ABC TREE MEN

CERTIFIED ARBORIST REPORT

PROJECT LOCATION:
2222 Clarke St, Port Moody

PREPARED FOR:
1156038 B.C. LTD.

PREPARED BY:
ABC Tree Men
8952 15th Ave, Burnaby B.C.

April 27, 2018
1st revision done on July 18, 2018

Francis R. Klimo
ISA Certified Arborist
ISA Certified Tree Risk Assessor
BC Wildlife Danger Tree Assessor

1.0 SCOPE OF WORK

ABC Tree Men was contracted by 1156038 B.C. LTD. to conduct and prepare a Tree assessment, Tree management plan, and Arborist report for its location at 2222 Clarke St, Port Moody. The objective of this report is to ensure the proposed development is in compliance with the *City of Port Moody Tree Protection Bylaw No. 2961, 2015.* We were conducting our field inspections on April 27, 2018 at around 10:30am. Our scope of work was to identify all key trees onsite and offsite, assess, document its condition, and recommend actions on removing or retaining the trees in question.

❖ 1.1 Limits of assignment

- Our investigation is based solely on visual inspection of the trees on April 27, 2018 and the analysis of photos taken and tree diagnosis gathered during the inspection.
- Our inspection was conducted from ground level. We did not conduct soil tests or below grade root examination to assess the condition of the root system of the trees.
- We conducted a level 2 assessment.
- Calm cloudy day, no notable adverse weather conditions.

❖ 1.2 Purpose and use of the report

- Meet municipal criteria for development submissions and to provide documentation pertaining to onsite and offsite trees to supplement the proposed development permit application for 2222 Clarke St, Port Moody.

2.0 SITE ANALYSIS

Currently on the property is an existing dwelling that is slated for demolition encompassing on an 800 square meter lot. A new townhouse with an underground parkade will be constructed.

Since the levels of the property are relatively flat runoff water and erosion would not affect neighboring trees and should not be of concern. Substantial grade changes will occur and should be of concern to the health and stability of one neighboring tree. Also, major excavation will be inside several on and offsite trees and its critical root zone. All trees that are located directly within building footprints or other construction zones with high disturbances requirements have been selected for removal.

No presence of bird nesting or any wildlife living in the trees can be identified. We are not qualified environmentalist or Geotechnical engineers, and should therefore be used as anecdotal observations only.

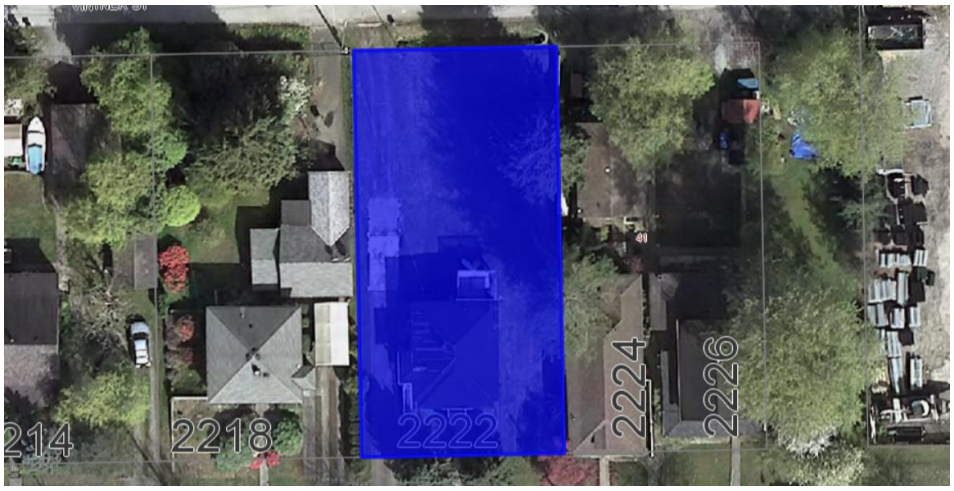


Figure 1. Location of subject site– 2222 Clarke St, Port Moody

3.0 TREE ASSESMENT PROCESS

Our tree inspection process is a systematic process for accurately identifying and cataloging trees. Using the site survey as a reference to their location and proposed townhouse house plans we have produced accurate findings to our recommendations to ensure proper tree protection during the construction phase and or prescribe removal recommendations.

- **3.1 Health and structure rating**

  - 5 - A healthy, vigorous tree, reasonably free of disease, with good structure and form typical of the species.
  - 4 - A tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
  - 3 - A tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that may be mitigated with care.
  - 2 - A tree in decline, epicormics growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
  - 1 - A tree in severe decline, dieback of scaffold branches and or trunk, mostly epicormic growth; extensive structural defects that cannot be abated.

4.0 SUMMARY OF FINDINGS

On April 27, 2018, ABC Tree Men conducted a site visit and visual inspection. A total of six (6) trees have been identified both offsite and onsite. Of the six (6) trees identified, four (4) are off-site city trees and two (2) trees are located onsite.

Overall, all trees range from fair to good in condition. Trees that were located directly within building footprints or other construction zones with high disturbances requirements were selected for removal.

We observed five (5) types of species of trees located on and offsite: Spruce, Laurel, Maple, Apple, and Westen redcedar.

DBH varies from 21cm to 87cm for all trees identified offsite and 91cm to 28cm for trees onsite.

Of the six (6) trees identified, two (2) trees will be retained with tree protection measures implemented and four (4) trees will be removed.

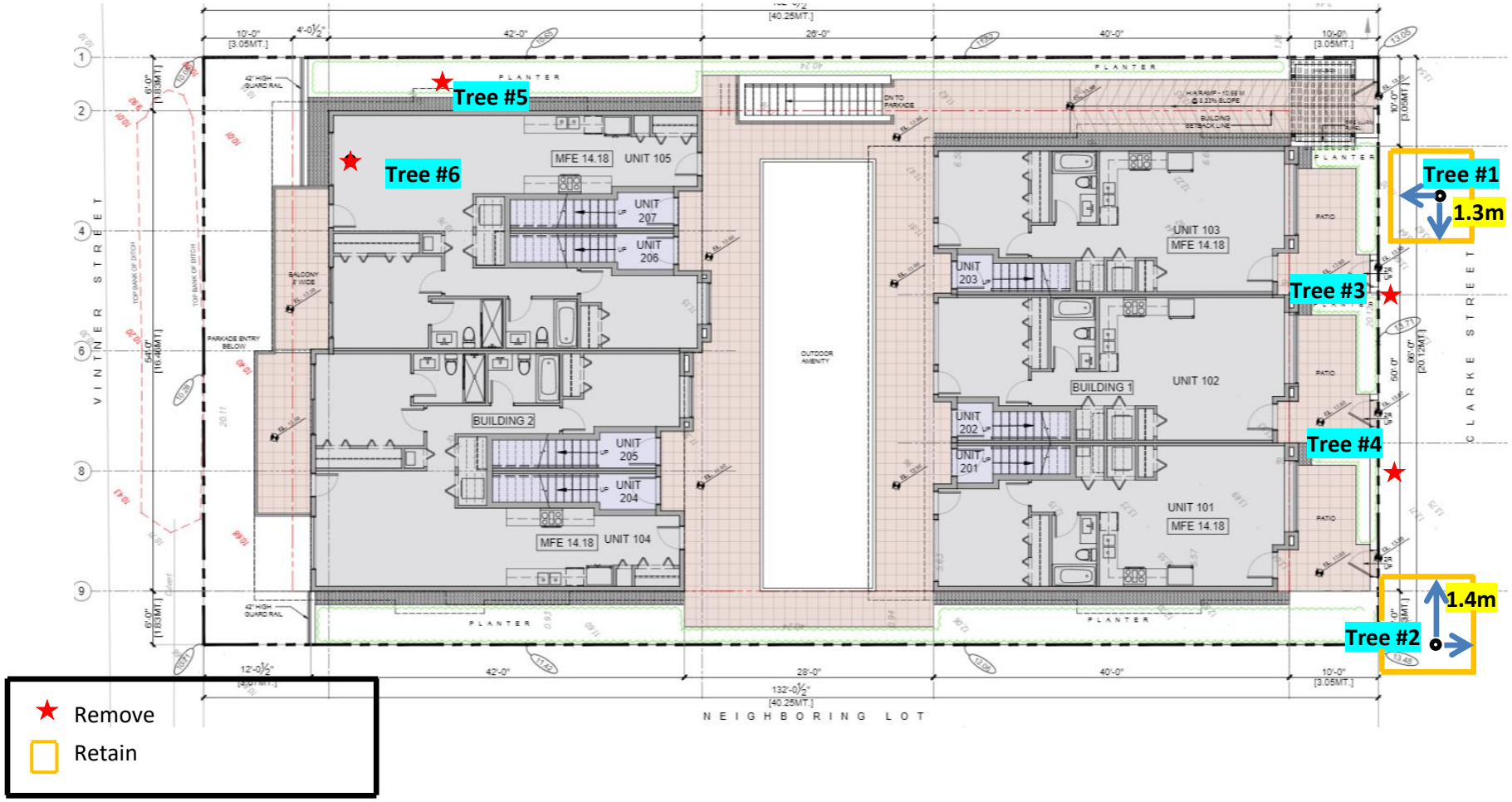
5.0 SITE MAP


Tree #5
Tree #6
Tree #1
Tree #3
Tree #4
Tree #2
Existing Dwelling
2222 Clarke Street
Port Moody, BC
Roof Peak
Main Floor Elevation
Ret Wall
Ret Wall
40
Top of Bank Ditch
Top of Bank Ditch
Ditch
Culvert
CLARK STREET
Concrete Sidewalk
Concrete Curb
Conifer
Conifer
40.24
40.24
20.11
20.12
6.50
6.60
5.63
5.57
6.08
5.98
19.03
14.35
13.73
13.75
13.64
13.64
10.68
10.40
10.20
10.01
10.00
10.43
10.01
9.92
9.92
9.61
9.10
0.93
0.94
1.24
1.28
0.66
2.45
[20.12M]
66'-0"

6.0 TREE INVENTORY

Table 1								
ABC Tree Men								
April 27, 2018								
2222 Clarke St, Port Moody								
Tag #	Name	Species	DBH(cm)	Height(m)	Condition (rating)	Retain or Remove	Comments	TPZ (m)
1	Maple	*Acer*	21	8	Boulevard tree, located to the front of the lot. Exposed surface roots observed along the TPZ and it seems to have been damaged by the lawnmower. Moderate trunk taper and live crown ratio. Overall, subject tree is in fair to good condition. (4)	Retain	Place tree protection barrier to protect trunk, roots, and structure.	1.3
2	Maple	*Acer*	23	8	Boulevard tree, located to the front of the lot. Exposed surface roots observed along the TPZ. Located within the driveways. No major defects and or signs of stress. Overall, subject tree is in fair to good condition. (4)	Retain	Place tree protection barrier to protect trunk, roots, and structure. Arborist supervision required during removal of the existing driveway.	1.4
3	Spruce	*Picea*	29	11	Offsite city tree, located to the front of the lot. Existing retaining wall located within CRZ. Co dominant at 1.8m. Low live crown ratio. Overall, subject tree is in fair to good condition. (4)	Remove	Removal is recommended due to conflicts with the proposed development	1.8
4	Spruce	*Picea*	35	11	Offsite city tree, located to the front of the lot. Co dominant at 3.0m. One limb protruding from main trunk at 1.2m. Low live crown ratio. Overall, subject tree is in fair to good condition. (4)	Remove	Removal is recommended due to conflicts with the proposed development	2.1
5	Western redcedar	*Thuja plicata*	91	27	Onsite tree, located to the north eastern side of the lot. Large dominant tree with a multi stemmed top. Large past limb failure with an open wound and dead wood within. Overall, subject tree is in fair to poor condition. (3)	Remove	Removal is recommended due to conflicts with the proposed development	5.5
6	Apple	*Malus*	28	6	Onsite tree, located to the back of the lot. Poor overall structure and health. Dead wood located throughout the crown. Past pruning cuts. Overall, subject tree is in poor condition. (2)	Remove	Removal is recommended due to conflicts with the proposed development	1.7

7.0 TREE MANAGEMENT PLAN



8.0 TREE RETENTION/REMOVAL RECOMMENDATIONS

A total of six (6) trees have been found both on and offsite. Based on the factors that include the pre-existing condition of the subject trees as detailed in the general observations, tree inventory, and the proposed development, trees are proposed to be treated a follows.

- **Tree retention**

  Pursuant to the *City of Port Moody Tree Protection Bylaw No. 2961, 2015* the following trees are recommended for retention as detailed in the report and tree recommendations. Information regarding specific recommendations can be found in the *Tree retention plan recommendations above and section 10.0 Tree Protection barriers.*

  - **Tree #1 and #2** will be retained with tree protection measures implemented. Place barriers to specifications and leave during whole construction period and remove when the director has authorized its removal.

- **Tree removal**

  Pursuant to the *City of Port Moody Tree Protection Bylaw No. 2961, 2015* the following trees are recommended for removal as per the following sections or as detailed in the report.

  - **Tree #3, #4, #5, and #6** will be removed due to conflicts with the proposed development and falls within the footprint of the building & within zone of heaviest construction & excavation activity.

9.0 GENERAL OBSERVATIONS, RECOMMENDATIONS AND PHOTOS

Photo 1. Facing towards the east looking at Tree #1

Photo 2. Facing westwards towards the west looking at tree #2

Species: Maple (*Acer*)

Tree#: 1, 2

Observations: Tree #1 and #2 are both Maples and are located to the front of the lot. Both are boulevard trees. The DBH measures 21cm and 23cm and both have an overall height of about 8m and a crown spread of 5m.

- Observing the crown and structure on both of the subject trees, there are no major concerns of stress or any major defects. Examining the base and surrounding TPZ, exposed surface roots can be observed on both trees. Tree #2 is situated within two driveways and surface roots have travelled along the native soil. Overall, subject trees are in fair to good condition.

Recommendations: Tree #1 and #2 will be both retained. Due to the close proximity to the construction site it is required to place tree protection barriers to protect its trunk, roots, and structure. Place barriers to drip line or to measurements outlined in section 10.0. Only removal of the driveway using low impact methods approved by arborist and under supervision should be implemented. Below are the necessary precautions during removal of the driveway:

- **Method of removal for driveway and placement of new driveway**
  The method of removal is going to be done in a carefully coordinated effort inside the TPZ of the subject tree #2. Only hand tools with the assistance of machinery will be used in the process of removing the existing driveway within the root protection zone, no excavation will go below the grade. During and after the removal process a certified Arborist will be monitoring all activities that will happen around the critical root zone.

Photo 3. Facing towards the east looking at Tree #3 and #4

Photo 4. Looking at the retaining wall within CRZ of tree #3

Species: Spruce (*Picea*)

Tree#: 3, 4

Observations: Tree #3 and #4 are both Spruces and are located to the front of the lot. Both trees are located on City property. The DBH measures 29cm and 35cm and both have an overall height of about 11m and a crown spread of 4.5m.

- Observing the crown and structure on both of the subject trees, both are co dominant at around 1.8m and 3m. A low live crown ratio on both trees can be examined. While assessing the base and surrounding TPZ, existing hardscapes and structures such as retaining walls and walkways can be observed and will be in conflict during the demolition process. Overall, subject trees are in fair to good condition.

Recommendations: Tree #3 and #4 will be both in conflict with the proposed development, and falls just outside the proposed building footprint and underground parkade & within zone of heaviest construction & excavation activity. Removal is recommended.

Substantial grade changes will occur within the TPZ of the subject trees if the excavation goes to specifications for the underground parkade. This will be devastating to its health and overall structure. As observed by the photos other structures such as the retaining wall running from the existing house up to the trunks of tree #3 and a concrete walkway within the CRZ can also be examined, all these structures will be removed and will cause disturbances to the subject trees. It is important to note that these trees have shallow spreading roots that go way beyond the drip line/TPZ and the excavation and grade changes would impact those roots. This can be detrimental and can influence the moisture availability to the subject tree. This is due to a reduction in the total rooting mass, changes in drainage, and overall moisture content

Photo 6. Facing towards tree #5

Species: Western redcedar (*Thuja plicata*)

Tree#: 5

Observations: Tree #5 is a Western redcedar and is located to the back of the property and is situated to the north eastern side of the lot. The DBH measures 91cm at 1.4 meters high from the ground with an overall height of about 27m and a crown spread of about 9m.

- Observing the tree, a multi stem attachment near the top third can be examined that seem to be weakly attached with poor junctions. A large wound from a past large limb failure can be observed. Examining the wound, dead wood and what appears to be insect infestation can be examined. Low live crown ratio tree. Observing overall, subject tree is in fair to poor condition.

Recommendations: Tree #5 will be in conflict with the proposed development, and falls just outside the proposed building footprint of the laneway house & within zone of heaviest construction & excavation activity. Removal is recommended.

10.0 TREE PROTECTION BARRIER

Tree protection barrier summary		
Tree number (species)	DBH(cm)	Minimum tree protection barrier Radial span (m)
1	21	1.3
2	23	1.4

All trees identified above will require tree protection barriers to protect and prevent the tree trunk, branches and roots being damaged by any construction activities/operations. Prior to any construction activity on site, tree protection fences must be constructed at the specified distance from the tree trunks. The protection barrier or temporary fencing must be at least 1.2 m in height and constructed of 2 by 4 lumber with orange plastic mesh screening. Structure must be sturdy with vertical posts driven firmly into the ground. This must be constructed prior to excavation or construction and remain intact throughout the entire period of construction. Further standards for fencing construction can be found at: *City of Port Moody Tree Protection Bylaw No. 2961, 2015*

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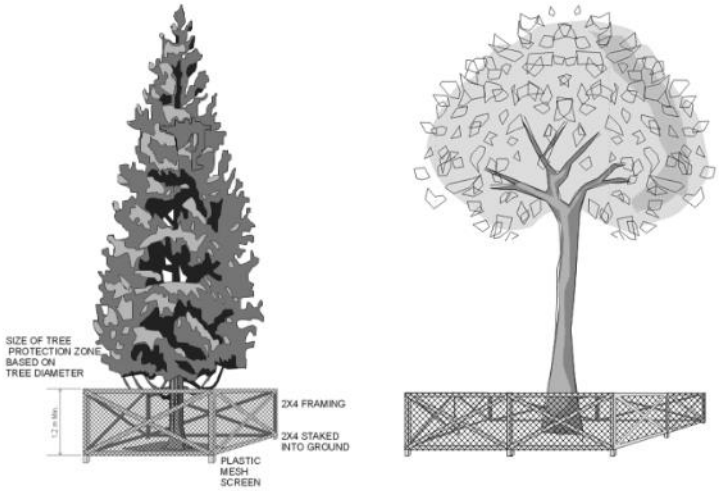

11.0 CONCLUSIONS

Based on our findings, a total of six (6) trees have been identified both offsite and onsite; four (4) trees are offsite city trees and two (2) trees are located onsite. A total of two (2) trees will be retained and protected with tree protection barriers implemented and a total of four (4) trees will be removed due to conflicts with the proposed development and unsuitability for retention.

Thank you for choosing ABC Tree Men. Any further questions can be forwarded to Francis Klimo at (604)358-5562

Regards,

Francis R. Klimo

ISA Certified Arborist #PN-8149A

ISA Certified Tree Risk Assessor (TRAQ)

BC Wildlife Danger Tree Assessor #7193