the offsite trees. Based on the tree bylaw 81 new trees will be required as replacements.

Tree protection fencing will be required in three places as noted in the report. The project arborist shall review and sign off on tree protection fencing before other work commences as outlined above.

All tree protection fencing to remain in place in good condition for the duration of the construction work. Any request to move or re align the fences shall be communicated to the project arborist for review before the fence is moved.

Work required to install underground utility lines to the north of tree 53 shall require project arborist to be on site during excavation work to supervise any root pruning required.

Yours truly,  
On Behalf of Dunster & Associates Environmental Consultants Ltd.



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