LANDSCAPE ARCHITECTURE

Arboricultural Assessment Report

Date of Review:	February 24, 2020	Project File No.:	19076
Date of Report:	March 5, 2020	Project Name:	Mixed-use 32-storey Highrise
Weather:	Windy	Arborist:	Xudong Bao ISA Certified Arborist PN-8671A, TRAQ

We completed a review of the site conditions on the date of review and note the following:

Re: Arboricultural Assessment Services at 5163-5187 Joyce Street, Vancouver, BC

For: Jeff Shen, J+S Architects; Email: jeff.s@jsarchitect.ca

1.0 Introduction:

A site visit was requested by J+S Architects to review the quality of existing significant and bylaw protected trees at the site associated with the proposed development of a Mixed-Use 32-Storey Highrise. We were provided with a copy of the topographical survey plan as well as a plan showing the proposed form of development. Only the trees detailed in this report were assessed. The purpose of this review was to outline the existing conditions of the subject trees, including health and structure, and to determine suitability for tree retention based on the proposed form of development. This report will be submitted to meet municipal permitting requirements.

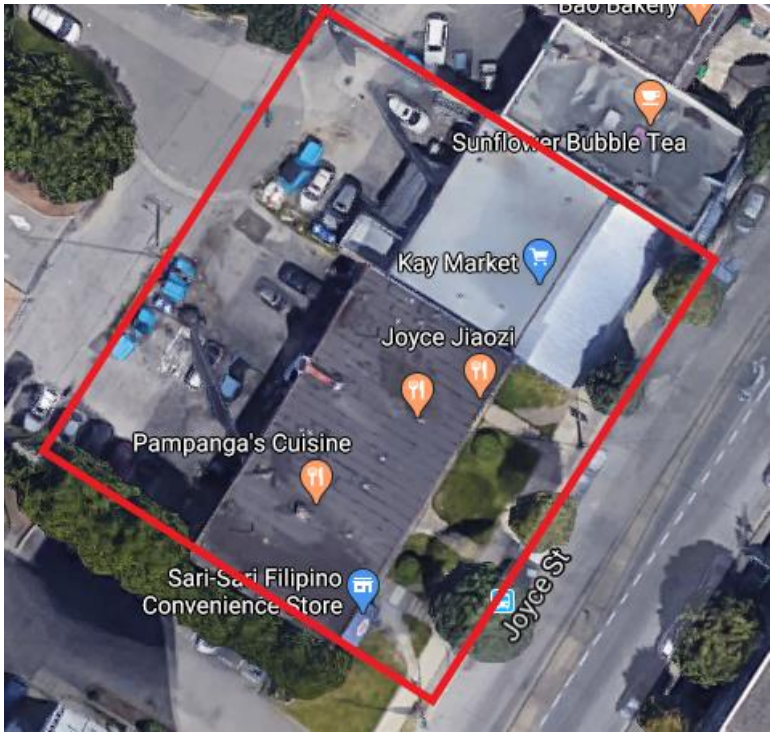
A standardized visual assessment method was used for the on-site tree inventory and analysis. Tree species, size, and condition were noted for each, as well as any outward signs of structural defects, health deficiencies, and/or environmental conditions potentially impacting the health or structural integrity of the trees. Trees have been tagged with a number for inventory and reference purposes. Digital photos were taken for file reference and report writing purposes. A detailed inspection including aerial inspection, decay mapping, excavation explorations and root mapping was not performed.

2.0 Scope of Work:

Our scope of work is defined by the owner as follows:

a) Assess bylaw size trees within the site and 5m of property line and of neighbouring properties.
b) Assess the feasibility of retaining trees on the site, on neighboring properties and on city property in association with the form of development proposed.
c) Provide mitigation/protection comments.

3.0 Observation:



The image above is taken from Google Maps and the subject site is outlined in red.

The property is currently a series of retail units along Joyce Street. Similar mixed use buildings line Joyce Street within proximity to the site.

Street Trees

A total of 32 trees are associated with this development project including 28 offsite Western redcedars on southwestern neighbour side and 4 city maples.

Environmental, Drainage and Wildlife Comments

There were no observed bird nests and no significant wildlife values noted on the site. The entire subject site appeared relatively flat.

Existing Trees / Vegetation

Attached Photos:



Photo 1: offsite cedar hedge (os1-os28, left to right)



Photo 2: Some damaged branches on offsite cedar hedge



Photo 3: Mechanical damage on offsite cedar



Photo 4: City trees along Joyce Street

3.1 Recommendation:

The mandate from the client to the Arborist was to review the existing trees on site and 5m from the property line, for their overall health/ quality and to provide comments in regard to their ongoing suitability for retention.

Our recommendation is to remove part of offsite cedar hedge (OS1-OS14) on neighbour side. According to the site plan, project site will be excavated to the southwestern property line. Significant number of roots from tree OS1 – OS14 will be excavated and will not have long term viability.

All the city trees and remaining cedar hedge on neighbour side are recommended to be retained. Tree OS15 – OS28 are next to an existing building and no roots are expected on the project side. Any excavation on the project side will not affect the roots directly but some roots may get exposed after excavation and should be covered with moist burlap bag filled with straw. Regular watering is required to keep burlap moist.

During the demolition, project arborist needs to supervise the foundation removal near tree OS15 – OS28. Excavation should be limited to the existing foundation area. After demolition, exposed roots along southwestern property line should be covered with moist burlap bag filled with straw as well.

The client should develop the site and install suitable replacement trees on and off site, as necessary or required. The purpose of the replacement trees is to re-establish a reasonable level of tree cover. Suitable tree species shall be selected to obtain optimal growth in the given locations and conditions. Refer to municipal requirements for replacement tree recommendations and select those that will grow to a mature stature and not outgrow the space in which they will be planted. This approach will ensure the best long-term solution to the specific urban forestry requirements of this site.

4.0 Limitations

We attach the following clauses to this document to ensure you are fully aware of what is technically and professionally realistic in the assessment and preservation of trees.

This Arboricultural field review report is based on site observations on the date noted, only. We ensure that the opinions expressed are a reasonable and accurate representation of the condition of all trees reviewed. The assessment was completed based on a visual review only and none of the trees were dissected, cored, probed or climbed. All trees or groups of trees have the potential to fail. No guarantees are offered or implied by M2 Landscape Architecture or their employees that the trees are safe given all conditions. Trees can be managed, but they cannot be controlled. To live, work or play near trees is to accept some degree of risk.

The assessment provided was based on preliminary information only.
The opinions expressed in this report are valid for a period of one year only. Any trees retained should be reviewed on a regular (yearly) basis and tree work required should be done as soon as possible to mitigate any risk.

The information provided in this report is for the exclusive use of our client and may not be reproduced or distributed without permission of M2 Landscape Architecture.

Please contact the undersigned if you have any questions or concerns regarding this matter.

Yours Truly,
(On behalf of M2 Landscape Architecture and Arboriculture Ltd.)



Xudong Bao
ISA Certified Arborist PN-8671A, TRAQ
M2 Landscape Architecture

ARBORIST TREE TABLE

Tree ID #	Botanical Name	Common Name	On Survey Y/N	Location: On, off, Shared, City	DBH (cm)	LCR (%)	Canopy (dia.)	Condition (Structure, Health, TRAQ rating)	Comments	Retention Suitability	Retain/ Remove	Tree Protection Zone (TPZ)
Ci1	*Acer x freemanii 'Armstrong'*	Armstrong maple	Y	City	44	-	3.5	Multiple stems from 6', natural crown form, limited root space, sidewalk heaving observed aroung trunk base, no major defects found.	Build tree barriers around exposed root zone only	g	Retain	2.64
Ci2	*Acer x freemanii 'Armstrong'*	Armstrong maple	Y	City	27	-	1.5	Multiple stems from 7', natural crown form, young, no major defects found	Build tree barriers around exposed root zone only	g	Retain	1.62
Ci3	*Acer x freemanii 'Armstrong'*	Armstrong maple	Y	City	34	-	2.5	Multiple stems from 6', natural crown form, some dead branches, severe mechanical damage at trunk base, trunk is slightly leaning north.	Build tree barriers around exposed root zone only	g	Retain	2.04
Ci4	*Acer x freemanii 'Armstrong'*	Armstrong maple	Y	City	31	-	3.0	Multiple stems from 7', natural crown form, young, no major defects found.	Build tree barriers around exposed root zone only	g	Retain	1.86
OS1	*Thuja plicata*	Western redcedar	Y	Off	38	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	2.28
OS2	*Thuja plicata*	Western redcedar	Y	Off	27	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.62
OS3	*Thuja plicata*	Western redcedar	Y	Off	31	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.86
OS4	*Thuja plicata*	Western redcedar	Y	Off	26	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.56
OS5	*Thuja plicata*	Western redcedar	Y	Off	20	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.5
OS6	*Thuja plicata*	Western redcedar	Y	Off	28	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.68
OS7	*Thuja plicata*	Western redcedar	Y	Off	43	55	1.5	Dual stems from base, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	2.58
OS8	*Thuja plicata*	Western redcedar	Y	Off	23	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.5
OS9	*Thuja plicata*	Western redcedar	Y	Off	53	55	1.5	Dual stems from base, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	3.18
OS10	*Thuja plicata*	Western redcedar	Y	Off	22	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.5

p=poor; m=moderate; g=good;
OS=Off Site; CRZ=Critical Root Zone

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OS11	*Thuja plicata*	Western redcedar	Y	Off	24	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.5
OS12	*Thuja plicata*	Western redcedar	Y	Off	31	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.86
OS13	*Thuja plicata*	Western redcedar	Y	Off	21	55	1.5	Single stem, previously topped with regerated leaders, part of hedge row, healthy, one mechanical damage observed on trunk at 5'.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.5
OS14	*Thuja plicata*	Western redcedar	Y	Off	21	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Will be siginificantly impacted by foundation excavation, neighbour's permission required	g	Remove	1.5
OS15	*Thuja plicata*	Western redcedar	Y	Off	25	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS16	*Thuja plicata*	Western redcedar	Y	Off	25	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS17	*Thuja plicata*	Western redcedar	Y	Off	22	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS18	*Thuja plicata*	Western redcedar	Y	Off	26	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, part of previous chainlink fence fused with tree trunk.	Next to existing building, no roots expected on project side.	g	Retain	1.56
OS19	*Thuja plicata*	Western redcedar	Y	Off	21	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, few branch damages observed on the neighbour side.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS20	*Thuja plicata*	Western redcedar	Y	Off	23	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, few branch damages observed on the neighbour side.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS21	*Thuja plicata*	Western redcedar	Y	Off	15	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS22	*Thuja plicata*	Western redcedar	Y	Off	27	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.62
OS23	*Thuja plicata*	Western redcedar	Y	Off	19	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS24	*Thuja plicata*	Western redcedar	Y	Off	21	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5

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OS25	*Thuja plicata*	Western redcedar	Y	Off	17	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS26	*Thuja plicata*	Western redcedar	Y	Off	20	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.5
OS27	*Thuja plicata*	Western redcedar	Y	Off	27	40	1.5	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	1.62
OS28	*Thuja plicata*	Western redcedar	Y	Off	41	40	2.0	Single stem, previously topped with regerated leaders, crown is unbalanced to southwest due to building clearance pruning, part of hedge row, healthy, no major defects found.	Next to existing building, no roots expected on project side.	g	Retain	2.46

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Tree OS1 - OS14 recommended for removal due to foundation excavation along southwestern property line, neighbour's permission required.

Build tree barrier around exposed root area only to avoid impeding pedestrian

Arborist to supervise house demolition near tree os15-os28, exposed soil profile and roots should be covered moist burlap filled with straw to protect roots.
Install tree protection fence along property line.

NO.	DATE	REVISION DESCRIPTION	DR.
-			

SEAL:

PROJECT:

ARBORIST
5163 & 5187 JOYCE STREET
VANCOUVER, BC

DRAWING TITLE:

ARBORIST PLAN

DATE: 05.MAR.2020	DRAWING NUMBER:
SCALE: 1:350	L1arb
DRAWN: XB	
DESIGN: XB	
CHK'D: MTLM	OF 2
M2LA PROJECT NUMBER:	19-076

19076-01 ARB.zip

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NO.	DATE	REVISION DESCRIPTION	DR.
-			

SEAL:

PROJECT:

ARBORIST
5163 & 5187 JOYCE STREET
VANCOUVER, BC

DRAWING TITLE:

ARBORIST PLAN

DATE: 05.MAR.2020	DRAWING NUMBER: L2arb
SCALE: 1:350	
DRAWN: XB	
DESIGN: XB	
CHK'D: MTLM	OF 2
M2LA PROJECT NUMBER:	19-076

19076-01 ARB.zip