# Arboricultural Inventory and Report

For: Lees + Associates

Site Location: Seaview Cemetery 1706 Lower Road Roberts Creek, BC

To be submitted with Phase 1 Tree Management Plan dated February 12, 2025

Submitted to: **Attn: Richard Cook** Lees + Associates 318 Homer Street Vancouver, BC V6B 2V2 Email: <u>rcook@elac.ca</u> Phone: 604-369-7431 Date: February 12, 2025

Submitted by:



The following Diamond Head Consulting staff conducted the on-site tree inventory and prepared or reviewed the report.

All general and professional liability insurance and staff accreditations are provided below for reference.

Reviewed by:

Mon Hathbur

**Project Staff:** 

Mitel News

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Please contact us if there are any questions or concerns about the contents of this report.

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# Insurance Information:

WCB:	# 657906 AQ (003)
General Liability:	Northbridge General Insurance Corporation - Policy #CBC1935506, \$10,000,000
Errors and Omissions:	Lloyds Underwriters – Policy #1010615D, \$1,000,000

#### Scope of Assignment:

Diamond Head Consulting Ltd. (DHC) was retained to complete an arboricultural assessment to supplement the proposed Phase 1 expansion for Seaview Cemetery, Roberts Creek. This report has an inventory of trees and summarizes management recommendations with respect to future construction activities. The approximate location and general health of off-site trees are included, as a limited assessment, because there is a legal obligation to protect them. This report is produced with the following primary limitations, detailed limitations specified in Appendix 7:

- Our investigation is based solely on visual inspection of the trees during our last site visit. This
  inspection is conducted from ground level. We do not conduct aerial inspections, soil tests or
  below grade root examinations to assess the condition of tree root systems unless specifically
  contracted to do so.
- 2) Unless otherwise said, tree risk assessments in this report are limited to trees with a *high* or *extreme* risk rating in their current condition, and in context of their surrounding land use at the time of assessment. The time frame for assessment of the likelihood of failure is 2 years.
- 3) The scope of work is primarily decided by site boundaries. Only trees specified in the scope of work were inventoried.
- 4) Beyond six months or if there are significant changes to the site or to the trees, from the date of this report, the client must contact DHC to confirm its validity because site base plans and tree conditions may change beyond the original report's scope. Added site visits and report revisions may be needed after this point to ensure report accuracy for the municipality's development permit application process. Site visits and reporting needed after the first submission are not included within the original proposal fee and will be charged to the client at an additional cost.

#### The client is responsible for:

- Obtaining a tree removal permit from the relevant authority prior to any tree cutting.
- Reviewing this report to understand and implement all tree **risk**, removal and protection requirements related to the project.
- Understanding that we have shown trees along the outskirts of the property boundary but not shrubs or other material that could be impacted by your contractors working at your property. The trees we have located are approximate locations and a legal survey is required to determine proper ownership of a tree. It is your responsibility to ensure that all plant material that may have roots passing property lines are protected.
- Obtaining relevant permission from adjacent property owners before removing off-site trees and vegetation.
- Obtaining a timber mark if logs are being transported offsite.
- Ensuring the project is compliant with the tree permit conditions.
- Constructing and maintaining tree protection fencing.
- Ensuring an arborist is present onsite to supervise any works in or near tree protection zones.
- Ensuring they (the client) carry out the risk mitigation recommendations in a reasonable time frame as noted in the Risk Rating Matrices.

# **Table of Contents**

1.0	Introduct	ion1
1.1	Site Ove	erview1
1.2	Propose	ed Land Use Changes1
1.3	Report	Objective1
2.0	Process a	nd Methods3
2.1	Tree Inv	ventory
2.2	Tree Ris	sk Assessment
2.3	Tree Pro	otection
3.0	Findings:	Tree Inventory and Risk Assessment4
3.1	Tree Inv	ventory
3.2	Tree Ris	sk Assessment
4.0	Discussio	n and Summary6
4.1	Trees O	n-site6
4.2	Trees o	n Adjacent Properties6
Appen	dix 1	Complete Tree Inventory Table7
Appen	dix 2	Site Photographs
Appen	dix 3	Tree Health and Structure Rating Criteria
Appen	dix 4	Tree Retention Value Rating Criteria
Appen	dix 5	Risk Rating Matrices
Appen	dix 6	Construction Guidelines
Appen	dix 7	Report Assumptions and Limiting Conditions55
List o	of Figur	es

Figure 1. Assessment Area within Seaview Cemetery (outlined in red)2
--

# List of Photographs

Photo 1. Central south area	
Photo 2. Central north area	
Photo 3. Central area	

# 1.0 Introduction

## 1.1 Site Overview

The subject site is the Seaview Cemetery located within Roberts Creek British Columbia. The cemetery is located between the Sunshine Coast Highway and Lower Road. Topography of the site is largely sloped with a significant change to grade along the southern end where steep slopes are located.

Vegetation within the site is predominantly composed of Western Red Cedar (*Thuja plicata*), Douglas Fir (*Pseudotsuga menziesii*), and Red Alder (*Alnus rubra*). Which are located within several clustered treed areas scattering within and around the site.

# 1.2 Proposed Land Use Changes

The proposed Phase 1 expansion consists of clearing and expanding area for additional internment to the central-north section of the cemetery, partial driveway decommissioning, and the construction of a storage bunker located at the central-south areas of the site. In preparing this report, we reviewed the following information:

• Seaview Cemetery Expansion Design and CA. Lees + Associates. November 28, 2024.

## 1.3 Report Objective

This report has been prepared to ensure the proposed development is compliant with the Sunshine Coast Regional District Tree Preservation Bylaw No. 641

Trees on adjacent properties with a tree protection zone that extends into the subject site have also been captured in the arborist report.



Figure 1. Assessment Area within Seaview Cemetery (outlined in red)

# 2.0 Process and Methods

Mitch Davis of DHC visited the site on September 9, 2024 The following methods and standards are used throughout this report.

# 2.1 Tree Inventory

Select trees on site and shared with adjacent properties were marked with a numbered tag and assessed for attributes including: species; height measured to the nearest meter; and, diameter at breast height (DBH) measured to the nearest centimeter at 1.4 m above grade. Off-site trees had a limited visual assessment and their locations have been noted, but not tagged. The general health and structural integrity of each tree was assessed visually and assigned to one of five categories: *excellent; good; moderate; poor; or dying/dead*. Descriptions of the health and structure rating criteria are given in Appendix 3.

Tree retention value, categorized as *high, medium, low, or nil,* was assigned to each tree or group of trees based on their health and structure rating, and potential longevity in a developed environment. Descriptions of the retention value ratings are given in Appendix 4. Recommendations for tree retention or removal were decided by taking in to account a tree's retention value rating, its location in relation to proposed building envelopes and development infrastructure.

## 2.2 Tree Risk Assessment

Tree risk assessments were completed following methods of the ISA Tree Risk Assessment Manual<sup>1</sup>. This methodology assigns risk based on the likelihood of failure, the likelihood of impact and the severity of consequence if a failure occurs. Only on-site trees that had *high* or *extreme* risk ratings in their current condition and in context of their surrounding land use were noted. Appendix 5 gives the likelihood and risk rating matrices used to categorize tree risk. DHC recommends that on-site trees be re-assessed for risk after the site conditions change (e.g. after damaging weather events, site disturbance from construction, creation of new targets during construction or in the final developed landscape).

# 2.3 Tree Protection

Tree protection zones were calculated for each tree according to a minimum standard of the dripline in meters, but may be modified based on professional judgement of the project arborist to accommodate species specific tolerances and site specific growing conditions.

<sup>&</sup>lt;sup>1</sup> Dunster, J.A., Smiley, E.T., Matheny, N. and Lilly, S. (2013). Tree Risk Assessment Manual. *International Society of Arboriculture*. Champaign, Illinois.

# 3.0 Findings: Tree Inventory and Risk Assessment

## 3.1 Tree Inventory

See Appendix 1. for the detailed tree inventory.

237 trees were identified on the subject site. Of which, 12 are recommended for removal and 225 are recommended for retention as part of the proposed Phase 1 cemetery expansion.

Additionally, 7 off site trees were identified 4m from the property line, and or with tree protection zones that extend into the subject site. All 7 off site trees are recommended for retention as part of the proposed Phase 1 cemetery expansion.

# 3.2 Tree Risk Assessment

Table 2: Summary of trees that pose a high or extreme risk at the time of assessment. To meet these criteria there was a probable or imminent likelihood of failure and will impact a target with significant or severe consequences. Trees that meet these criteria are shown in the table below. Residual risk will be discussed for any tree within the table that is not a complete removal.

	Tree	Target		Likelihoo	bd				Residual	
Number	Part to Fail	Туре	Failure	Impact	Failure & Impact	Consequences	Risk Rating	Action	Risk	
2528	Decayed stem at 2m	Power lines	Probable	High	Likely	Significant	High	Remove	Nil	

# 4.0 Discussion and Summary

## 4.1 Trees On-site

Impacts of the Phase 1 of the Seaview Cemetery Expansion on site trees and our recommendations for tree protection are outlined below:

- Expansion of internment area at the central north section: Trees 2701-2709 recommended for removal due to root conflicts with design. Tree protection fencing to be installed as per TMP. Arborist supervision required during excavation as root pruning may be required along edge of cut. Stumps of removed trees located within TPZ's of retained trees to be left in place or ground to grade.
- 2. Driveway decommissioning at central area of site: Gravel removal to be carried out under arborist supervision to document and provide direction to mitigate any root conflicts.
- 3. Construction of storage bunker at central south area of site: Remove trees 2546 and 2547 due to root conflicts. Steep slopes in area likely make construction of tree fencing not feasible. To protect trees, ensure that machinery and equipment remain on existing driveways.
- 4. Tree 2528: Identified as high risk tree targeting power lines along Lower Road.
- 4.2 Trees on Adjacent Properties

All identified off site privately owed trees are located outside of the proposed scope of the Phase 1 cemetery expansion.

# Appendix 1 Complete Tree Inventory Table

The complete tree inventory below contains information on tree attributes and recommendations for removal or retention. Tree ownership in this inventory table is not definitive, its determination here is based on information available from the legal site survey, GPS locations, and field assessment during site visits. Tree Protection Zones are measured from the outer edge of a tree's stem. If using these measurements for mapping the tree protection zone, ½ the tree's diameter must be added to the distance to accommodate a survey point at the tree's center. Where tree protection fencing is proposed to vary from the minimum municipal TPZ, comments will be included in the Retention/TPZ comments and shown on the Tree Retention and Removal Plan.

\*TPZ is the tree protection zone size required by the relevant municipal bylaw or, if not defined, the project arborist.

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2010	On Site	Douglas-Fir	Pseudotsuga menziesii	85	24	5	Moderate	Growing at edge of creek. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2013	On Site	Douglas-Fir	Pseudotsuga menziesii	58	24	3	Moderate	Growing at edge of creek. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2501	On Site	Douglas-Fir	Pseudotsuga menziesii	65	24	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2502	On Site	Douglas-Fir	Pseudotsuga menziesii	92	27	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2503	On Site	Western Red Cedar	Thuja plicata	90	23	4	Moderate	Part of row. Codom union at base. DBH 46 and 44cm. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2504	On Site	Douglas-Fir	Pseudotsuga menziesii	51	23	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2505	On Site	Red Alder	Alnus rubra	43	23	4	Poor	Part of row. Single stem. Asymmetrical crown. Suppressed crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2506	On Site	Douglas-Fir	Pseudotsuga menziesii	40	22	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2507	On Site	Douglas-Fir	Pseudotsuga menziesii	64	22	4	Moderate	Part of row. Single stem forked at 10m. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2508	On Site	Red Alder	Alnus rubra	72	22	4	Moderate	Growing at edge of creek. Root plate undercut. Crown entangled with crown of 2509.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2509	On Site	Douglas-Fir	Pseudotsuga menziesii	81	24	6	Moderate	Growing at edge of creek. Root plate undercut. Crown entangled with crown of 2509. Large exposed surface roots.	Medium	Retain	Outside scope of proposed Phase 1 work.	6
Surveyed	2511	On Site	Red Alder	Alnus rubra	44	21	3	Poor	Growing on edge of creek. Single stem.	Low	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									Some dieback at top on crown.				
Surveyed	2512	On Site	Red Alder	Alnus rubra	67	22	3	Poor	Growing on edge of creek. Stem forked at 12m. Some dieback at top on crown.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2514	On Site	Red Alder	Alnus rubra	50	23	3	Poor	Growing on edge of creek. Single stem. Some dieback at top on crown.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2515	On Site	Red Alder	Alnus rubra	71	20	3	Poor	Growing on edge of creek. Stem forked at 4m. Some dieback at top on crown.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2516	On Site	Douglas-Fir	Pseudotsuga menziesii	55	24	6	Moderate	Growing at edge of creek. Single stem. Crown entangled with crown of 2517. Large exposed surface roots.	Medium	Retain	Outside scope of proposed Phase 1 work.	6
Surveyed	2517	On Site	Red Alder	Alnus rubra	100	24	6	Moderate	Growing at edge of creek. Codom union at base. DBH 2x50cm. Crown entangled with crown of 2516. Large exposed surface roots.	Low	Retain	Outside scope of proposed Phase 1 work.	6

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2518	On Site	Douglas-Fir	Pseudotsuga menziesii	22	16	2	Poor	Growing at edge of creek. Single stem. Crown entangled with crown of 2517. Suppressed. Large exposed surface roots.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2519	On Site	Red Alder	Alnus rubra	73	22	4	Moderate	Growing next to creek. Stem forked at 9m. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2520	On Site	Red Alder	Alnus rubra	35	22	4	Moderate	Growing next to creek. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2521	On Site	Red Alder	Alnus rubra	36	22	4	Moderate	Growing next to creek. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2522	On Site	Red Alder	Alnus rubra	74	25	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2523	On Site	Red Alder	Alnus rubra	74	25	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2524	On Site	Red Alder	Alnus rubra	80	25	4	Poor	Part of row. Single stem. Asymmetrical crown. Significant	Low	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									dieback throughout crown.				
Surveyed	2525	On Site	Red Alder	Alnus rubra	72	17	4	Poor	Part of row. Single stem. Asymmetrical crown. Heavily suppressed. Crown bowed west.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2526	On Site	Western Hemlock	Tsuga heterophylla	56	24	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2527	On Site	Western Red Cedar	Thuja plicata	50	24	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2528	On Site	Red Alder	Alnus rubra	61	21	4	High Risk	Single stem. Large decay column from 2m to top. Crown bowed south over road. Targets power lines.	Nil	Remove	Due to risk to power lines.	4
Surveyed	2529	On Site	Western Red Cedar	Thuja plicata	53	23	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2530	On Site	Red Alder	Alnus rubra	52	24	4	Poor	Part of row. Codom union at base. SBH 2x26cm. Low live crown percentage.	Low	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2531	On Site	Red Alder	Alnus rubra	37	22	4	Moderate	Growing next to creek. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2532	On Site	Red Alder	Alnus rubra	27	18	4	Poor	Growing next to creek. Single stem. Asymmetrical crown. Suppressed.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2533	On Site	Red Alder	Alnus rubra	36	19	4	Moderate	Growing next to creek. Single stem. Asymmetrical crown. Crown bowed south.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2534	On Site	Red Alder	Alnus rubra	82	25	4	Moderate	Growing next to creek. Codom union at base. DBH 46 and 36m. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2535	On Site	Red Alder	Alnus rubra	48	23	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2536	On Site	Red Alder	Alnus rubra	32	20	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2537	On Site	Western Red Cedar	Thuja plicata	60	22	4	Moderate	Part of row. Single stem. Asymmetrical	Medium	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									crown. Stem abutting 2538.				
Surveyed	2538	On Site	Red Alder	Alnus rubra	32	21	3	Moderate	Part of row. Single stem. Asymmetrical crown. Stem abutting 2537.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2539	On Site	Red Alder	Alnus rubra	23	20	4	Poor	Part of row. Single stem. Asymmetrical crown. Crown bowed south.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2540	On Site	Douglas-Fir	Pseudotsuga menziesii	28	17	3	Moderate	Part of row. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2541	On Site	Red Alder	Alnus rubra	24	17	2	Poor	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2542	On Site	Red Alder	Alnus rubra	45	22	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2543	On Site	Red Alder	Alnus rubra	50	24	5	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2544	On Site	Red Alder	Alnus rubra	66	24	5	Moderate	Part of row. Codom union at base. DBH 43 and 23cm. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	5

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2545	On Site	Red Alder	Alnus rubra	21	15	3	Poor	Part of row. Single stem. Asymmetrical crown. Suppressed.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2546	On Site	Red Alder	Alnus rubra	60	15	3	Moderate	Part of row. Cluster of stems. Asymmetrical crown.	Low	Remove	In conflict with phase 1 expansion.	3
Surveyed	2547	On Site	Red Alder	Alnus rubra	45	22	5	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Remove	In conflict with phase 1 expansion.	5
Surveyed	2548	On Site	Western Red Cedar	Thuja plicata	41	17	2	Moderate	Part of group. Secondary stem union at 1.5m.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	2
Surveyed	2549	On Site	Red Alder	Alnus rubra	22	16	2	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing	2

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
												driveways during construction.	
Surveyed	2550	On Site	Western Red Cedar	Thuja plicata	34	16	2	Moderate	Part of row. Single stem. Asymmetrical crown.	NA	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	2
Surveyed	2551	On Site	Red Alder	Alnus rubra	52	24	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	4
Surveyed	2552	On Site	Red Alder	Alnus rubra	55	24	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
												machinery and equiplent on existing driveways during construction.	
Surveyed	2553	On Site	Red Alder	Alnus rubra	47	21	4	Poor	Part of row. Single stem. Asymmetrical crown. Broken top at 17m.	Low	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	4
Surveyed	2554	On Site	Red Alder	Alnus rubra	44	23	4	Moderate	Part of row. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2555	On Site	Western Red Cedar	Thuja plicata	120	27	5	Good	Part of forest stand. Large single stem. Full crown.	High	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2556	On Site	Western Red Cedar	Thuja plicata	47	16	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2557	On Site	Western Red Cedar	Thuja plicata	35	13	3	Poor	Part of forest stand. Single stem. Asymmetrical	Low	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									crown. Top broken at 4m.				
Surveyed	2558	On Site	Western Red Cedar	Thuja plicata	21	10	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2559	On Site	Red Alder	Alnus rubra	36	15	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Stem bowed south.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2560	On Site	Western Red Cedar	Thuja plicata	31	15	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Stem bowed south.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2561	On Site	Red Alder	Alnus rubra	42	16	2	Poor	Part of forest stand. Single stem. Asymmetrical crown. Top broken.	Low	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2562	On Site	Western Red Cedar	Thuja plicata	61	23	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2563	On Site	Douglas-Fir	Pseudotsuga menziesii	80	27	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2564	On Site	Western Red Cedar	Thuja plicata	57	23	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2565	On Site	Western Red Cedar	Thuja plicata	78	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2566	On Site	Douglas-Fir	Pseudotsuga menziesii	87	27	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2567	On Site	Douglas-Fir	Pseudotsuga menziesii	22	20	2	Poor	Part of forest stand. Single stem. Asymmetrical crown. Suppressed.	Low	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2568	On Site	Western Red Cedar	Thuja plicata	24	18	2	Poor	Part of forest stand. Single stem. Asymmetrical crown. Suppressed.	Low	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2569	On Site	Douglas-Fir	Pseudotsuga menziesii	62	27	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2570	On Site	Western Red Cedar	Thuja plicata	62	25	4	Moderate	Part of forest stand. Single stem.	Medium	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									Asymmetrical crown.				
Surveyed	2571	On Site	Western Red Cedar	Thuja plicata	74	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2572	On Site	Western Red Cedar	Thuja plicata	72	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2573	On Site	Western Red Cedar	Thuja plicata	52	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2574	On Site	Western Red Cedar	Thuja plicata	41	22	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	3
Surveyed	2575	On Site	Western Red Cedar	Thuja plicata	43	22	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
												likely not feasible. Keep machinery and equiplent on existing driveways during construction.	
Surveyed	2576	On Site	Douglas-Fir	Pseudotsuga menziesii	92	27	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	3
Surveyed	2577	On Site	Western Red Cedar	Thuja plicata	78	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2578	On Site	Western Red Cedar	Thuja plicata	93	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	3
Surveyed	2579	On Site	Douglas-Fir	Pseudotsuga menziesii	66	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing driveways during construction.	3
Surveyed	2580	On Site	Douglas-Fir	Pseudotsuga menziesii	102	27	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Growing on slope. Construction of tree fencing t protect TPZ likely not feasible. Keep machinery and equiplent on existing	5

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
												driveways during construction.	
Surveyed	2581	On Site	Western Red Cedar	Thuja plicata	28	20	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2582	On Site	Western Red Cedar	Thuja plicata	45	23	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2583	On Site	Western Red Cedar	Thuja plicata	66	23	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2584	On Site	Western Red Cedar	Thuja plicata	25	20	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2585	On Site	Douglas-Fir	Pseudotsuga menziesii	96	27	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2586	On Site	Douglas-Fir	Pseudotsuga menziesii	32	20	3	Poor	Part of forest stand. Single stem forked at 8m. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2587	On Site	Western Red Cedar	Thuja plicata	76	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2588	On Site	Western Red Cedar	Thuja plicata	77	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2589	On Site	Western Red Cedar	Thuja plicata	78	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2590	On Site	Western Red Cedar	Thuja plicata	80	28	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2591	On Site	Western Red Cedar	Thuja plicata	68	24	3	Poor	Part of forest stand. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2592	On Site	Western Red Cedar	Thuja plicata	34	20	3	Poor	Part of forest stand. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2593	On Site	Douglas-Fir	Pseudotsuga menziesii	81	27	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2594	On Site	Western Red Cedar	Thuja plicata	57	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2595	On Site	Western Red Cedar	Thuja plicata	77	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2596	On Site	Douglas-Fir	Pseudotsuga menziesii	84	28	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2597	On Site	Western Red Cedar	Thuja plicata	61	22	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2598	On Site	Western Red Cedar	Thuja plicata	26	20	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2599	On Site	Western Red Cedar	Thuja plicata	29	20	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2600	On Site	Western Red Cedar	Thuja plicata	43	20	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2601	On Site	Western Red Cedar	Thuja plicata	38	20	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2602	On Site	Douglas-Fir	Pseudotsuga menziesii	79	27	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Stem abutting 2601.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2603	On Site	Western Red Cedar	Thuja plicata	27	17	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2604	On Site	Western Red Cedar	Thuja plicata	70	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2605	On Site	Western Red Cedar	Thuja plicata	23	17	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2606	On Site	Douglas-Fir	Pseudotsuga menziesii	48	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2607	On Site	Douglas-Fir	Pseudotsuga menziesii	65	27	6	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	6

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2608	On Site	Douglas-Fir	Pseudotsuga menziesii	102	30	6	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	6
Surveyed	2609	On Site	Western Red Cedar	Thuja plicata	52	22	6	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	6
Surveyed	2610	On Site	Douglas-Fir	Pseudotsuga menziesii	81	27	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2611	On Site	Western Red Cedar	Thuja plicata	36	20	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2612	On Site	Western Red Cedar	Thuja plicata	22	14	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2613	On Site	Western Red Cedar	Thuja plicata	24	20	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2614	On Site	Western Red Cedar	Thuja plicata	61	23	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Stem forked at 15m.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									Feeding cavities up stem. Base sounds solid.				
Surveyed	2615	On Site	Western Red Cedar	Thuja plicata	20	17	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2616	On Site	Western Red Cedar	Thuja plicata	68	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2617	On Site	Western Red Cedar	Thuja plicata	152	26	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Codom union at 1.5m.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2618	On Site	Western Red Cedar	Thuja plicata	80	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2619	On Site	Western Red Cedar	Thuja plicata	79	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2620	On Site	Western Red Cedar	Thuja plicata	58	22	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2621	On Site	Western Red Cedar	Thuja plicata	68	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2622	On Site	Western Red Cedar	Thuja plicata	57	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2623	On Site	Western Red Cedar	Thuja plicata	79	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2624	On Site	Western Red Cedar	Thuja plicata	80	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2625	On Site	Western Red Cedar	Thuja plicata	68	24	4	Dying	Part of forest stand. Single stem. Asymmetrical crown. Low live crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2626	On Site	Western Red Cedar	Thuja plicata	81	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2627	On Site	Western Red Cedar	Thuja plicata	56	23	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2628	On Site	Western Red Cedar	Thuja plicata	22	20	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2629	On Site	Western Red Cedar	Thuja plicata	63	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2630	On Site	Western Red Cedar	Thuja plicata	71	24	4	Dying	Part of forest stand. Single stem. Asymmetrical crown. Low live crown.	Nil	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2631	On Site	Western Red Cedar	Thuja plicata	41	22	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2632	On Site	Western Red Cedar	Thuja plicata	57	25	4	Poor	Part of forest stand. Single stem. Asymmetrical crown. Significant dieback from top down.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2633	On Site	Western Red Cedar	Thuja plicata	100	25	4	Poor	Part of forest stand. Single stem. Asymmetrical crown. Significant	Low	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									dieback from top down.				
Surveyed	2634	On Site	Western Red Cedar	Thuja plicata	105	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Secondary stem union at base.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2635	On Site	Western Red Cedar	Thuja plicata	33	22	2	Poor	Part of forest stand. Single stem. Asymmetrical crown.	Low	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2636	On Site	Western Red Cedar	Thuja plicata	52	23	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Acute fork at 15m.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2637	On Site	Western Red Cedar	Thuja plicata	57	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2638	On Site	Western Red Cedar	Thuja plicata	77	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2639	On Site	Douglas-Fir	Pseudotsuga menziesii	83	27	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2640	On Site	Western Red Cedar	Thuja plicata	55	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2641	On Site	Western Red Cedar	Thuja plicata	62	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2642	On Site	Douglas-Fir	Pseudotsuga menziesii	64	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2643	On Site	Western Red Cedar	Thuja plicata	60	22	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2644	On Site	Western Red Cedar	Thuja plicata	63	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2645	On Site	Douglas-Fir	Pseudotsuga menziesii	63	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2646	On Site	Douglas-Fir	Pseudotsuga menziesii	65	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
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Surveyed	2647	On Site	Western Hemlock	Tsuga heterophylla	56	25	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Stem swept east.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2648	On Site	Western Red Cedar	Thuja plicata	67	25	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Acute fork at 16m.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2649	On Site	Western Red Cedar	Thuja plicata	70	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	NA	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2650	On Site	Western Red Cedar	Thuja plicata	75	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2651	On Site	Western Red Cedar	Thuja plicata	27	20	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2652	On Site	Western Red Cedar	Thuja plicata	40	23	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2653	On Site	Western Red Cedar	Thuja plicata	48	23	3	Moderate	Part of forest stand. Single stem.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									Asymmetrical crown.				
Surveyed	2654	On Site	Western Red Cedar	Thuja plicata	91	26	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2655	On Site	Western Red Cedar	Thuja plicata	26	20	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2656	On Site	Western Red Cedar	Thuja plicata	33	20	2	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2657	On Site	Douglas-Fir	Pseudotsuga menziesii	103	30	5	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Stem slightly swept. Corrected.	Medium	Retain	Outside scope of proposed Phase 1 work.	5
Surveyed	2658	On Site	Western Red Cedar	Thuja plicata	68	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2659	On Site	Western Hemlock	Tsuga heterophylla	22	20	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Suppressed.	Low	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2660	On Site	Douglas-Fir	Pseudotsuga menziesii	83	30	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2661	On Site	Western Red Cedar	Thuja plicata	68	22	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2662	On Site	Western Red Cedar	Thuja plicata	82	24	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2663	On Site	Western Red Cedar	Thuja plicata	51	22	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2664	On Site	Western Red Cedar	Thuja plicata	60	27	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2665	On Site	Western Red Cedar	Thuja plicata	55	25	4	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2666	On Site	Douglas-Fir	Pseudotsuga menziesii	35	23	3	Moderate	Part of forest stand. Single stem. Asymmetrical	Low	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									crown. Base of stem buried.				
Surveyed	2667	On Site	Western Red Cedar	Thuja plicata	101	26	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2668	On Site	Western Red Cedar	Thuja plicata	45	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2669	On Site	Western Red Cedar	Thuja plicata	40	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2670	On Site	Douglas-Fir	Pseudotsuga menziesii	53	28	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2671	On Site	Western Red Cedar	Thuja plicata	25	18	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2672	On Site	Western Red Cedar	Thuja plicata	25	20	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2673	On Site	Douglas-Fir	Pseudotsuga menziesii	58	27	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2674	On Site	Western Red Cedar	Thuja plicata	51	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2675	On Site	Western Red Cedar	Thuja plicata	47	23	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown. Base of stem buried.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2676	On Site	Douglas-Fir	Pseudotsuga menziesii	50	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2677	On Site	Western Red Cedar	Thuja plicata	47	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2678	On Site	Douglas-Fir	Pseudotsuga menziesii	54	28	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2679	On Site	Douglas-Fir	Pseudotsuga menziesii	47	24	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2680	On Site	Western Red Cedar	Thuja plicata	34	22	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2681	On Site	Western Red Cedar	Thuja plicata	34	22	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2682	On Site	Western Red Cedar	Thuja plicata	59	25	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2683	On Site	Western Red Cedar	Thuja plicata	47	22	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Historic broken top at 7m.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2684	On Site	Douglas-Fir	Pseudotsuga menziesii	61	26	3	Moderate	Part of forest stand. Single stem.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									Asymmetrical crown.				
Surveyed	2685	On Site	Western Red Cedar	Thuja plicata	55	23	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2686	On Site	Western Red Cedar	Thuja plicata	88	26	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2687	On Site	Western Red Cedar	Thuja plicata	23	20	3	Poor	Part of forest stand. Single stem. Asymmetrical crown. Suppressed.	Low	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2688	On Site	Western Red Cedar	Thuja plicata	46	23	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2689	On Site	Western Red Cedar	Thuja plicata	51	23	3	Moderate	Part of forest stand. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2690	On Site	Douglas-Fir	Pseudotsuga menziesii	92	30	6	Moderate	Growing as pair with 2691. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	6

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2691	On Site	Douglas-Fir	Pseudotsuga menziesii	89	30	6	Moderate	Growing as pair with 2692. Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	6
Surveyed	2692	On Site	Western Red Cedar	Thuja plicata	78	17	4	Poor	Single stem. Top broken at 17m.	Low	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2693	On Site	Douglas-Fir	Pseudotsuga menziesii	81	27	4	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	4
Surveyed	2694	On Site	Western Red Cedar	Thuja plicata	35	20	2	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	2
Surveyed	2695	On Site	Western Red Cedar	Thuja plicata	50	23	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2696	On Site	Western Red Cedar	Thuja plicata	50	23	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2697	On Site	Western Red Cedar	Thuja plicata	80	24	3	Moderate	Single stem. Asymmetrical crown. West of berm. Stem forked at 7m.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2698	On Site	Western Red Cedar	Thuja plicata	70	24	3	Moderate	Single stem. Asymmetrical crown. West of berm.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	2699	On Site	Western Red Cedar	Thuja plicata	70	24	3	Moderate	Single stem. Asymmetrical crown. West of berm.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2700	On Site	Western Red Cedar	Thuja plicata	57	22	4	Moderate	Growing at north edge of scope. Single stem.	Medium	Retain	Protect as per TMP.	4
Surveyed	2701	On Site	Western Hemlock	Tsuga heterophylla	21	14	4	Moderate	Growing at north edge of scope. Single stem.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2702	On Site	Western Red Cedar	Thuja plicata	44	21	4	Moderate	Growing at north edge of scope. Single stem. Asymmetrical crown.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2703	On Site	Western Red Cedar	Thuja plicata	20	14	4	Moderate	Growing at north edge of scope. Single stem. Asymmetrical crown.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2704	On Site	Western Red Cedar	Thuja plicata	58	24	4	Moderate	Growing at north edge of scope. Single stem. Asymmetrical crown.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2705	On Site	Western Red Cedar	Thuja plicata	67	25	4	Moderate	Growing at north edge of scope. Single stem. Asymmetrical crown.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2706	On Site	Western Red Cedar	Thuja plicata	77	25	4	Moderate	Growing at north edge of scope. Single stem. Asymmetrical crown.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2707	On Site	Western Red Cedar	Thuja plicata	67	24	4	Moderate	Growing at north edge of scope. Single stem.	Medium	Remove	In conflict with phase 1 expansion.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									Asymmetrical crown.				
Surveyed	2708	On Site	Western Red Cedar	Thuja plicata	61	24	4	Moderate	Growing at north edge of scope. Single stem. Asymmetrical crown.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2709	On Site	Western Red Cedar	Thuja plicata	41	24	4	Moderate	Growing at north edge of scope. Single stem. Asymmetrical crown.	Medium	Remove	In conflict with phase 1 expansion.	4
Surveyed	2710	On Site	Western Red Cedar	Thuja plicata	81	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2711	On Site	Western Red Cedar	Thuja plicata	47	23	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2712	On Site	Western Red Cedar	Thuja plicata	36	20	4	Poor	Part of group. Single stem. Asymmetrical crown. Suppressed.	Low	Retain	Protect as per TMP.	4
Surveyed	2713	On Site	Western Red Cedar	Thuja plicata	49	23	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2714	On Site	Western Red Cedar	Thuja plicata	52	23	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2715	On Site	Western Red Cedar	Thuja plicata	49	20	4	Poor	Part of group. Single stem. Asymmetrical crown. Acute unions at 3m.	Low	Retain	Protect as per TMP.	4
Surveyed	2716	On Site	Western Red Cedar	Thuja plicata	89	20	4	Poor	Part of group. Single stem. Asymmetrical crown. Secondary stem union at base.	Low	Retain	Protect as per TMP.	4
Surveyed	2717	On Site	Western Red Cedar	Thuja plicata	50	24	4	Poor	Part of group. Single stem. Asymmetrical crown.	Low	Retain	Protect as per TMP.	4
Surveyed	2718	On Site	Western Red Cedar	Thuja plicata	52	24	4	Poor	Part of group. Single stem. Asymmetrical crown.	Low	Retain	Protect as per TMP.	4
Surveyed	2719	On Site	Western Red Cedar	Thuja plicata	55	23	4	Poor	Part of group. Single stem. Asymmetrical crown.	Low	Retain	Protect as per TMP.	4
Surveyed	2720	On Site	Douglas-Fir	Pseudotsuga menziesii	52	27	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2721	On Site	Western Red Cedar	Thuja plicata	56	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2722	On Site	Western Red Cedar	Thuja plicata	37	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	2723	On Site	Western Red Cedar	Thuja plicata	35	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2724	On Site	Western Red Cedar	Thuja plicata	37	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2725	On Site	Western Red Cedar	Thuja plicata	35	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2726	On Site	Western Red Cedar	Thuja plicata	73	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2727	On Site	Western Red Cedar	Thuja plicata	33	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2728	On Site	Western Red Cedar	Thuja plicata	32	20	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2729	On Site	Western Hemlock	Tsuga heterophylla	56	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2730	On Site	Western Red Cedar	Thuja plicata	63	24	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2731	On Site	Western Red Cedar	Thuja plicata	66	24	4	Moderate	Part of group. Single stem. Asymmetrical crown. Some	Medium	Retain	Protect as per TMP.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
									feeding cavities up stem.				
Surveyed	2732	On Site	Western Red Cedar	Thuja plicata	27	23	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2733	On Site	Western Red Cedar	Thuja plicata	36	23	4	Poor	Part of group. Single stem. Asymmetrical crown. Stem forked at 2m.	Low	Retain	Protect as per TMP.	4
Surveyed	2734	On Site	Western Red Cedar	Thuja plicata	57	23	4	Poor	Part of group. Single stem. Asymmetrical crown. Stem forked at 2m.	Low	Retain	Protect as per TMP.	4
Surveyed	2735	On Site	Western Red Cedar	Thuja plicata	54	23	4	Poor	Part of group. Single stem. Asymmetrical crown. Stem forked at 2m.	Low	Retain	Protect as per TMP.	4
Surveyed	2736	On Site	Western Red Cedar	Thuja plicata	56	23	4	Moderate	Part of group. Single stem. Asymmetrical crown.	Medium	Retain	Protect as per TMP.	4
Surveyed	2737	On Site	Western Red Cedar	Thuja plicata	68	23	4	Poor	Part of group. Single stem. Asymmetrical crown. Large decay column visible at wound at base. Moderate reaction growth.	Low	Retain	Protect as per TMP.	4

Unsurveyed	Tag #	Location	Species Common Name	Botanical Name	DBH (cm)	Height (m)	Dripline Radius (m)	Health and Structure Rating	Comments	Retention Value Rating	Retain/ Remove	Retention/TPZ Comments	*TPZ (m)
Surveyed	OS01	Off Site	Western Red Cedar	Thuja plicata	65	23	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	OS02	Off Site	Douglas-Fir	Pseudotsuga menziesii	77	23	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	OS03	Off Site	Western Red Cedar	Thuja plicata	57	20	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	OS04	Off Site	Western Red Cedar	Thuja plicata	35	20	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	OS05	Off Site	Big-Leaf Maple	Acer macrophyllum	56	26	3	Moderate	Single stem. Asymmetrical crown. Stem forked at 2m.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	OS06	Off Site	Western Red Cedar	Thuja plicata	50	22	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3
Surveyed	OS07	Off Site	Western Red Cedar	Thuja plicata	25	20	3	Moderate	Single stem. Asymmetrical crown.	Medium	Retain	Outside scope of proposed Phase 1 work.	3

# Appendix 2 Site Photographs



Photo 1. Central south area, showing eastern edge of forest stand where construction of storage bunker is proposed.



Photo 2. Central north area, showing approximate area of cemetery expansion.



Photo 3. Central area, showing edge of cluster were driveway decommissioning is proposed.

# Appendix 3 Tree Health and Structure Rating Criteria

The tree health and structure ratings used by Diamond Head Consulting summarize each tree based on both positive and negative attributes using five stratified categories. These ratings indicate health and structural conditions that influence a tree's ability to withstand local site disturbance during the construction process (assuming appropriate tree protection) and benefit a future urban landscape.

Excellent: Tree of possible specimen quality, unique species or size with no discernible defects.

**Good:** Tree has no significant structural defects or health concerns, considering its growing environment and species.

**Moderate:** Tree has noted health and/or minor to moderate structural defects. This tree can be retained, but may need mitigation (e.g., pruning or bracing) and monitoring post-development. A moderate tree may be suitable for retention within a stand or group, but not suitable on its own.

**Poor:** Tree is in serious decline from previous growth habit or stature, has multiple defined health or structural weaknesses. It is unlikely to acclimate to future site use change. This tree is not suitable for retention within striking distance of most targets.

**Dying/Dead:** Tree is in severe decline, has severe defects or was found to be dead.

**High Risk:** The tree shows severe health decline and/or with major structural weaknesses or decay. Dead or compromised tree parts increase the likelihood of failure, posing a high risk to nearby targets within the timeframe of this report. the tree is not suitable for retention due to deteriorating tree conditions and exceeding thresholds as a risk high or extreme risk as outlined in Appendix 5. See Section 3.2 for individual detailed risk assessments and Appendix 4 for risk rating definitions.

## Appendix 4 Tree Retention Value Rating Criteria

The tree retention value ratings used by Diamond Head Consulting provide guidance for tree retention planning. Each tree in an inventory is assigned to one of four stratified categories that reflect its value as a future amenity and environmental asset in a developed landscape. Tree retention value ratings take in to account the health and structure rating, species profile\*, growing conditions and potential longevity assuming a tree's growing environment is not compromised from its current state.

**High:** Tree suitable for retention. Has a good or excellent health and structure rating. Tree is open grown, an anchor tree on the edge of a stand or dominant within a stand or group. Species of *Populus, Alnus* and *Betula* are excluded from this category.

**Medium:** Tree suitable for retention with some caveats or suitable within a group\*\*. Tree has moderate health and structure rating, but is likely to require remedial work to mitigate minor health or structural defects. Includes trees that are recently exposed, but wind firm, and trees grown on sites with poor rooting environments that may be ameliorated.

**Low:** Tree has marginal suitability for retention. Health and structure rating is moderate or poor; remedial work is unlikely to be viable. Trees within striking distance of a future site developments should be removed.

**Nil:** Tree is unsuitable for retention. It has a dying/dead or poor health and structure rating. It is likely that the tree will not survive, or it poses and unacceptable hazard in the context of future site developments.

\* The species profile is based upon mature age and height/spread of the species, adaptability to land use changes and tree species susceptibility to diseases, pathogen and insect infestation.

\*\* Trees that are 'suitable as a group' have grown in groups or stands that have a single, closed canopy. They have not developed the necessary trunk taper, branch and root structure that would allow then to be retained individually. These trees should only be retained in groups.

# Appendix 5 Risk Rating Matrices

Trees with a *probable* or *imminent* likelihood of failure, a *medium* or *high* likelihood of impacting a specified target, and a *significant* or *severe* consequence of failure have been assessed for risk and included in this report (Section 3.2). These two risk rating matrices showing the categories used to assign risk are taken without modification to their content from the International Society of Arboriculture Tree Risk Assessment Qualification Manual.

Likelihood of	Likelihood of Impacting Target							
Failure	Very Low	Low	Medium	High				
Imminent	Unlikely	Somewhat Likely	Likely	Very Likely				
Probable	Unlikely	Unlikely	Somewhat Likely	Likely				
Possible	Unlikely	Unlikely	Unlikely	Somewhat Likely				
Improbable	Unlikely	Unlikely	Unlikely	Unlikely				

#### Matrix 1: Likelihood

Matrix 2: Risk Rating

Likelihood of	Consequences of Failure								
Failure and Impact	Negligible	Minor	Significant	Severe					
Very Likely	Low	Moderate	High	Extreme					
Likely	Low	Moderate	High	High					
Somewhat Likely	Low	Low	Moderate	Moderate					
Unlikely	Low	Low	Low	Low					

# **Guidelines for Mitigation Actions**

# extreme-risk trees

mitigate as soon as possible

# high-risk trees

mitigate as soon as work schedule allows

## moderate-risk trees

retain and monitor and/or mitigate, as necessary

## low-risk trees

retain and monitor or mitigate if desired

# Appendix 6 Construction Guidelines

Tree management recommendations in this report are made under the expectation that the following guidelines for risk mitigation and proper tree protection will be adhered to during construction.

Respecting these guidelines will prevent changes to the soil and rooting conditions, contamination due to spills and waste, or physical wounding of the trees. Any plans for construction work and activities that deviate from or contradict these guidelines should be discussed with the project arborist so that mitigation measures can be implemented.

### **Tree Protection Zones**

A Tree protection zone (TPZ) is determined using either dripline or a DBH multiplier to define a radius measured in all directions from the outside of a tree's trunk. It is typically determined according to local municipal bylaw specifications and may be modified based on professional judgement of the project arborist to accommodate species specific tolerances and site specific growing conditions. For retained trees, the TPZ and fencing indicated in this report are proposed as suitable in relation to the level of disturbance proposed on the site plan provided to the project arborist. Arborist consultation is required if any additional work beyond the scope of the plans provided is proposed near the tree. Work done in addition to the proposed impacts discussed in this report may cause the tree to decline and die.

<u>Tree Protection Fencing</u>: Tree protection zones (TPZs) will be protected by Tree Protection Fencing except where site features constrict roots (e.g., retaining walls or roads), where continual access is required (e.g., sidewalks), or when an acceptable encroachment into the TPZ is proposed, in which case the fencing will be modified. Tree Protection Fencing is shown on the Tree Protection Plan and, where it varies from the TPZ, the rationale is described in the inventory table in Section 3.1.

Within a TPZ, no construction activity, including materials storage, grading or landscaping, may occur without project arborist approval. Within the TPZ, the following are tree preservation guidelines based on industry standards for best practice and local municipal requirements:

- No soil disturbance or stripping.
- Maintain the natural grade.
- No storage, dumping of materials, parking, underground utilities or fires within TPZs or tree driplines.
- Any planned construction and landscaping activities affecting trees should be reviewed and approved by a consulting arborist.

- Install specially designed foundations and paving when these structures are required within TPZs.
- Route utilities around TPZs.
- Excavation within the TPZs should be supervised by a consultant arborist.
- Surface drainage should not be altered in such a way that water is directed in or out of the TPZ.
- Site drainage improvements should be designed to maintain the natural water table levels within the TPZ.

Prior to any construction activity, Tree Protection Fencing must be constructed as shown on the Tree Protection Plan. 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. Tree Protection Fencing must be constructed prior to tree removal, excavation or construction and remain intact for the entire duration of construction.

### **Unsurveyed Trees**

Unsurveyed trees identified by DHC in the Tree Retention Plan have been hand plotted for approximate location only using GPS coordinates and field observations. The location and ownership of unsurveyed trees cannot be confirmed without a legal surveyed. The property owner or project developer must ensure that all relevant on- and off-site trees are surveyed by a legally registered surveyor, whether they are identified by DHC or not.

### **Removal of logs from sites**

Private timber marks are required to transport logs from privately-owned land in BC. It is property owner's responsibility to apply for a timber mark prior to removing any merchantable timber from the site. Additional information can be found at: <u>http://www.for.gov.bc.ca/hth/private-timber-marks.htm</u>

### **Regulation of Soil Moisture and Drainage**

Excavation and construction activities adjacent to TPZs can influence the availability of moisture to protected trees. This is due to a reduction in the total root mass, changes in local drainage conditions, and changes in exposure including reflected heat from adjacent hard surfaces. To mitigate these concerns the following guidelines should be followed:

• Soil moisture conditions within the tree tree protection zones should be monitored during hot and dry weather. When soil moisture is inadequate, supplemental irrigation should be provided that penetrates soil to the depth of the root system or a minimum of 30 cm.

- Any planned changes to surface grades within the TPZs, including the placement of mulch, should be designed so that any water will flow away from tree trunks.
- Excavations adjacent to trees can alter local soil hydrology by draining water more rapidly from TPZs more rapidly than it would prior to site changes. It is recommended that when excavating within 6 m of any tree, the site be irrigated more frequently to account for this.

### **Root Zone Enhancements and Fertilization**

Root zone enhancements such as mulch, and fertilizer treatments may be recommended by the project arborist during any phase of the project if they deem it necessary to maintain tree health and future survival.

### Paving Within and Adjacent to TPZs

If development plans propose the construction of paved areas and/or retaining walls close to TPZs, measures should be taken to minimize impacts. Construction of these features would raise concerns for proper soil aeration, drainage, irrigation and the available soil volume for adequate root growth. The following design and construction guidelines for paving and retaining walls are recommended to minimize the long-term impacts of construction on protected trees:

- Any excavation activities near or within the TPZ should be monitored by a certified arborist. Structures should be designed, and excavation activities undertaken to remove and disturb as little of the rooting zone as possible. All roots greater than 2 cm in diameter should be hand pruned by a Certified Arborist.
- The natural grade of a TPZ should be maintained. Any retaining walls should be designed at heights that maintain the existing grade within 20 cm of its current level. If the grade is altered, it should be raised not reduced in height.
- Compaction of sub grade materials can cause trees to develop shallow rooting systems. This can contribute to long-term pavement damage as roots grow. Minimizing the compaction of subgrade materials by using structural soils or other engineered solutions and increasing the strength of the pavement reduces reliance on the sub-grade for strength.
- If it is not possible to minimize the compaction of sub-grade materials, subsurface barriers should be considered to help direct roots downward into the soil and prevent them from growing directly under the paved surfaces.

### **Plantings within TPZs**

Any plans to landscape the ground within the TPZ should implement measures to minimize negative impacts on the above or below ground parts of a tree. Existing grass layer in TPZs should not be stripped because this will damage surface tree roots. Grass layer should be covered with mulch at the start of the project, which will gradually kill the grass while moderating soil moisture and temperatures. Topsoil should be mixed with the mulch prior to planting of shrubs, but new topsoil layer should not be greater than 20 cm deep on top of the original grade. Planting should take place within the newly placed topsoil mixture and should not disturb the original rooting zone of the trees. A two-meter radius around the base of each tree should be left unplanted and covered in mulch; a tree's root collar should remain free from any amendments that raise the surface grade.

### Monitoring during construction

Ongoing monitoring by a consultant arborist should occur for the duration of a development project. Site visits should be more frequent during activities that are higher risk, including the first stages of construction when excavation occurs adjacent to the trees. Site visits will ensure contractors are respecting the recommended tree protection measures and will allow the arborist to identify any new concerns that may arise.

During each site visit the following measures will be assessed and reported on by a consulting arborist:

- Health and condition of protected trees, including damage to branches, trunks and roots that may have resulted from construction activities, as will the health of. Recommendations for remediation will follow.
- Integrity of the TPZ and fencing.
- Changes to TPZ conditions including overall maintenance, parking on roots, and storing or dumping of materials within TPZ. If failures to maintain and respect the TPZ are observed, suggestions will be made to ensure tree protection measures are remediated and upheld.
- Review and confirmation of recommended tree maintenance including root pruning, irrigation, mulching and branch pruning.
- Changes to soil moisture levels and drainage patterns; and
- Factors that may be detrimentally impact the trees.

# Appendix 7 Report Assumptions and Limiting Conditions

- Unless expressly set out in this report or these Assumptions and Limiting Conditions, Diamond Head Consulting Ltd. ("Diamond Head") makes no guarantee, representation or warranty (express or implied) regarding this report, its findings, conclusions or recommendations contained herein, or the work referred to herein.
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- 4) Conditions affecting the trees subject to this report (the "Conditions", include without limitation, structural defects, scars, decay, fungal fruiting bodies, evidence of insect attack, discolored foliage, condition of root structures, the degree and direction of lean, the general condition of the tree(s) and the surrounding site, and the proximity of property and people) other than those expressly addressed in this report may exist. Unless otherwise stated information contained in this report covers only those Conditions and trees at the time of inspection. The inspection is limited to visual

examination of such Conditions and trees without dissection, excavation, probing or coring. While every effort has been made to ensure that any trees recommended for retention are both healthy and safe, no guarantees, representations or warranties are made (express or implied) that those trees will not be subject to structural failure or decline. The Client acknowledges that it is both professionally and practically impossible to predict with absolute certainty the behavior of any single tree, or groups of trees, in all given circumstances. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure and this risk can only be eliminated if the risk is removed. If Conditions change or if additional information becomes available at a future date, modifications to the findings, conclusions, and recommendations in this report may be necessary. Diamond Head expressly excludes any duty to provide any such modification of Conditions change or additional information becomes available.

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9) Loss or alteration of any part of this report invalidates the entire report.