



**GYE + ASSOCIATES**

Consultants in Urban Forestry and Arboriculture

## **Arborist Report**

### **514 & 518 Sumas Street, Victoria Rezoning Application**

Date of Report: September 12, 2019

Date of Field Work: December 4, 2018

Prepared by Jeremy Gye

ISA Certified Arborist # PN-0144AM

On behalf of Gye and Associates, Urban Forestry Consultants Ltd.

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## EXECUTIVE SUMMARY

The existing lots at 514 and 518 Sumas Street are proposed for rezoning. The proposed site is located on the west side of Sumas Park. A number of trees currently grow within the site, within the park near the boundary with the site and on the municipal boulevard fronting the site. (See attached tree plan.)

- There are two ornamental plums, two fruiting apples, a Bay laurel and one Arbutus growing on the proposed site. The Arbutus has protected status within the City of Victoria's Tree Preservation Bylaw and will be retained and protected. All five non-bylaw trees will be removed. No replacement trees are required on private property.
- There is one Cottonwood tree and a newly planted elm tree on the west side of the park, both of which will be preserved.
- Three Japanese plum trees are located on the Sumas Street boulevard, fronting lots 514, 518 and the west side of Sumas Park respectively. It is anticipated that the boulevard-plum currently fronting 514 Sumas Street (Tree 1187) will be critically impacted by proposed services and utilities that must be trenching up the west side of the proposed site. The remaining two boulevard-plums will be retained and preserved.

Tree protection measures are prescribed to protect the boulevard and park trees. The removal of the boulevard tree fronting 514 Sumas Street shall be compensated for by a payment of cash-in-lieu to the City.



Fig-1 Context photo: aerial image of subject lots and Sumas Park



## **ASSIGNMENT**

Gye and Associates (G&A) have been retained to prepare a tree protection plan drawing and report in support of the owner's rezoning application, as well as on-site services during the site servicing phase. This report has been prepared in accordance with the City's published Terms of Reference for Tree Preservation Plans.

## **METHODOLOGY**

- A site visit was made to identify, measure and assess the condition of relevant trees. The proposed architectural site plan and engineering site servicing plan were reviewed to assess potential tree impacts associated with the project.
- Biometric and assessment data was recorded and is presented in table format below (Table-1) on the referenced tree plan.
- Protected Root Zone (PRZ) radii were calculated for the subject trees. The PRZ was calculated using the method recommended by Nelda Matheny and James Clark, which considers the relative tolerance of the tree species to disturbance, the biological age of the tree and its stem diameter at chest height.<sup>1</sup> Soil depth and texture and the health and condition of the tree were also considered. Multipliers of 12x the stem diameter have been derived using this method on a tree-by-tree basis.
- The homeowner and project design team were interviewed to obtain a history of the site and a better understanding of the proposed redevelopment.
- Topographic survey and lot layout drawings for rezoning were provided to the arborist to incorporate into the attached Tree Preservation Plan drawing, including the location of existing trees and proposed underground services.
- The canopy and protected root zone (PRZ) of each tree was plotted to scale on the tree plan.
- The site plan was reviewed to identify elements that encroach within the PRZ or crown of each tree. Underground services were also delineated on the plan and reviewed for potential impacts.
- Tree protection measures were developed to protect trees designated for retention both on site and off-site.

## **OBSERVATIONS**

### **SITE DESCRIPTION**

The subject property is located in a mature urban residential neighborhood. The terrain of the site is relatively flat. The majority of the lot surface is either constructed or landscaped. No recent

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<sup>1</sup> Nelda Matheny and James R. Clark, Tree and Development, A Technical Guide to Preservation of Trees During Land Development (International Society of Arboriculture, Champaign IL, USA. 1998 P. 74)



soil disturbances were noticed during the site visit. A single-family home is located on each of the existing lots. Vehicular access to the lots is from the alley at the northerly side of the properties.

### TREE RESOURCE

Eleven (11) trees are in the vicinity of the proposed re-development. Six of these trees are located on the subject properties (two flowering cherries, two fruiting apples, a Bay laurel and one Arbutus). Two Japanese plum trees are located on the municipal boulevard fronting the lots. One Japanese plum is located on the boulevard fronting Sumas Park. Two trees (one poplar and one elm) are located along the west side of Sumas Park, which is the adjacent property to the east.



Fig-2 Subject lots and boulevard trees, looking westerly.

All trees are considered to be in fair – good health and structural condition. Biophysical attributes are presented below in the following table.

**Table -1.** Tree inventory table

G&A Tree ID	Common Name	Scientific Name	DBH (cm)	Protected Root Zone Radius (m)	Crown Radius (m)	Health (Good, Fair, Poor)	Structural Condition (Good, Fair, Poor)	Bylaw-Protected Tree?	Comments	Recommendations
1185	Ornamental plum	Prunus spp.	32	4	3	Fair	Fair	No	Boulevard tree; scars at the base of the trunk	Retain and protect
1185A	Arbutus	Arbutus menziesii	12	2	1.5	Good	Good	Yes	Located on Lot 518	REMOVE
1186	Ornamental plum	Prunus spp.	18	3	2	Fair	Fair	No	Boulevard tree	Retain and protect
1187	Ornamental plum	Prunus spp.	38	5	4	Fair	Fair	No	Boulevard tree	Retain and protect
1188	Ornamental plum	Prunus spp.	28	4	2	Fair	Fair	No	Located on Lot 514	REMOVE
1189	Ornamental plum	Prunus spp.	30	4	4	Good	Good	No	Located on Lot 514	REMOVE
1190	Cottonwood	Populus trichocarpa	81	9	8	Good	Fair	Yes	Park tree; no tag; overextended branches	Retain and protect
1190A	Elm	Ulmus minor	8	1	1	Fair	Fair	Yes	Park tree; new plant; no tag	Retain and protect
NT001	Bay laurel	Laurus nobilis	55	6	2	Good	Fair	No	Multi-stemmed: 17 cm +0.6(11+12+15+14+12)cm	REMOVE
NT002	Fruiting apple	Malus sp.	13	2	2	Poor	Fair	No		REMOVE
NT002	Fruiting apple	Malus sp.	22	3.5	3	Fair	Fair	No		REMOVE



Fig-3 Park-cottonwood tree # 1190B  
looking south.

## SITE PLAN

The rezoning site plan includes the following elements that are located within or immediately adjacent to tree protection areas identified in the attached tree plan:

- Installation of underground services and utilities—such as sewer, storm, water, electrical power, gas and communications—to the property boundary.

## **DISCUSSION**

The existing sewer, drain and water services require upgrading. The preliminary servicing design drawing shows sewer and drain proposed for installation near the south-east corner of the subject property. At the front property line, the sewer line will be approximately 1.8 m below existing grade. It is expected gas service will come in next to the sewer and drain service. This location is sufficiently distant from Arbutus 1185A, the park poplar #1190B and the boulevard-plum #1185 to avoid any significant impacts. The preliminary servicing design drawing shows the water service connecting to the frontage at the south-west corner of the site and running up the west side. It is anticipated that in-ground utilities such as hydro, telephone and cable will also be located in this area. The horizontal separation requirements between these services and utilities will require trenching within 1m of boulevard-plum #1187; we therefore recommend the removal and replacement of this tree.

## **TREE PROTECTION MEASURES**





Tree protection measures to limit impacts from the construction of the foundation, driveway and in-ground services include the following:

- Underground services are located as far from the boulevard trees as possible.
- Prior to the release of a tree or demolition permit by the City, the applicant and their general contractor are required to meet on site with the project arborist to review the Tree Preservation Plan in detail.
- All tree protection areas (TPAs) shall be fenced to prevent soil compaction, rutting and other forms of disturbance within the PRZ. This includes new protection fencing inside the east side of the property to protect the Arbutus and park trees.
- If it should prove absolutely necessary to reduce the extent of the tree fencing to facilitate site access, then the growing soils within the PRZ must be armoured and protected to prevent soil disturbance (such as for site access off Sumas Street). Acceptable soil-armouring materials include steel plates or 200mm of compacted road base on top of geo-textile cloth.
- Site access for the excavator and bin-trucks required for demolition of the existing houses is recommended at the north end of the site.
- All excavation within or adjacent to TPAs shall be supervised by the project arborist;
- Where considered necessary by the arborist, pneumatic or hydraulic excavation techniques shall be used in place of mechanical excavation.
- The project arborist shall prune any tree roots or branches damaged during excavation;

Additional detail is provided on the attached tree plan. If diligently implemented, the tree protection measures specified in the Tree Management Plan and this report will effectively preserve the two boulevard trees and two off-site trees for the long-term benefit of both the homeowner and the community.

## ROLE OF THE PROJECT ARBORIST

In addition to assisting with tree preservation planning during the rezoning design and permit application phases of the project, the arborist shall be present during the site servicing phase of the project to supervise all works occurring within or immediately adjacent to the tree protection areas identified on the attached tree plan.

The following is a summary of the key interventions required by the arborist (G&A). **The owner's site servicing contractor and civil engineer are responsible for coordinating with the arborist for all required on site work.**

1. A mandatory site meeting is required with the project arborist, site servicing contractor and civil engineer to review the tree preservation plan prior to work commencing on site. The purpose of the meeting is to systematically review the objectives of the plan and the specific measures required to protect the relevant trees during the site servicing phase of the project.



2. The arborist shall inspect the prescribed tree protection fencing and any soil armouring prior to work commencing on site.
3. The use of explosive for rock removal can kill or injure trees if not managed carefully. If rock removal is required as part of the site preparation phase, the building and blasting contractor shall meet on site with the arborist to develop the rock removal work plan together, prior to an estimate of costs being provided by the blasting contractor.
4. The arborist shall be present to oversee the following site work within or immediately adjacent to the Tree Protection Areas identified on the attached plan:
  - a. trenching for both municipal service connections and extension of these underground services to the property boundary;
  - b. associated rock removal or blasting;
  - c. periodic site inspections to ensure effective compliance with required tree preservation measures;
  - d. meetings as required to resolve any emergent conflicts between site servicing requirements and tree protection.
5. At completion of site servicing, the arborist shall ensure that any tree protection or restoration deficiencies are addressed by the owner and contractor. Once all deficiencies have been repaired, the arborist shall prepare a letter to the City of Victoria confirming successful completion of project, including resolution of any deficiencies.

***End report.***

**CERTIFICATION:**

This report and the opinions expressed within it have been prepared in good faith and to accepted arboricultural standards within the scope afforded by its terms of reference and the resources made available to the consultant.

Prepared and submitted on behalf of Gye and Associates, Urban Forestry Consultants Ltd,

**Jeremy Gye – Senior Consultant**

Gye and Associates, Urban Forestry Consultants Ltd.

**Consulting Arborist** (Diploma, American Society of Consulting Arborists, 1997)

**ISA Certified Arborist** (Certification No. PN-0144A)

**ISA Certified Municipal Specialist** (Certification No. PN-0144AM)

**ISA Tree Risk Assessment Qualified**

**APPENDIX**

Tree Preservation and Landscape Plan drawing (see attached).





DRAWN BY \_\_\_\_\_  
SHEET NO. \_\_\_\_\_