



**D. Clark Arboriculture**  
2741 The Rise Victoria B.C. V8T-3T4  
(250)474-1552 (250)208-1568  
clarkarbor@gmail.com  
[www.dclarkarboriculture.com](http://www.dclarkarboriculture.com)  
ISA Certified Arborist  
TRAQ/WDTA

## Arborist Report for Development Re: Demolition and Construction



Site Location:  
445 Grafton Street, Victoria BC

Darryl Clark  
ISA Certified Arborist- PN 6523A TRAQ

December 11, 2025  
 Attention: Margaret Cormode  
 MAC Island Construction –  
 5285 West Saanich Road  
 Victoria, BC V9E 2E8

## 1.0 Scope of Work

MAC Reno-Design-Build has retained D. Clark Arboriculture to provide comments on trees on-site, off-site, and municipally owned that may be impacted by the proposed demolition of an existing structure and construction of a new single-family dwelling. A Tree Management Plan is also provided per the Township of Esquimalt Bylaw 2022. no 3076.

## 2.0 Summary

Tree Impact Summary				
TREE STATUS	# of Trees	# of Trees to be Removed	# of Replacement Trees	# of Existing Replacement Trees
On-site trees	19	6	15	0
Off-site Trees	4	0	0	0
Municipal Trees	0	0	0	N/A
TOTAL	23	6	15	0

Demolition and construction activities are anticipated to encroach on the Protected Root Zone (PRZ) of (8) on-site trees. Based on information provided to us at the time this report was produced, (6) on-site bylaw protected trees will require removal due to tree locations conflicted with proposed demolition and construction.

Trees identified for retention in this report require tree protection measures including Tree Protection Zone Fencing, root zone armoring, and arborist supervision of all activities required within the Protected Root Zone (PRZ) of the trees.

## 3.0 Introduction and Methodology

Miche Hachey first visited the site April 4, 2025, and Laura Mantin visited the site on May 23<sup>rd</sup>, 2025, to assess trees on-site and off-site that have the potential for soil and root zone disturbance or root/tree injury by proposed demolition of the existing structure and construction of a single-family home.

This report was completed on December 11, 2025 and includes but is not limited to;

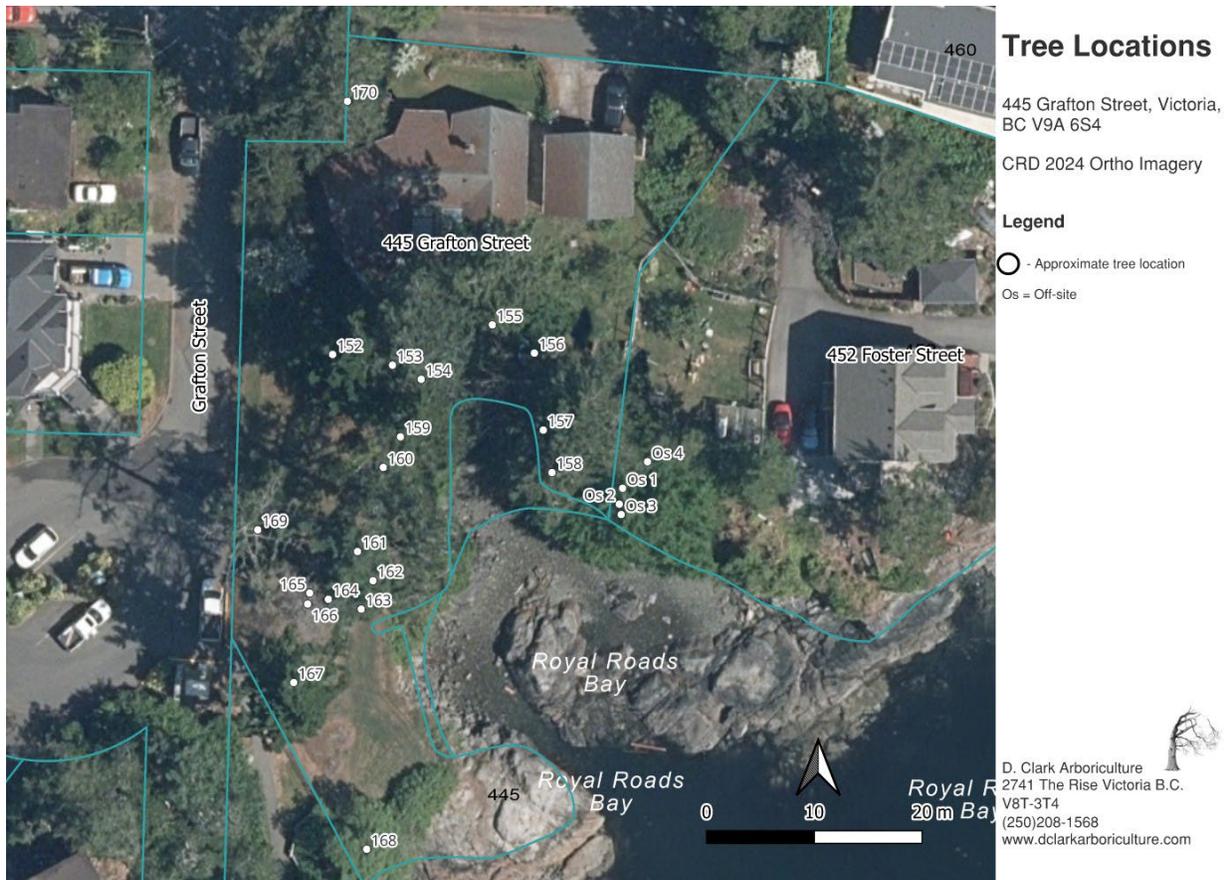
- An aerial site map indicating approximate tree locations. *(See Figure 1)*
- A Tree Survey and Tree Management Plan
- An inventory of (20) on-site trees (3) municipal trees, and (4) off-site trees including health and structural condition ratings, and arborist comments.
- Tree height was estimated to the nearest meter. DBH was estimated to the nearest centimeter. All off-site tree measurements are approximate.
- Measurements were collected using a standard fabric diameter tape. Height and canopy spread measurements were collected using a Lasertech 200L laser rangefinder.
- Photos that were captured to document the site are included in this report and were taken using a Google Pixel 7(25mm). *(See Figures 3-14)*

#### 4.0 Tree Survey

445 Grafton Street Tree Inventory										
#	Species	cm/DBH	Height	Canopy Spread	PRZ/m	Structure	Health	Bylaw Protected	Retain/Remove	Reason for Removal
152	<i>Pseudotsuga menziesii</i>	60	25	13	7	Fair	Fair	Yes	Remove	Grade changes.
153	<i>Pseudotsuga menziesii</i>	90	24	13	11	Fair	Fair	Yes	Remove	Grade changes.
154	<i>Pseudotsuga menziesii</i>	36	16	5	4	Fair	Poor	Yes	Remove	Grade changes.
155	<i>Pseudotsuga menziesii</i>	85	25	19	10	Fair	Fair	Yes	Remove	Grade changes and lot servicing.
156	<i>Pseudotsuga menziesii</i>	77	18	12	9	Fair	Fair	Yes	Remove	Grade changes and lot servicing.
157	<i>Pseudotsuga menziesii</i>	112	30	18	13	Fair	Fair	Yes	Retain	
158	<i>Pseudotsuga menziesii</i>	90	12	8	11	Fair	Poor	Yes	Retain	
159	<i>Pseudotsuga menziesii</i>	78	27	15	9	Fair	Fair	Yes	Retain	
160	<i>Pseudotsuga menziesii</i>	44	10	6	5	Fair	Poor	Yes	Retain	
161	<i>Pseudotsuga menziesii</i>	62	21	7	7	Fair	Poor	Yes	Retain	
162	<i>Pseudotsuga menziesii</i>	90	22	9	11	Fair	Fair	Yes	Retain	
163	<i>Pseudotsuga menziesii</i>	75	13	5	9	Fair	Poor	Yes	Retain	
164	<i>Pseudotsuga menziesii</i>	30	14	2	4	Fair	Dead	Yes	Remove	Dead.
165	<i>Pseudotsuga menziesii</i>	67	28	10	8	Fair	Fair	Yes	Retain	
166	<i>Pseudotsuga menziesii</i>	71	22	10	9	Fair	Dead	Yes	Remove	Dead.
167	<i>Pseudotsuga menziesii</i>	111	20	13	13	Fair	Fair	Yes	Retain	
168	<i>Salix spp.</i>	90	8	12	11	Poor	Dead	Yes	Remove	Dead.
169	<i>Pseudotsuga menziesii</i>	71	25	13	9	Fair	Poor	Yes	Remove	Installation of municipal sidewalk.
170	<i>Chamaecyparis lawsoniana</i>	31	7	3	4	Fair	Good	Yes	Retain	
Os 1	<i>Ulmus pumilia</i>	30	9	6	4	Fair	Poor	Yes	Retain	
Os 2	<i>Ulmus pumilia</i>	40	9	6	5	Fair	Poor	No	Retain	
Os 3	<i>Ulmus pumilia</i>	15	7	5	2	Fair	Poor	No	Retain	
Os 4	<i>Pseudotsuga menziesii</i>	18	9	63	2	Fair	Fair	No	Retain	

DBH- Diameter at Breast Height. Measured at 1.4 meters from the point of germination. Where the tree is multi-stemmed at 1.4 meters, the DBH shall be considered 100% of the (3) largest stems.

PRZ- Protected Root Zone will be calculated as 12x the diameter of the tree radially.



## 5.0 Site Description

The property at 445 Grafton Street currently features a single-family bungalow-style home. The oceanfront site has multi-terraced topography, with a 1 m high retaining wall separating a semicircular lower lawn area to the south of the house. An additional 3 m high retaining wall separates the lawn from the waterfront and is accessible by a metal staircase at low tide (*Figures 11 & 13*). The western portion of the property extends 79 metres from north to south, culminating at a public right-of-way. The property is landscaped with maintained grass and several mature *Pseudotsuga menziesii* (Douglas-fir). A cluster of municipally-owned trees are in a raised garden bed at the northwest corner of the property within the property fence (*Figure 12*). Other off-site trees are located at the southwestern corner of the property (*Figure 9*).

## 6.0 Tree Removal Requirements

Based on information provided at the time this report was completed, (6) bylaw protected on-site trees will require removal to accommodate excavator access and demolition/construction activities. (*Refer to 4.0 Tree Inventory Table*)

## 7.0 Tree Protection Plan

### 7.1 Role of the Project Arborist

7.1.1. No aspect of this Tree Protection Plan will be amended in whole or in part without the permission of the Project Arborist.

7.1.2. Any amendments to the plan must be documented in memorandums to the Municipality and the Developer.

7.1.3. A site meeting including the Project Arborist, Developer, Project Supervisor, and any other related parties to review the tree protection plan will be held at the beginning of the project.

7.1.4. The Project Arborist must approve all tree protection measures before excavation begins in or near areas defined as Protected Root Zone on the Tree Management Plan.

7.1.5. The Project Arborist is responsible for ensuring that all aspects of this plan, including violations, are documented in memorandums to the Municipality and the Developer.

## 7.2 Limitations

7.2.1 An assessment of off-site tree health and structure was restricted by field of view due to difficulty of access. Assessment was based entirely at ground level and to the property of 445 Grafton Avenue and Grafton Avenue.

## 7.3 Tree Protection Measures

7.3.1. Fencing for Protected Root Zones<sup>1</sup> will be installed as per dimensions and location indicated on the Tree Management Plan (TMP).

7.3.2. Fencing for the TPZ must be either securely anchored 2x4 posts and framing, paneled with securely affixed orange snow fence or plywood, or continuous temporary job site fencing (metal) secured with bailing wire or zip ties. Fencing will incorporate highly visible signs that include "TREE PROTECTION AREA- NO ENTRY" (See appendix for an example).

7.3.3. The area inside fenced TPZs is off-limits to workers, equipment, and storage of materials. Areas outside the tree protection fence but still within the Protected Root Zone (PRZ) may be left open for access, as work areas and for storage of materials. These areas will be protected by root zone armoring consisting of either 3/4" plywood or a minimum of 20 centimeters of coarse wood chips (see Tree Management Plan for locations of each).

7.3.4. Tree protection measures will remain in place for the duration of the project unless they are amended and documented by the Project Arborist.

7.3.5. Tree protection measures will not be amended in any way without approval from the Project Arborist. Any additional tree protection measures will be documented in a memo to the Client and Municipality.

7.3.6. Work inside the established TPZ of any retained tree identified in this plan for any reason will take place under the supervision of the Project Arborist or their designate. Root disturbance and injury mitigation techniques may be specified by the Project Arborist including but not limited to the use of a hydro-vac or Airspade® or digging using hand tools to expose roots for inspection.

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<sup>1</sup> Matheny et al. (2023). Managing Tree During Site Development and Construction: Best Management Practices, Third Edition

7.3.7. For excavation activities using an excavator, the operator will work radially inward toward the tree. The excavator will remove the soil incrementally with a non-toothed shovel allowing any exposed roots to be pruned to an acceptable standard by the Project Arborist. Exposed roots that are to remain exposed for any duration outside of the day of excavation are to be covered with a layer of burlap and kept damp for the duration of the project. A memo to summarize these activities will be provided to the Municipality and Developer once the activities are completed.

7.3.8. Any excavation of plant vegetation inside a PRZ of a retained tree using machinery must be supervised by the Project Arborist.

7.3.9. Any roots damaged or injured inside TPZs may prompt the requirement for a tree risk assessment to evaluate tree stability.

#### 7.4 General Requirements

7.4.1. Any pruning of protected trees will be performed by an ISA (International Society of Arboriculture) Certified Arborist, by industry-recognized best management practices<sup>2</sup>. At the time this report was completed, no on-site or off-site trees were anticipated to require pruning.

7.4.2. Equipment traffic in and out of the site is anticipated to utilize the asphalt driveway. Any access for machinery (such as excavators) will employ the use of root zone armoring to reduce the likelihood of soil compaction and root damage to nearby on-site and off-site trees where required.

7.4.3. Material staging and storage (ex. bins for loading demolition debris) will be in a location that does not encroach on the PRZ of any retained trees. It is anticipated that bins will utilize the asphalt driveway. The location will be approved by the Project Arborist before construction activities begin. There is ample room for staging construction materials outside of the PRZ's of retained trees.

#### 7.5 Demolition and Construction Activities

##### 7.5.1. Tree Stump Removal and Grading During Demolition

Excavation for the removal of tree stump #155 and #156 are anticipated to impact (1) on-site tree #157 as tree PRZs are shared. Supervision will be required for the removal of these tree stumps, and the Project Arborist will conduct root pruning if deemed necessary. Additionally, it is anticipated that existing retaining walls will be removed during demolition and some regrading in the area of tree #157 will occur.

To minimize root damage and soil compaction from occurring, mitigation recommendations include the use of root zone armoring for foot and machinery access that occurs through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs. All excavation and grading activities in the PRZ of tree #157 will be supervised by the project arborist.

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<sup>2</sup> Lilly, S.J. et al. (2019) Best Management Practices: Pruning (Third Edition).

## 7.5.2. Capping of Existing Residence Civil Services

### 7.5.2a Storm

The capping of the existing residence's storm services is anticipated to occur near the easement to the south and is not expected to encroach on any trees on or off site.

### 7.5.2b Sewer

The capping of the existing residence's sewer services is anticipated to occur near the easement to the south and is not expected to encroach on any trees on or off site.

### 7.5.2c Water

Capping of water services may occur at the property line to the and is not expected to encroach on any trees on or off site.

## 7.5.3. Residence Demolition

Construction activities and machinery access for the demolition of the residence are not anticipated to encroach on the PRZs of any trees. Where access for machinery is required to impact the PRZ of retained trees, to minimize root damage, and soil compaction from occurring for machinery/foot access, mitigation recommendations include the use of root zone armoring through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs, and supervision by Project Arborist for all excavator access, where it impacts the PRZ of protected trees.

## 7.5.4. Installation of Civil Services

A civil servicing plan has been proposed.

### 7.5.4a Storm

Installation of the existing residence's sewer services is anticipated to the easement main to the south and is not expected to encroach on any trees on or off site.

### 7.5.4b Sewer

Installation of the existing residence's sewer services is anticipated to the easement main to the south and is not expected to encroach on any trees on or off site.

### 7.5.4c Water

Installation of water services will occur at the property line to the west and is not expected to encroach on any trees on or off site.

## 7.5.5. Residence Construction

Construction activities are not anticipated to encroach on the PRZ of any retained trees

In the event of construction activities creeping into the PRX of retained trees, mitigation recommendations include the use of root zone armoring for foot and machinery access that occurs through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs. Where excavation is in the PRZ of any retained trees these activities will be supervised by the Project Arborist.

### 7.5.6 Landscaping

A Landscape Plan has been proposed. Foot traffic, machinery, and planting locations have the potential to disrupt the PRZ of retained trees.

To minimize root damage and soil compaction from occurring, mitigation recommendations include the use of root zone armoring for foot and machinery access that occurs through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs. Where excavation is in the PRZ of any retained trees these activities will be supervised by the Project Arborist.

It is likely that landscaping will require an amended Tree preservation site plan. Any amendments to the plan will be coordinated and approved by the Project Arborist and will be submitted to the municipality for approval before, installation activities begin.

## 8.0 Replacement Trees

### 8.1. Trees to be Replaced

As of the date of this report, (6) on-site bylaw protected trees are proposed to be removed to facilitate construction activities. As stated in the Township of Esquimalt Bylaw 2022. no 3076, section 9 sub. 2, the removal of these bylaw protected trees triggers the requirement for replacement trees. As they are all Douglas Fir species are greater than 12m tall, (3) trees are required to replace each tree, for a total of (18) trees. The present Landscape Plan locates 15 replacement trees on the property. Cash-in-lieu may be required for the additional replacement trees if suitable locations can not be found.

### 8.2. Planting Requirements and a Restrictive Covenant

In accordance with Township of Esquimalt Bylaw 2022. no 3076, section 9 sub. 4: *“Replacement trees shall not be planted:*

*(a) in the case of trees having a mature height of eight (8) metres or less, within two (2) metres of a building foundation wall; or*

*(b) in the case of trees having a mature height greater than eight (8) metres, within three (3) metres of a building foundation wall; or*

*(c) within one (1) metre of a property line.”*

Additionally, there is a restrictive covenant on the property limiting the height of trees on the foreshore side of the property. A landscape plan has been developed with this covenant in mind and appropriate replacement trees have been proposed.

### 8.3. Maintenance Requirements

In accordance with Township of Esquimalt Bylaw 2022. no 3076, section 9 sub. 6, *“All Replacement Trees must be planted and maintained in accordance with sound arboricultural practices as set out in the latest edition of the BCSLA/BCLNA “BC Landscape Standard” and must be planted substantially in accordance with the tree planting diagram in Figure 1 of Schedule “B”.”*

Thank you for the opportunity to comment on these trees.

Should any issues arise from this report, I am available to discuss them by phone, or email.

Regards,



Darryl Clark

ISA Certified Arborist- PN 6523A

TRAQ

### Disclosure Statement

An arborist uses their education, training, and experience to assess trees and provide prescriptions that promote health and well-being and reduce the risk of trees.

The prescriptions set forth in this report are based on the documented indicators of risk and health noted at the time of the assessment and are not a guarantee against all potential symptoms and risks.

Trees are living organisms and subject to continual change from a variety of factors including but not limited to disease, weather and climate, and age. Disease and structural defects may be concealed in the tree or underground. It is impossible for an arborist to detect every flaw or condition that may result in failure, and an arborist cannot guarantee that a tree will remain healthy and free of risk.

To live near trees is to accept some degree of risk. The only way to eliminate the risks associated with trees is to eliminate all trees.

### Assumptions and Limiting Conditions

- Altering this report in any way invalidates the entire report.
- The use of this report is intended solely for the addressed client and may not be used or reproduced for any reason without the consent of the author.
- The information in this report is limited to only the items that were examined and reported on and reflects only the visual conditions at the time of the assessment.
- The inspection is limited to a visual examination of the accessible components without dissection, excavation, or probing unless otherwise reported. There is no guarantee that problems or deficiencies may not arise in the future, or that they may have been present at the time of the assessment.
- Sketches, notes, diagrams, etc. included in this report are intended as visual aids, are not considered to scale except where noted, and should not be considered surveys or architectural drawings.
- All information provided by owners and or managers of the property in question, or by agents acting on behalf of the A assumed to be correct and submitted in good faith. The consultant cannot be responsible or guarantee the accuracy of information provided by others.
- It is assumed that the property is not in violation of any codes, covenants, ordinances, or any other governmental regulations.
- The consultant shall not be required to attend court or give testimony unless subsequent contractual arrangements are made.

The report and any values within are the opinion of the consultant, and fees collected are in no way contingent on the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, or any finding to be reported.



Figure 3 – tree #152 facing South



Figure 4 – Trees #153, #154, and #155, facing northeast with retaining wall in foreground



Figure 5 – Trees #152, #153, and #154, facing northwest with retaining wall in foreground



Figure 6 – Tree #155 facing northeast



Figure 7 – Tree #156 facing northeast



Figure 8 – Trees OS 1, OS 2, OS 3, and OS 4 facing southeast



Figure 9 – Trees #157, #158, OS 1, OS 2, OS 3, and OS 4 facing east

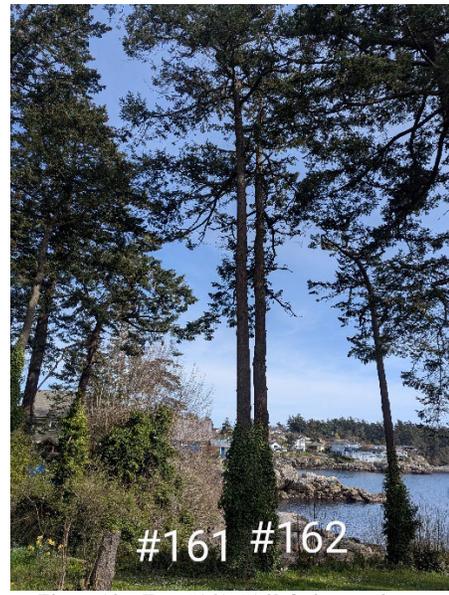
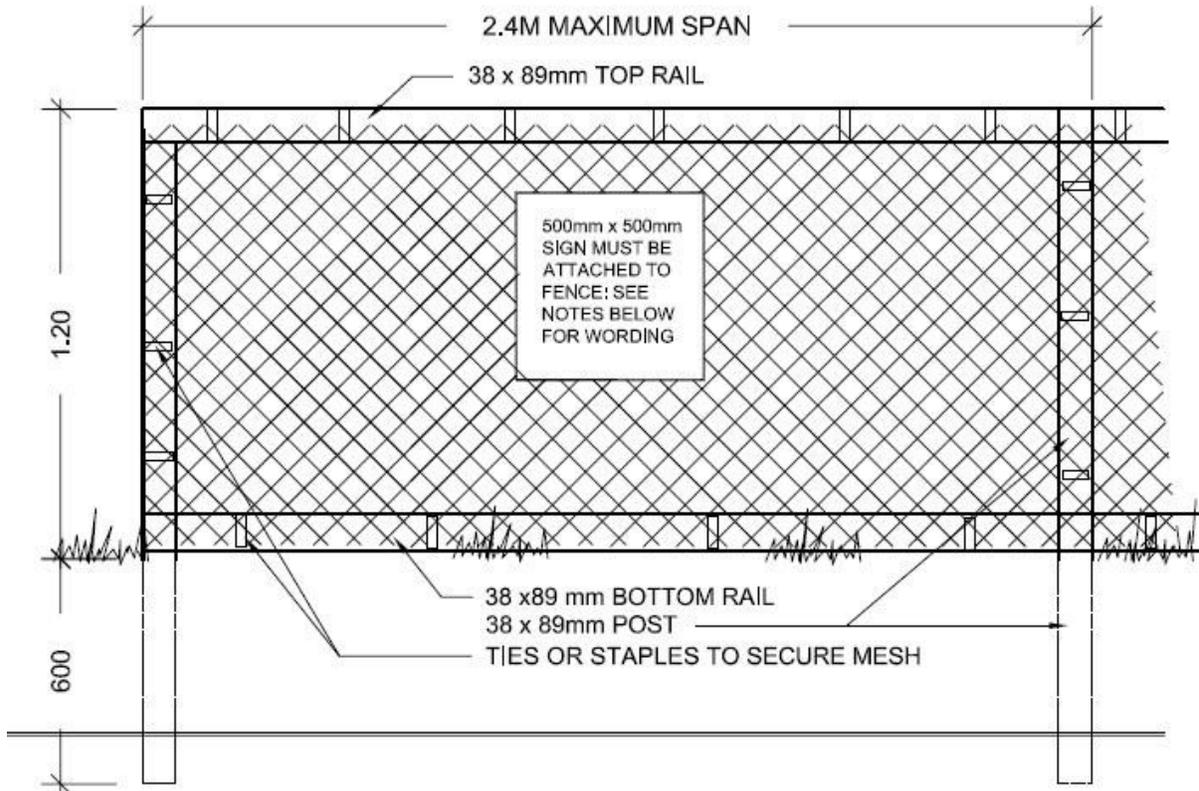


Figure 10 – Tree #161, #162 facing southeast



Figure 13 – View of front yard, retaining walls, and existing structure

## Appendix



### TREE PROTECTION FENCING

#### Tree Protection Fencing Specifications:

1. The fence will be constructed using 38 x 89 mm (2" x 4") wood frame:
  - Top, Bottom, and Posts. In rocky areas, metal posts (T-bar or rebar) drilled into rock will be accepted.
  - Use orange snow fencing mesh and secure to the wood frame with "zip" ties or galvanized staples. Painted plywood or galvanized fencing may be used in place of snow fence mesh.

Attach a roughly 500 mm x 500 mm sign with the following wording: **TREE PROTECTION AREA-NO ENTRY**. This sign must be affixed on every fence face or at least every 10 linear meters.