



TO: Qualified Professionals, Certified Arborists, Certified Hazard Tree Assessors, Landowners and Developers
FROM: Development Services
DATE: March 28, 2022

RE: Terms of Reference for Arborist Reports

Introduction

An Arborist Report may be required by the District of Squamish in the following instances:

- When detailing the reasons why a tree is at such a high risk to fail that it needs to be removed.
- When there are protected trees on-site, or any off-site trees which could be affected by the proposed development.
- When a tree infraction has occurred, and a report is needed to detail the repair work for the tree.
- At the request of the General Manager (Tree Management Bylaw No. 2640, Section 6.4.k).

The following is intended to provide general terms of reference for typical requirements when completing Arborist Reports in the District of Squamish.

Reporting Requirements

Implementation

- Name of arborist and company, address, phone number, email address
- District of Squamish Business License number
- Proof of professional liability insurance
- Arborist ISA certification number
- Tree Risk Assessor certification number if required for hazard trees
- Name and contact information of applicant and property owner
- Parcel legal description and civic address
- Current zoning and if applicable, rezoning of the parcel
- Statement of purpose and rationale for the proposed tree removal
- Brief description of proposed works or development on the property
- Signature of Arborist

Tree Assessment

The following information is required for all Trees¹ within the parcel, within 2 m of the property line or has a crown (dripline) encroaching on the property, or trees of any size on neighboring District owned property.

- Species (scientific and common names)
- Tag number
- Diameter at breast height (DBH) to the nearest 1 cm
- Condition (crown/trunk/roots) – may include:
 - Structural integrity
 - Deadwood (%)
 - Insect infestations (type)
 - Pathological concerns (type)
 - Fungal fruiting bodies evident
 - Decay events at unions, baes, or elsewhere (resistograph)
 - Causing damage to structures
 - Significant lean/root uplifting
 - Live crown ratio
- Location – either by survey plan or for small projects (≤5 trees for removal) overhead maps
- Tree risk assessment including hazard rating, and description of hazard/target
- History
- All other pertinent information
- **Include a Tree Inventory in table format**

Impact Assessment and Mitigation Measures

- Assess the potential impacts on the trees by the proposed development
 - **Note:** To make an adequate impact assessment, the applicant must provide the arborist with up-to-date drawings showing the proposed property lines and building envelopes, as well as the location of proposed driveways, roads and utility corridors. The applicant must inform the arborist of the details for any proposed retaining walls or changes to existing grade. Such details must be included on the Tree Retention Plan.
- Based on the impact assessment, determine which trees require removal or retention. Consider mitigation before removal. Recommendations for tree removal require the reason for removal and methods of removal clearly stated.
- Provide detailed descriptions of mitigation measures for the retained trees. These measures must include the tree protection fencing detail (for District standards, see the District Tree Protection Barrier Guide). The location and dimensions of the tree protection fencing must be detailed on the Tree Retention Plan.

¹ *Tree* means a woody perennial plant usually having a single trunk or stem which has a diameter of at least 20 cm (8 inches) when measured from a height of 1.4 meters above the natural grade of land; this size threshold does not apply if the tree is within an Environmentally Sensitive Area.

- Outline any site-specific mitigation options deemed necessary by the arborist for retained trees including (but not limited to) relocation of retaining walls and perimeter drainage; hand-digging; pruning, cable and bracing, watering, mulching, aeration techniques, fertilization, drainage, wildlife hazard trees, relocation of utility installation or connections; etc.

Tree Retention Plan

- North arrow
- Scale marker
- Site location
- Trees >20 cm DBH on the parcel and within 2 m of the parcel boundary
- Trees within ESAs or RAAs on the parcel, regardless of size, for removal or that may be affected by the development.
- Neighboring District trees regardless of size
- Diameter of tree (DBH) in centimeters to the nearest 1 cm
- Tag numbers (ensure #s large enough to read)
- Existing and proposed buildings
- Environmentally Sensitive Area or Riparian Assessment Area boundaries
- Tree barriers and sizes written on plan
- Any other features which would impact tree removal or the planting and maintenance of replacement trees or the viability of retained trees
- The District may request that the Tree Retention Plan be stamped by a registered BCLS surveyor or professional engineer and property sealed with the following additional information:
 - Driveways and sidewalks with elevations
 - Overhead or underground utility lines (such as Storm/Sanitary/Telus/Hydro/Fortis)
 - Septic fields
 - Easements
 - Restrictive covenant areas

Photographs


- Labelled photos with description of what is being shown
- Entire tree
- Close up of problem areas including rot, damage
- Entire site showing trees being reviewed

Tree Retention Summary

Provide a summary table that outlines the following:

- Number of Trees identified
- Number of Trees to be removed
- Number of Trees to be retained

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- Number of Replacement Trees required
 - Number of Replacement Trees proposed
 - Number of Replacement Trees in deficit

Tree Replacement Plan

When replacement trees are proposed, a tree replacement plan is to be provided. The Arborist Report should include a written summary that includes the following information:

- Number of replacement trees
- Species of replacement trees
- Size of replacement trees
- Maintenance requirements
- Monitoring and reporting requirements

The summary can either a) reference to landscape architecture plans; or b) reference a prepared tree replacement plan (site plan). If the latter, please include the following information on the site plan:

- North arrow
- Scale marker
- Site location
- Location of replacement trees
- Size of replacement trees
- Species of replacement trees
- Existing and proposed buildings
- Any other features which would impact tree removal or the planting and maintenance of replacement trees.
- The District may request that the Tree Retention Plan be stamped by a registered BCLS surveyor or professional engineer and property sealed with the following additional information:
 - Driveways and sidewalks with elevations
 - Overhead or underground utility lines (such as Storm/Sanitary/Telus/Hydro/Fortis)
 - Septic fields
 - Easements
 - Restrictive covenant areas



Qualified Professional (QP)

- Arborist Reports are to be prepared by an International Society of Arboriculture (ISA) Certified Arborist.
- Danger Tree assessments are to be completed and prepared by TRAQ Certified or BC Parks Certified Danger Tree Assessors.

Peer Review

Depending on the complexity of the site, scope of development under consideration, availability/quality/reliability of background information and field data, the degree of judgment on which the assessment is based, QP's training/experience and the capability of the approving authority to review and respond, an independent peer review may be required by the District. Costs of the peer review are to be borne by the developer.