



Tree Management Plan for Proposed Housing Development at 2700 Mission Road, Courtenay, BC

This Tree Management Plan is intended to address Arborist Reporting requirements as listed in the City of Courtenay Bylaw #2850 in support of the Application for Tree Removal Permit.

Introduction:

In August of 2021, property owner Rick Browning requested that MJR Tree Service conduct a tree survey and provide a Tree Management Plan for a proposed housing development located on the greenfield property of 2700 Mission Road.

The survey was completed on August 10th, 2021. Trees within the proposed development area are indicated in Table 1.

Site Description

Topography:

Property profile is reasonable level throughout at 90m based on the ESRI contours basemap.

Soils and Morphology:

Primarily anthropogenic soils throughout property. Previously cleared.

Water (lakes, streams, creeks):

There are no watercourses on this property.

Wildlife habitat (e.g. nesting trees, deer):

No nests were observed during tree assessment.

No evidence of Heron/Raptor presence observed during assessment.

Natural Features/visual values:

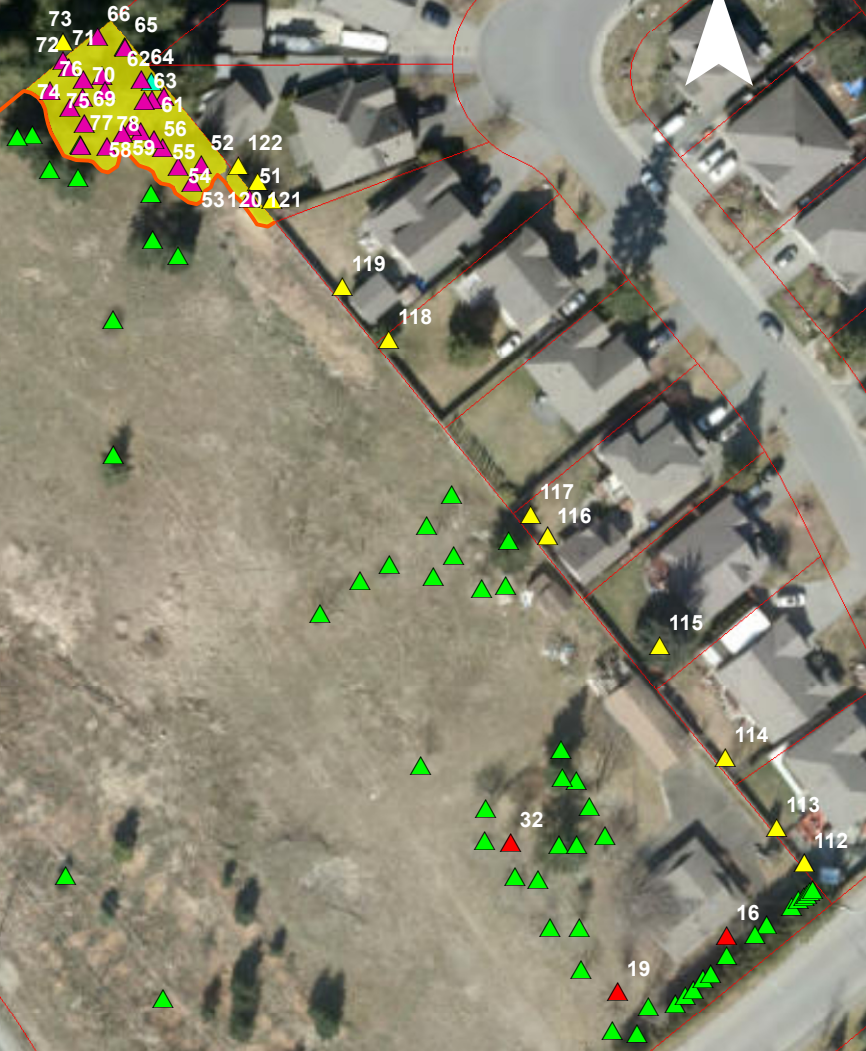
No significant natural features or visual values on this property.

Vegetation (overstory/understory – size, species, density):








Property has very low stem density and is primarily open grassy area with the exception of a dense greenspace in the northern corner of property (proposed tree retention area).

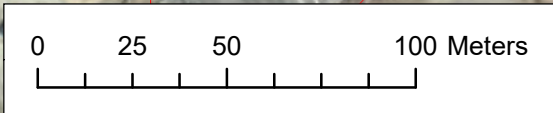
Total counts for the trees within the tree management area are indicated in Table 1 in this report. Area distribution for previously planted trees and proposed tree removals are indicated in Map 1. attached to this report.

2021-09-02 2700 Mission Rd Tree Location Map



Legend

-  Tree Removal
-  Retained Tree
-  Protected Tree
-  Hazardous Tree
-  Adjacent Property Tree
-  Tree Retention Area
-  Tree Protection Fencing



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Table 1. Tree Inventory Count and Proposed Tree Removals (Greater than 20cm DBH):

Species Common	Scientific Name	Number of trees on property	Number of trees to be removed
Coniferous			
Douglas-fir	<i>Pseudotsuga menziesii</i>	31	19
Cypress	<i>Cupressus</i>	15	15
Western red cedar	<i>Thuja plicata</i>	3	0
White pine	<i>Pinus strobus</i>	1	0
Deciduous			
Bigleaf maple	<i>Acer macrophyllum</i>	4	4
Pacific dogwood	<i>Cornus nuttallii</i>	1	0
Hazelnut	<i>Corylus</i>	1	1
Red alder	<i>Ulnus rubra</i>	6	6
Sweet cherry	<i>Prunus avium</i>	2	2
Walnut	<i>Juglans</i>	3	3
	Totals:	67	50

These proposed tree removals are unlikely to create hazardous conditions, both within subject property and adjacent properties. There are no residual risk concerns in regards to tree management and removals on the property.

Table 2.

Protected trees on site (included in Table 1. tree count):

Map #	Common Name	Scientific Name	DBH (cm)
62	Pacific Dogwood	Cornus nuttallii	20cm

Table 3. Hazardous Trees to be removed (does not include dead snags):

Map #	Common Name	dbh	stems	notes
16	Sweet cherry	26cm	1	60% decline, might fall over.
19	Red alder	34cm	1	In decline, decay cavity
32	Red alder	30cm	1	In decline
		Total Stem Count	3	



Table 4. Retention Area Tree Inventory

With the exception of the protected dogwood within the retention area (indicated on map provided in report), all trees in the retention area are in good health and suitable as replacement trees. Note: Dogwood included in tree count numbers as it remains a viable seed tree within the retention stand.

Map ID	Species	dbh	stems	notes
51	Western red cedar	11cm - 15cm	6	
52	Douglas fir	29cm	1	
53	Douglas fir	21cm	1	
54	Douglas fir	22cm	1	
55	Douglas fir	22cm	1	
56	White pine	23cm	1	Multi-stemmed
57	Douglas fir	22cm	1	
60	Western red cedar	20cm	1	
61	Douglas fir	45cm	1	Multi-stemmed
62	Dogwood	20cm	1	In decline, dead top.
63	Douglas fir	11cm	1	
64	Douglas fir	15cm	1	
65	Western red cedar	29cm	1	
66	Douglas fir	11cm	1	
67	Western red cedar	57cm	1	
68	Douglas fir	40cm	1	
69	Douglas fir	30cm	1	
70	Douglas fir	10cm	2	
71	Douglas fir	30cm	1	
72	Douglas fir	11cm	1	
74	Douglas fir	17cm	1	
75	Douglas fir	16cm, 20cm	1	
76	Douglas fir	25cm, 22cm, 15cm, 8cm	4	
77	Douglas fir	18cm, 8cm	2	
78	Douglas fir	19cm	1	
		Total Stem Count	35	



Table 5. Adjacent Property Trees

The following adjacent property trees along the northeast property boundary have low potential to be impacted by development activities. By utilizing current fenceline or constructing additional fencing along this boundary adjacent property trees will have adequate protection.

Map ID	Species	dbh	stems
112	Japanese maple	10cm	1
113	columnar cedar	N/A	3
114	Sweet cherry	30cm	1
115	Douglas fir	50cm	1
116	Plum	N/A	1
117	Plum	N/A	1
118	Cypress	40cm	1
119	Western red cedar	10cm	1
120	Plum	10cm	1
121	Red maple	16cm	1
122	Silver maple	20cm	1
		Total Stem Count	13

Note: Trees along the northwest property boundary will require a protective barrier along the property line. This protective barrier will be adequate to protect the residual adjacent property hardline and will not infringe on the critical root zone of adjacent property trees.

Tree Replacement Requirement Summary

Property area: **2.36 Ha**

Tree Density Target: **118 trees**

Total Number of Trees on Property (Greater than 20cm dbh): **67**

Total Number of Proposed Tree Removals (over 20cm dbh): **50**

Total Number of Retained Trees (Includes trees less than 20cm): **35**

Total Number of Hazardous Trees: **3**

Total Number of Replacement Trees Required to Meet Tree Density Target: **118 – 35 = 83**

Total Number of Tree Replacement Tree Requirements at 3:1 Ratio of Tree Removals and 1:1 Ratio for Hazardous Trees below Tree Density Target: **(47 x 3) + (3 x 1) = 144**

Total Tree Replacement Requirement: 144 – 35 = 109 Trees

Estimated Security Deposit Amount: \$32700

Onsite planned replacement tree count and locations to be identified within the project landscape plan.

MJR TREE SERVICE 250-616-8906



Please contact MJR Tree Service with any further questions.

Report prepared by:

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SCHEDULE B

TREE PROTECTION AND MANAGEMENT BYLAW NO. 2850, 2016

TREE PROTECTION BARRIER AND SIGNAGE SPECIFICATIONS

Barrier structure and material:

Tree protection *barriers* should generally be a minimum of 1.2 meters high, and consist of snow fencing or an equivalent, supported by poles at sufficiently close intervals to ensure the integrity of the fence, or supported by wooden frames.

In instances where *development* is not expected to occur near the *root protection area*, poles strung with multiple bands of flagging tape may be sufficient, subject to approval by an *Arborist* and/or the *Director*.

Barrier distance from tree(s):

Tree protection *barriers* must be of a sufficient size to protect the *root protection area* of the tree. The *root protection area* refers to the area of land surrounding the trunk of the tree that contains the bulk of the critical root system of the tree, as defined on a plan prepared by an *Arborist*, that the *Director* reasonably approves.

Barrier protection sign:

Where *retained trees* require protection barriers, a tree protection informational sign in the format provided in this Schedule, must be affixed to the *barrier* at intervals of every 30 metres unless waived as a requirement by the *Director*. The sign must be able to withstand weather conditions for prolonged periods of time.

Barrier duration:

The *barrier* must be in place throughout the entire duration of the *development* activities that are taking place around the *tree* and until written approval of its removal is obtained from the *City*.



Tree Protection Zone (TPZ)

No grade changes, trenching, storage of materials or equipment, liquid disposal, hard surfacing or vehicular traffic are permitted within this area.

The tree protection barrier and sign must not be removed, without authorization of City of Courtenay, Development Services Department. Failure to comply may result in fines.

If you see this sign or protection barriers being tampered with, please report to the number listed below.

For more information call the Development Services Department at 250 334 4441