

## Trust Fund Board Baseline Report Standard Revised June 2012

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### Introduction

The following document is intended as a guide for those preparing baseline inventory reports on properties owned and covenanted by the Trust Fund Board. It was developed to accompany the launch of the Natural Area Protection Tax Exemption Program (NAPTEP).<sup>1</sup>

### What is a “baseline inventory report” and why is it important?

A baseline inventory report is an integral part of every conservation covenant<sup>2</sup>. It is a record of the condition of a covenant area at the time the covenant is registered and typically includes information on flora and fauna, as well as on other natural features. The baseline report acts as a legal tool—it justifies a covenant’s presence and helps to enforce it should there be violations. As an additional function, it can also act as a record of natural change over time on a property.

### How detailed does the baseline report need to be?

The level of detail in a baseline report is determined by the information required to legally establish the condition of the property at the time the covenant is registered. Information should be presented in simple language and should be understandable to the average person. The baseline report serves as a record of the values present on a covenant area at the time of the covenant’s registration, highlighting the natural, cultural and geological value(s). As a guide, baseline reports for the Trust Fund Board should be approximately 6+ pages in length (excluding maps and photographs), with 1-2 pages per ecosystem type after the 6 pages.

### Before Beginning a Baseline Report You Must:

1. Have and read a copy of the draft covenant;
2. Have a final completed survey of the covenant area done by a registered British Columbia Land Surveyor (B.C.L.S.); and,
3. Be an environmental professional approved by the Trust Fund Board.

### Recommended Baseline Documentation Procedures:

#### *Who Should Collect Information?*

To ensure that the contractor hired to complete the baseline report is a qualified individual, it is important that he/she be approved by the Trust Fund Board *prior* to any data collection. In some instances, the Trust Fund Board may recommend that biologists, foresters, landscape planners, etc. be consulted.

#### *Time of Collection:*

Baseline inventories should be conducted when the ecological/special feature of interest is best observed. As a rule of thumb, springtime generally provides the best opportunity for species identification. Special attention should be taken not to disturb rare species during sensitive times (e.g. Peregrine Falcons during nesting).

Other considerations when deciding the time to collect baseline data include the availability of covenant holder(s) and landowner(s), as they may need to provide information or wish to be

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<sup>1</sup> For more information on NAPTEP see the Islands Trust Fund website at [www.islandstrustfund.bc.ca](http://www.islandstrustfund.bc.ca).

<sup>2</sup> Covenants, and the baseline reports that are a part of them, are *confidential documents* until they are registered at the Land Titles Office.

present during site visits. Presence of interested parties is also helpful in identifying locations for photo stations, covenant area boundaries and special features.

### ***Where to Get Information:***

The following are the primary resources used to complete a baseline report:

- The *Draft Conservation Covenant* will provide a legal description of the property.
- *Landowners* are an obvious and often rich source of information. Landowner questionnaires, discussions and property tours can be particularly helpful.
- The landowner must supply the person conducting the baseline report with a *Survey of the Covenant Area* done by a British Columbia Land Surveyor.
- A *site visit* is an integral component of a baseline report and will provide information about vegetation and animal species present in the area. Depending on the size and complexity of the covenant area, a site visit may be several days
- The *Trust Fund Board* can provide digital map layers as follows:
  - Orthophotography;
  - Sensitive Ecosystem Mapping;
  - Terrestrial Ecosystem Mapping;
  - Cadastral;
  - Contours;
  - Water features including streams and watercourses and bodies of water;
- The *BC Conservation Data Centre (CDC)* is a good resource for identifying rare plants and animals as well as rare ecological communities.
- The *BC Forest Service* or a company like *Weyerhaeuser* may be able to provide information on past logging history on the land.
- The *Agricultural Land Commission* will provide information on whether the land in the Agricultural Land Reserve and the *Private Managed Forest Land Council* will provide information on whether the land is Private Managed Forest Land.
- The local *Official Community Plan* can provide zoning information for the land.
- The *Archaeology Branch* can provide information about recorded archaeological sites.
- *First Nations* offices may also be able to help with historical use of the land. Contractors should be aware that there are overlapping traditional territories in the Islands Trust Area and the covenant area may be in more than one traditional territory.
- Local *Historical Societies* may also be a source of information for the history of the covenant area.

## Critical Elements in the Baseline Report

The following is a list of critical elements that must be included in any baseline report. The report is typically no longer than 6-10 pages, depending on the number of vegetation types and excluding maps, sketches, photographs and other pertinent attachments. It must be approved by the landowner and can only be completed **AFTER** the survey of the covenant area is complete. Attached to this document is a fictional example of a typical baseline report.

### 1.0 Acknowledgment

The property owner **MUST** review the baseline report and acknowledge that it is accurate by initialling the baseline report and signing the covenant. Private contractors preparing baseline reports **MUST** acknowledge that the report is a true representation of the property and should submit final copies of the baseline report to the landowner.

### 2.0 Property Location and Description

Property location and description should include:

- 2.1. Location of property, location of the covenant area, closest BC ferry dock and directions from ferry dock.
- 2.2. Legal description as provided by the Trust Fund Board.
- 2.3. Property and covenant size (from covenant survey).

For ease of future monitoring, it is helpful if covenant area boundaries are clearly marked while doing the baseline report. The landowner should be consulted regarding the method used to mark boundaries.

### 3.0 History of the Site

- 3.1. Provide a general history of the covenant area including time of settlement, history of buildings, archaeological information and other improvements, etc.
- 3.2. Provide a land use history of the covenant area including a description of past clearing, logging, resource extraction, farming, etc.

### 4.0 List of Buildings, Structures and Other Improvements

Describe any buildings, structures and improvements to the property. **Show all buildings, structures and improvements on the baseline report map.**

- 4.1. List any buildings in the covenant area (houses, cottages, studios, workshops, etc)
- 4.2. List any structures in the covenant area (sheds, outhouses, chicken coups, well heads, power lines, utility corridors, etc)
- 4.3. List any other improvements to the land (roads, trails, etc.)

### 5.0 Significance of the Land and Amenities

- 5.1. In a one paragraph, easy to read narrative, provide a general description of the land with an emphasis on the feature(s) of interest. If the covenant area is granted through NAPTEP, include information on the features detailed in the Natural Area Protection Tax Exemption Program Regulation.

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- 5.2. Note any red or blue listed species or ecosystems. The Conservation Data Centre (CDC) website is helpful for determining these, <http://www.env.gov.bc.ca/atrisk/toolintro.html>.

### 6.0 Inventory by Vegetation Type

The inventory of biological features by vegetation type accompanies the Map of the Covenant Area. The Map of the Covenant Area is a snapshot of the current state of the covenant area on the date the data for the baseline report was collected. The date that data was collected should be included in this section of the baseline report and on the map of the covenant area contained in the report.

- 6.1. In this section each vegetation type is described in 2-3 sentences. Vegetation types are plant communities, consisting of several layers (canopy, secondary canopy, understorey), that are influenced by moisture, elevation, soil type, aspect, and disturbance history. Typically a vegetation type will only include one site series; however, they may include more than one site series or may be termed “variable” if many are found in close proximity to one another. Each vegetation type must have at least one representative photograph (see information on photographs, below).

List, in a table format, the canopy species, secondary canopy species and understorey species observed in each vegetation type. Include information on rare/threatened species and locally uncommon species. Note special features, expected changes and disturbance history of the site.

In a separate table indicate potential wildlife habitats/features, observed animal species and rare/threatened species and locally uncommon species. Evidence of animals can be included in this section. For example, Beaver (*Castor Canadensis*) could be listed if a beaver dam and evidence of freshly cut trees were observed. Contractors should note the type of evidence observe.

Species in this section should be noted using both their scientific and common names. Red and blue listed species as well as invasive species should be noted.

- 6.2. Indicate any risks to the covenant area. For example, is it likely that invasive species will spread or germinate in other locations in the covenant area? Are there any areas where flooding or erosion might change the characteristics of the vegetation type? Is there heavy browsing of young vegetation or other animal activity that might change the landscape? Are there any areas that are susceptible to human damage?

### 7.0 Accompanying photos and maps

Provide a list of attached appendices and maps. The following must be included as attachments:

#### Map of the Covenant Area

Attached to the baseline report is a detailed map of the covenant area. The map must be in black and white, as coloured documents are not accepted by the Land Titles Office. The map should detail the following:

1. Buildings, structures and other improvements to the land. For example: sheds, cottages, workshops, outhouses, wells, utility corridors, roads, trails, barns, etc.
2. Vegetation types as they are described in section 6.
3. Significant patches of invasive vegetation.
4. Photo stations: Any place that a photo has been taken.
5. Survey pins
6. Contour lines
7. Any important natural or geological features. For example: large rock outcrops, streams, bodies of water, cliffs, eagle nesting trees, etc.
8. If applicable, any areas where restoration is taking place.

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Each map should also have:

1. A north arrow
2. A scale bar
3. A scale (eg. 1:2,500)
4. A date
5. A title

### Photographic Documentation

Photographs are used to establish the general state of each vegetation type and to record any significant features of the covenant area. Four hard copies and one digital copy (with photos labelled in their file names) of photographs must be provided for the following:

1. Significant values: there should be photographs of natural, cultural and geological features that are being protected in the covenant area.
2. Vegetation types: each vegetation type should be documented by at least one photograph.
3. Structures: buildings, trails, roads, utility corridors, etc.
4. Significant patches of invasive species
5. Areas considered at risk. For example, a property line adjacent to a parking lot or an area where erosion is occurring.

The number of photographs taken will vary depending on the covenant area. Photographs are independent of the baseline report; they are not submitted to the Land Titles Office. They are contained in Appendix I and are filed with all parties (Trust Fund Board, landowner and co-covenant holder (if applicable)).

**All photographs taken for the baseline report, whether digital or on film must be labelled on the covenant area map in the report.** While digital cameras may be used, a full set of prints must be developed for each party Trust Fund Board (2 sets), landowner (1 set) and co-covenant holder (1 set, if applicable). Each photograph must have listed on the back:

1. Date/time
2. Location
3. Name of photographer
4. Reference letter: Reference letters should be sited in the text of the report and illustrated on a map.

Digital photographs, with their reference numbers as their file names, should also be submitted on a disk.

Photo stations should be established in areas that are easy to relocate. Each photograph should be accompanied by:

1. A label that corresponds to the "Covenant Area Map" label.
2. A description of the physical location (e.g. UTM Coordinates, or a description of the location based on a permanent survey marker or notable, permanent feature).
3. An azimuth direction indicating the direction in which the photo was taken (e.g. 180<sup>0</sup>).
4. A description of the feature documented (e.g. general photo of vegetation type 2 or Pumphouse)

# SAMPLE BASELINE REPORT

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Initialed by Landowner: \_\_\_\_\_

## SCHEDULE B

Attached to and forming part of the Covenant Agreement between the TRUST FUND BOARD, Covenant Holder, and the Owner, Jane Smith, dated as of the 29th day of August, 2012.

### BASELINE DOCUMENTATION REPORT

#### 1.0 Acknowledgment

- 1.1. The Owner and [insert name, address and phone number of environmental consultant] hereby acknowledge and agree that the following is an accurate description of the Covenant Area as of the reference date of this Agreement.

#### 2.0 Location and Description

- 2.1. The Covenant Area is located on the East side of Jade Island. From the B.C. Ferries terminal at Jade Island travel East on Sunset Point Road 0.6 km. Turn right on Whileye road and proceed 1.3 km to the gate of 1443 Whileye Road. The Covenant Area is located in the southeast corner of the property.
- 2.2. "Covenant Area" means that part of the parcel of land legally described as: Part of Section 77, Jade Island, Green District as shown on the Plan. "Plan" means the Reference Plan of Covenant, over Part of Section 77, Jade Island, Green District certified correct by Adam Brown, B.C.L.S.<sup>3</sup> and dated August 13, 2005, and deposited in the Victoria Land Title Office under VIP \_\_\_\_\_<sup>4</sup> a reduced copy of which forms Schedule A<sup>5</sup> to this Agreement.
- 2.3. The Covenant Area is 8.154 ha, including about 0.5 ha of open rock outcrop and 7.7 ha of closed canopy forest.

#### 3.0 Site History

- 3.1. Section 77 was crown granted as part of an 1888 survey to Gordon Smitt. From 1954 to 1955 there was a small sawmilling operation in the western portion of the Covenant Area. In 1961 it was subdivided into 15 lots, one of which is lot 1, the location of the Covenant Area. From 1975 – 1985 sheep were grazed on the land. The old sheep shed is still in the southeast section of the property.
- 3.2. The South and Southwest portions of the area were selectively logged in 1953 for old growth Douglas-fir. No tree cutting, clearing or road building has occurred since this time.

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<sup>3</sup> B.C.L.S. = British Columbia Land Surveyor

<sup>4</sup> This is left blank to be filled in when submitted to the Land Titles Office.

<sup>5</sup> Refers to the section of the covenant document that contains the B.C.L.S. survey. Covenants that cover an entire parcel, e.g. a Nature Reserve, will not have an attached survey plan. For these covenants, the Baseline Documentation Report will be Schedule A.

#### 4.0 List of buildings, structures and other improvements

Structures and other property improvements are shown in the Map of the Covenant Area.

- 4.1. There are no large buildings in the Covenant Area, although a house is located in the southwestern corner of the property outside the Covenant Area.
- 4.2. Structures found in the Covenant Area:
  - An old sheep shed in the southeast corner of the Covenant Area.
- 4.3. Other improvements in the Covenant Area:
  - A trail that has been used by the owner to access the rocky outcrop at the upper end of the property
  - A trail that has been used to access the old sheep shed which is no longer in use.

#### 5.0 Significance of the Land and Amenities

- 5.1. The Covenant Area includes Douglas-fir – Salal forest and herbaceous-terrestrial rock outcrop ecosystems on a steep, broad Northwest-Southeast trending sandstone slope. Rock outcrop ecosystems form only a small portion of the Coastal Douglas-fir zone in which the Covenant Area is located.
- 5.2. Species of flora and fauna and ecological communities found in the Covenant Area and designated as red or blue listed by the British Columbia Conservation Data Centre (BC CDC) are:

##### Red Listed

Edith's Checkerspot (*Euphydryas editha taylori*) (COSEWIC, Endangered)  
Sharp-tailed Snake (*Contia tenuis*) (COSEWIC, Endangered)  
Phantom orchid (*Cephalanthera austiniiae*) (COSEWIC, Threatened)  
Western redcedar / vanilla-leaf (*Thuja plicata* / *Achlys triphylla*) Ecological Community  
Douglas-fir / arbutus Ecological Community (*Pseudotsuga menziesii* / *Arbutus menziesii*)

##### Blue Listed

Red-legged Frog (*Rana aurora*)  
Great Blue Heron (*Ardea herodias fannini*)

#### 6.0 Inventory of Biological Features

An inventory of the biological features of the Covenant Area was conducted on September 4, 2011. Four vegetation types were identified (see attached map) as follows:

- 6.1. Vegetation type 1: Douglas-fir – Arbutus – Moss woodland (CDFmm/00 & CDFmm/02).

**Description:** Vegetation type 1 is dominated by a Douglas-fir – Arbutus ecological community (CDFmm02) interspersed with rock outcrops. Rock outcrop covers approximately 15% vegetation type. Slopes are gentle to moderate; soils are very shallow and coarse textured with a high component

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of rock fragments. This is an open canopy, mossy floored upper slope woodland made up primarily of Douglas-fir and Arbutus.

### FLORA

Main Canopy Species & percent cover  Age (estimated) Height DBH	Douglas-fir ( <i>Pseudotsuga menziesii</i> ) 30%, Arbutus ( <i>Arbutus menziesii</i> ) 15% <b>RED LISTED ECOLOGICAL COMMUNITY</b> Uneven-aged, 80-300+ yrs (upper age unknown) 30-40 m 50-150 cm
Secondary Canopy Species & percent cover Age (tree core of sample tree and estimated) Height DBH	Douglas-fir ( <i>Pseudotsuga menziesii</i> ), 5% 25-80 yrs 10-25 m 10-30 cm
Total Canopy Cover	30%
Understorey (species & percent cover) Shrubs, including trees <10 m Herbs, ferns, grasses, mosses, etc.	Dull Oregon-grape ( <i>Mahonia nervosa</i> ), 2% Hairy honeysuckle ( <i>Lonicera hispidula</i> ), 1% Dusky fork moss ( <i>Dicranum scoparium</i> ), 10% Reindeer lichen ( <i>Cladina</i> sp.), 5% Broad-leaved stonecrop ( <i>Sedum spathulifolium</i> ), 2% Brittle prickly-pear cactus ( <i>Opuntia fragilis</i> ), <1% Orchard-grass ( <i>Dactylis glomerata</i> ), 5% <b>INVASIVE</b>
Observed rare/threatened species & locally uncommon species	None observed
Special Features	Wildflowers in more open areas in the spring/early summer (observed by landowner)
Expected Changes	Douglas-fir is shade tolerant on this site, and thus will continue to dominate the stand
Disturbance History	Fire/wind throw, last fire +/- 120 yrs ago, fire scarred vets

### FAUNA

Wildlife Habitat / Features	<ul style="list-style-type: none"> <li>- large Douglas-fir snags may be suitable nesting/perching sites</li> <li>- South facing slopes with rocky ledges are habitat for snakes &amp; lizards.</li> <li>- Arbutus berries seasonal food for birds</li> </ul>
Observed Species	<b>BIRDS</b> American Robin ( <i>Turdus migratorius</i> ) Common Raven ( <i>Corvus corax</i> ) Black-capped Chickadee ( <i>Poecile atricapilla</i> ) Several unidentified songbirds



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	<p><b>MAMMALS</b>          Black-tailed Deer (<i>Odocoileus hemionus</i>) (deer scat)          Deer Mouse (<i>Peromyscus maniculatus</i>)</p>
Rare/threatened species & locally uncommon species	<p>Northern Alligator Lizard (<i>Elgaria coerulea</i>)          Evening Grosbeak (<i>Coccothraustes vespertinus</i>)          Northern Shrike (<i>Lanius excubitor</i>)</p>

**Vegetation type 2:** Douglas-fir – Arbutus – Symphoricarpos – rock outcrop. Open rock outcrop community with shallow, fine textured colluvial soils on ledges.

### FLORA

<p>Main Canopy          Species &amp; percent cover</p> <p>Age (estimated)</p> <p>Height          DBH</p>	<p>Douglas-fir (<i>Pseudotsuga menziesii</i>), 15%,          Arbutus (<i>Arbutus menziesii</i>) 5%</p> <p><b>RED LISTED ECOLOGICAL COMMUNITY</b></p> <p>Uneven-aged, 80-300+ yrs (upper age unknown)          30-40 m          50-150 cm</p>
<p>Secondary Canopy          Species &amp; percent cover          Age (estimated)          Height          DBH</p>	<p>Douglas-fir (<i>Pseudotsuga menziesii</i>), 5%          25-80 yrs          10-25 m          10-30 cm</p>
Total Canopy Cover	20%
<p>Understorey (species &amp; percent cover)          Shrubs, including trees &lt;10 m</p> <p>Herbs, ferns, mosses, etc.</p>	<p>Common snowberry (<i>Symphoricarpos albus</i>), 10%          Scotch broom (<i>Cytisus scoparius</i>), 20%,  <b>INVASIVE</b>          Seablush (<i>Plectritis congesta</i>), 5%</p>
Observed rare/threatened species & locally uncommon species	Phantom orchid ( <i>Cephalanthera austiniiae</i> ) <b>RED LISTED</b>
Special Features	Open park-like nature, potentially abundant wild flowers in the spring (observed by owner)
Expected Changes	Douglas-fir is shade tolerant on this site, and thus will continue to dominate the stand
Disturbance History	Fire/wind throw, last fire +/- 120 yrs ago, fire scarred vets, cleared in south portion for sawmilling site (note the Scotch broom)

### FAUNA

Wildlife Habitat / Features	<ul style="list-style-type: none"> <li>- large Douglas-fir snags may be suitable nesting/perching sites</li> <li>- South facing slopes with rocky ledges, habitat for snakes &amp; lizards, including red listed Sharp-tailed Snake</li> </ul>
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	- Arbutus berries seasonal food for birds
Observed Species (note invasives)	<p><b>BIRDS</b> American robin (<i>Turdus migratorius</i>) Common raven (<i>Corvus corax</i>)</p> <p><b>MAMMALS</b> Black-tailed deer (<i>Odocoileus hemionus</i>)</p>
Rare/threatened species & locally uncommon species	<p>Sharp-tailed snake (<i>Contia tenuis</i>) <b>RED LISTED</b> Northern alligator lizard (<i>Elgaria coerulea</i>)</p>

**Vegetation type 3: Douglas-fir-Salal forest** (CDFmm/01). This is the zonal forest of the Coastal Douglas-fir zone. Slopes are gentle; soils are moderately deep and coarse textured sandy loams and glacial deposit materials. Low sandstone ridge outcrops are common.

### FLORA

<p>Main Canopy Species &amp; percent cover</p> <p>Age (estimated) Height (estimated) DBH (estimated)</p>	<p>Douglas-fir (<i>Pseudotsuga menziesii</i>), 40% Western redcedar (<i>Thuja plicata</i>), 15%* Arbutus (<i>Arbutus menziesii</i>), 2% Uneven aged, 25-125 yrs 20-35 m 50-125 cm</p>
<p>Secondary Canopy Species &amp; percent cover</p> <p>Age (estimated) Height (estimated) DBH (estimated)</p>	<p>Douglas-fir (<i>Pseudotsuga menziesii</i>), 5% Western redcedar (<i>Thuja plicata</i>), 10%* 25-50 yrs 10-25 m 10-30 cm</p>
Total Canopy Cover	50%
<p>Understorey (species &amp; percent cover) – note invasives Shrubs, including trees &lt;10 m</p> <p>Herbs, ferns, mosses, etc.</p>	<p>Salal (<i>Gaultheria shallon</i>), 30% Himalayan blackberry (<i>Rubus discolor</i>), 5% <b>INVASIVE, Dying out</b> Dull Oregon-grape (<i>Mahonia nervosa</i>), &lt;1% Common snowberry (<i>Symphoricarpos albus</i>), 10% Oregon beaked moss (<i>Kindbergia oregana</i>), 20% Step moss (<i>Hylocomium splendens</i>), 20% Hairy honeysuckle (<i>Lonicera hispidula</i>), &lt;1% Small hair moss (<i>Oligotrichum aligerum</i>), 20% Peppered moon lichen (<i>Sticta fuliginosa</i>), 5% Sword fern (<i>Polystichum munitum</i>), 5% Vanilla-leaf (<i>Achlys triphylla</i>), 5% * Seablush, 5%</p>
Observed rare/threatened species & locally uncommon species	None observed.
Special Features	Richer site, trees are younger than vegetation

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	types 1 & 2, but almost the same size
Expected Changes	Douglas-fir expected to grow much larger.
Disturbance History	Wind throw, selective logging approximately 50 yrs ago for Douglas-fir

\*Western redcedar and Vanilla-leaf are a **RED LISTED ECOLOGICAL COMMUNITY**

### FAUNA

Wildlife Habitat / Features	<ul style="list-style-type: none"> <li>- large Douglas-fir snags may be suitable nesting/perching sites</li> <li>- Arbutus berries seasonal food for birds</li> <li>- Abundance of large woody debris may be suitable for newts, salamanders and frogs</li> </ul>
Observed Species	<p><b>BIRDS</b> Rufous Hummingbird (<i>Selasphorus rufus</i>)</p> <p><b>MAMMALS</b> None observed</p> <p><b>AMPHIBIANS</b> Pacific Chorus Frog (<i>Pseudacris regilla</i>)</p>
Rare/threatened species & locally uncommon species	None observed

**Vegetation type 4:** Douglas-fir – dull Oregon-grape – oceanspray forest (CDFmm/01). Closed canopy forest with a rich understorey of shrubs and forbs. Slopes are very steep on an escarpment and toe slope; soils are deep, fine textures colluvium with large colluvial boulders.

### FLORA

<p>Main Canopy</p> <p>Species &amp; percent cover</p> <p>Age (estimated)</p> <p>Height (estimated)</p> <p>DBH (estimated)</p>	<p>Douglas-fir (<i>Pseudotsuga menziesii</i>), 60%</p> <p>Western redcedar (<i>Thuja plicata</i>), 10%</p> <p>Arbutus (<i>Arbutus menziesii</i>), 3%</p> <p>Broadleaf maple (<i>Acer macrophyllum</i>), 3%</p> <p>Uneven aged, 25-125 yrs</p> <p>20-35 m</p> <p>40-125 cm</p>
<p>Secondary Canopy</p> <p>Species &amp; percent cover</p> <p>Age (estimated)</p> <p>Height (estimated)</p> <p>DBH (estimated)</p>	<p>Douglas-fir (<i>Pseudotsuga menziesii</i>), 5%</p> <p>Western redcedar (<i>Thuja plicata</i>), 10%</p> <p>Scouler's willow (<i>Salix scouleriana</i>), 3%</p> <p>25-50 yrs</p> <p>10-15 m</p> <p>10-30 cm</p>
Total Canopy Cover	60%
<p>Understorey (species &amp; percent cover) – note invasives</p> <p>Shrubs, including trees &lt;10 m</p>	<p>Western hemlock (<i>Tsuga heterophylla</i>), 5%</p> <p>Dull Oregon-grape (<i>Mahonia nervosa</i>), 10%</p> <p>Oceanspray (<i>Holodiscus discolor</i>), 10%</p> <p>Salal (<i>Gaultheria shallon</i>), 5%</p> <p>Falsebox (<i>Paxistima myrsinites</i>), 5%</p>

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Herbs, ferns, mosses, etc.	Baldhip rose ( <i>Rosa gymnocarpa</i> ), 2% Hairy honeysuckle ( <i>Lonicera hispidula</i> ), 5% Sword Fern ( <i>Polystichum munitum</i> ), 5% Bracken Fern ( <i>Pteridium aquilinum</i> ), <1% Stair Step Moss ( <i>Hylocomium splendens</i> ), 20% Lanky Moss ( <i>Rhytidiadelphus loreus</i> ), 5% Oregon beaked moss ( <i>Kindbergia oregana</i> ), 20%
Observed rare/threatened species & locally uncommon species	None observed.
Special Features	Richer more diverse site, trees are younger than vegetation types 1 & 2, but almost the same size
Expected Changes	Douglas-fir expected to grow much larger creating a more diversely layered canopy. Hemlock may increase in understory.
Disturbance History	Wind throw, selective logging approximately 50 yrs ago for Douglas-fir

### FAUNA

Wildlife Habitat / Features	<ul style="list-style-type: none"> <li>- large Douglas-fir snags may be suitable nesting/perching sites</li> <li>- Arbutus berries seasonal food for birds</li> <li>- Abundance of large woody debris may be suitable for newts, salamanders and frogs</li> </ul>
Observed Species (note invasives)	<p><b>BIRDS</b></p> <p>Pileated Woodpecker (<i>Dryocopus pileatus</i>) (feeding sites observed) Barred Owl (<i>Strix varia</i>) Downy Woodpecker (<i>Picoides pubescens</i>)</p> <p><b>MAMMALS</b></p> <p>River Otter (<i>Lontra canadensis</i>) (sign observed) Deer Mouse (<i>Peromyscus maniculatus</i>)</p> <p><b>AMPHIBIANS</b></p> <p>Red-legged Frog (<i>Rana aurora</i>)</p>
Rare/threatened species & locally uncommon species	None observed

#### 6.2. Potential Risks to the Covenant Area

Vegetation type 2 contains a large patch of Scotch broom (*Cytisus scoparius*) in the old sawmilling site. Scotch broom is a concern in this area due to the openness of the Douglas-fir / Arbutus woodland and the disturbed nature of this site. It threatens the ability of seedlings in this area to germinate, putting the Red listed Douglas-fir/Arbutus ecological community at risk in the long term. Removal of Scotch broom in this area may be required in the future to maintain this ecosystem.

Vegetation types 1 & 2 contain Orchard-grass (*Dactylis glomerata*). Currently it is less than 5% however, it is likely to spread over rocky outcrop areas anywhere that there is a small soil deposit. If it does this it could choke out native vegetation, for example Common Red Paintbrush (seen in the spring by the landowner), which may be a food source for the Red-listed Edith's Checkerspot

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Butterfly. The Orchard-grass should be monitored and if it begins to spread, removal may be necessary to prevent negative impacts on native vegetation.

Vegetation type 4 contains Himalayan blackberry (*Rubus discolor*). However, the blackberry is dieing out due to increased shading from Douglas-fir in the area. It is anticipated that the spread of the blackberry will not be a problem. However, future monitors of the site should keep an eye on the area to ensure that the blackberry remains under control.

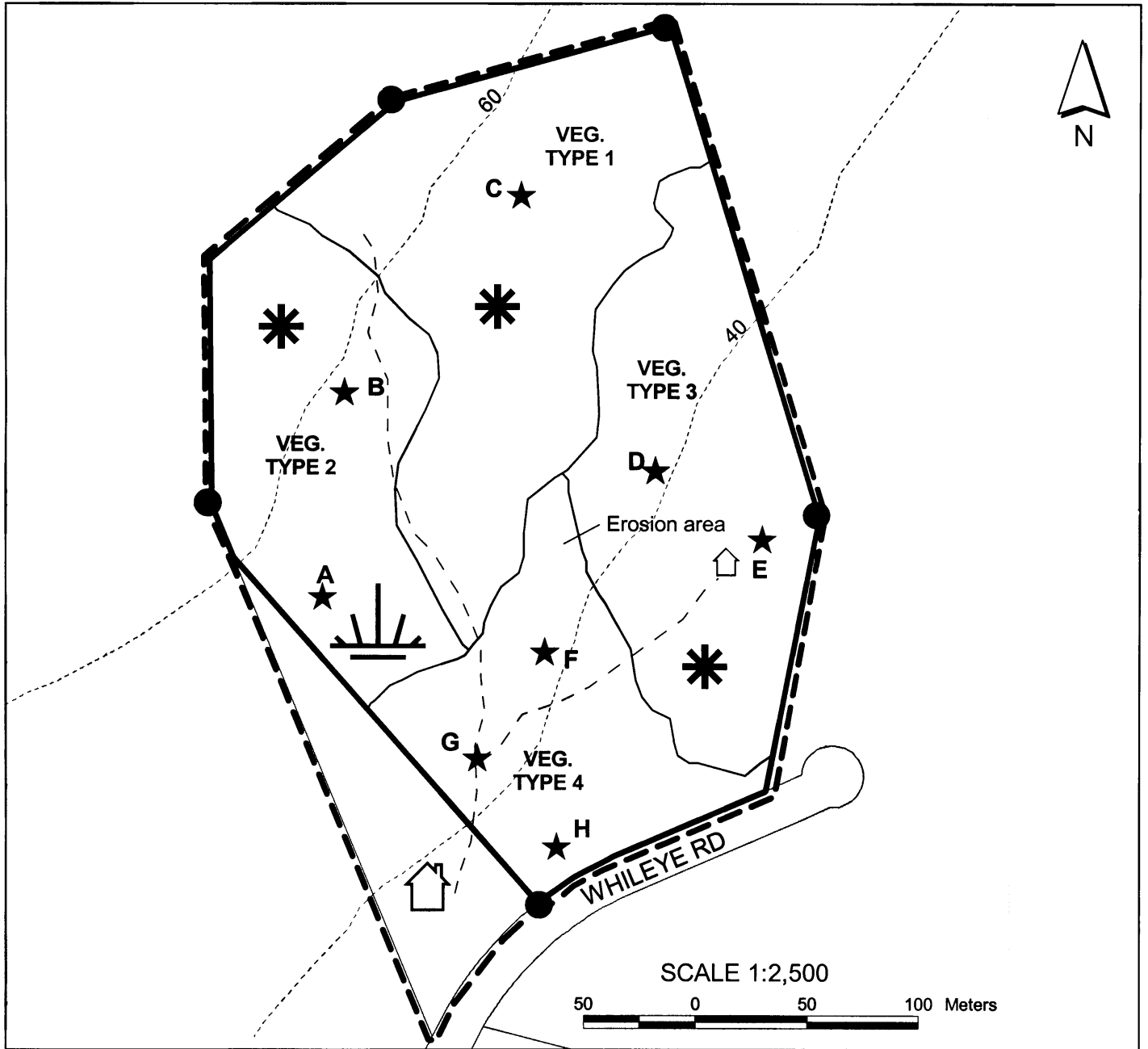
Trails in the Covenant Area lead to the old sheep shed and a rocky outcrop area. Access to the rocky outcrop area may impact some of the wildflower species in that area. Future monitoring should include human impacts on these areas.

Erosion is a potential risk in vegetation type 4 where slopes are very steep and there is already evidence of slumping. This is a natural process that may result in some changes in both vegetation types 2 & 4.

### 7.0 List of Figures and Attachments

Map of the Covenant Area: Lot 2, Section 77, Jade Island, Green District as of September 4, 2004.  
Appendix I. Photographs of significant features and vegetation types in the Covenant Area. (Filed with all parties (Trust Fund Board, Landowner and Co-covenant Holder if applicable))

Map of the Covenant Area: Lot 2, Section 77, Jade Island, Green District  
September 2, 2005



Legend

- |  |  |  |                               |  |                     |
|--|--|--|-------------------------------|--|---------------------|
|  | Contours (20 m. interval)              |  | Red/Blue listed species       |  | Located survey pins |
|  | Trail                                  |  | Invasive species (>20% cover) |  | Photo locations     |
|  | Property boundary                      |  | Sheep shed                    |  |                     |
|  | Heavy black line denotes covenant area |  | House                         |  |                     |

## Appendix I: Photographic Documentation<sup>6</sup>

PHOTO STATION	DIRECTION OF PHOTO	UTM EAST	UTM NORTH	DATE	COMMENTS
A	135°	475541	5482524	Sept 4, 2011	This is a large patch of <i>Cytisus scoparius</i> (Scotch broom). It should be monitored annually to ensure that it does not spread. This area may be a spot for invasive plant removal and introduction of native vegetation.
B	270°	475518	5482628	Sept 4, 2011	This is a typical snapshot of vegetation type 2. The shrubs in the foreground are <i>Symphoricarpos albus</i> (Common snowberry), trees are <i>Arbutus menziesii</i> (Arbutus) and <i>Pseudotsuga menziesii</i> (Douglas-fir)
C	270°	475371	5482286	Sept 4, 2011	This is a photo of the typical vegetation found in vegetation type 1. Arbutus and Douglas-fir are seen here with Dull Oregon-grape ( <i>Mahonia nervosa</i> ) and Dusky fork moss ( <i>Dicranum scoparium</i> ) in the understorey.
D	315°	475514	5482257	Sept 4, 2011	This is a typical photo of vegetation type 3. The trees in the photo are Douglas-fir and Western redcedar ( <i>Thuja plicata</i> ). The understorey is primarily Salal ( <i>Gaultheria shallon</i> ).
E	225°	475389	5482268	Sept 4, 2011	This is the NE side of the sheep shed.
F	0°	475502	5482243	Sept 4, 2011	This is the southern or downhill end of an erosion area. It should be monitored for further slumping.
G	45°	475546	5482282	Sept 4, 2011	This is the trail from the trail junction to the sheep shed. It is typical of the trails on the property.
H	0°	475425	5482287	Sept 4, 2011	This is a typical photo of vegetation type 4. The evergreen trees shown are Douglas-fir and Western redcedar. The large deciduous tree on the left is a Broadleaf maple ( <i>Acer macrophyllum</i> ) and the skinny deciduous tree on the right is a willow ( <i>Salix scouleriana</i> ). In the understorey there is Dull Oregon-grape and Oceanspray ( <i>holodiscus discolor</i> ).

<sup>6</sup> Photos attached in duplicate and are kept by the parties. They are not sent to the Land Titles Office with the rest of the Baseline Report.