

WOODLOT LICENCE # 1898

WOODLOT LICENCE PLAN

2023 to 2033

Buttle Lake Resources
1355 Evergreen Road
Campbell River, B.C.
V9W 3S2
E-mail: blr@uniserve.com
Phone: 250 286 4699 Fax: 250 286 4698

Authorized Licensee Signature:

Nigel Ross RPF

Print Name



Signature

November 12, 2023

Date

DISCLAIMER

This disclaimer forms part of the Woodlot Licence Plan (WLP) for Woodlot Licence # 1898 and advises that:

- The decision to operate under one or more of the Practice Requirements provided in the Woodlot Licence Planning and Practices Regulation (WLPPR) is the sole responsibility of the woodlot licence holder.
- This disclaimer is signed on the explicit understanding that abiding by the Practice Requirements stated in Parts 3 and 4 of the WLPPR meets the expectations of government with respect to the management of woodlot licences;
- The undersigned Registered Professional Forester has been retained with respect to the practice of professional forestry as it pertains to alternative performance requirements, results, strategies, standards and measures presented in this WLP.

Signed: _____



Name: Nigel Ross RPF

RPF # 2304

Contact phone number: 250-202-1881 Email: blr@uniserve.com



Seal:

TABLE OF CONTENTS

I. WOODLOT LICENCE PLAN (WLP) REQUIRED CONTENT	5
PLAN AREA	5
MAP AND INFORMATION	5
Biogeoclimatic zones and subzones.....	5
Resource Management Zones, Landscape Units or Sensitive Areas	6
Wildlife Habitat Areas	6
Scenic Areas	6
Ungulate Winter Ranges.....	6
Community Watersheds.....	6
Fisheries Sensitive Watersheds.....	6
Community and Domestic Water Supply Intakes that are Licensed Under the <i>Water Sustainability Act</i> and any Related Water Supply Infrastructures.....	6
Contiguous Areas of Sensitive Soils.....	7
Temporary or Permanent Barricades that Restrict Vehicle Access.....	7
Private Property Within or Adjacent to the WLP Area.....	7
Resource Features other than Wildlife Habitat Features and Other Features where the Location Must Not Be Disclosed	7
Areas Where Timber Harvesting will be Avoided or Modified.....	8
CONSERVING AND PROTECTING CULTURAL HERITAGE RESOURCES	13
WILDLIFE TREE RETENTION STRATEGY	14
Dispersed Retention/ Patch Retention.....	16
MEASURES TO PREVENT THE INTRODUCTION OR SPREAD OF INVASIVE PLANTS	17
MEASURES REGARDING NATURAL RANGE BARRIERS	18
STOCKING INFORMATION FOR SPECIFIED AREAS	18
PRACTICE REQUIREMENTS	18
Exemptions	18
Alternative Performance Requirements	18
II. APPENDICES	21
Appendix 1A: Stocking Standards for Specified Areas.....	21
Appendix 1B: Stocking Standards For Clearcut Silvicultural Systems.....	22
Appendix 2: The Woodlot Licence Plan Maps.....	23
Appendix 3: Geotechnical Report Schedule A Lands.....	24
Appendix 5: Review and Comment.....	
a) Advertising	
b) Referrals	
c) Copy of Written Comments Received.....	
d) Revisions Made Because of Written Comments Received.....	
e) Efforts Made to Meet with First Nations	
III. SUPPLEMENTAL INFORMATION	NA

EXEMPTIONS.....NA
RATIONALE IN SUPPORT OF PROPOSED ALTERNATIVE PERFORMANCE REQUIREMENTS.....NA

I. WOODLOT LICENCE PLAN (WLP) REQUIRED CONTENT

PLAN AREA

This plan covers the entire Woodlot Licence area.

MAP AND INFORMATION

Information Item	Map	Text	N/A
Forest cover	X		
Topography (unless exempted by DM)	X		
Location and riparian class of streams, wetlands and lakes as shown on gov't endorsed forest cover maps, terrain resource inventory maps, & fish & fish habitat inventory maps	X		
Identification of fish streams on gov't endorsed maps	X		
Biogeoclimatic zones and subzones (unless exempted by DM)		X	
Public utilities (transmission lines, gas & oil pipelines, and railways)	X		
Special Situations that may not Apply to the WL area			X
Resource Management Zones, Landscape Units or Sensitive Areas	X		
Wildlife Habitat Areas (unless exempted by DM)			X
Scenic Areas	X		
Ungulate Winter Ranges			X
Community Watersheds			X
Fisheries Sensitive Watersheds			X
Community and domestic water supply intakes that are licensed under the <i>Water Act</i> and any related water supply infrastructures	X		
Contiguous areas of sensitive soils	X		
Existing roads	X		
Temporary or permanent barricades to restrict vehicle access	X		
Private property within or adjacent to the woodlot licence area	X		
Resource features other than wildlife habitat features and archaeological sites (unless the location of the resource feature is not to be disclosed)	X		

BIOGEOCLIMATIC ZONES AND SUBZONES

The entire woodlot licence area is in the CWH xm2 biogeoclimatic subzone.

RESOURCE MANAGEMENT ZONES, LANDSCAPE UNITS OR SENSITIVE AREAS

The

- entire woodlot licence area
- portion of the woodlot licence area
- Crown land portion of the woodlot licence area

is within the Special Management Zone #19 (SMZ#19) of the Vancouver Island Land Use Plan (VILUP), a higher level plan. The Order Establishing Resource Management Zone Objectives within the Area covered by the VILUP, including SMZ 19, was signed in October 2000

This WLP is consistent with the following objectives set by government:

WILDLIFE HABITAT AREAS

There are no WHAs located in whole or in part within the WLP area.

An exemption has been granted: Yes No

SCENIC AREAS¹

There is one or more scenic areas located in whole or in part within the WLP area. It/they are identified on the map in Appendix 2.

UNGULATE WINTER RANGES

There are no Ungulate Winter Ranges located in whole or in part within the WLP area.

COMMUNITY WATERSHEDS

There are no Community Watersheds located in whole or in part within the WLP area.

FISHERIES SENSITIVE WATERSHEDS

There are no Fisheries Sensitive Watersheds located in whole or in part within the WLP area.

COMMUNITY AND DOMESTIC WATER SUPPLY INTAKES THAT ARE LICENSED UNDER THE WATER SUSTAINABILITY ACT AND ANY RELATED WATER SUPPLY INFRASTRUCTURES

There are community or domestic water supply intakes and related water supply infrastructure within the WLP area or nearby (i.e. within 100m) that could be affected by operations carried out under this plan. The locations are identified on the map in Appendix 2, and are further described as follows:

On the Schedule A lands there are numerous licenced water intakes located on Baikie (Cedar) Creek. There are ten water licences, and 35 users (pers. Comm. With Ian Baikie (representative for Cedar Creek Community), March 2023). An application is currently in process, under the

¹ The specified % alterations and definitions in this document are not current. Refer to the Forest Planning and Practices Regulation section 1.1 for definitions.

Water Sustainability Regulation, to create the Camp Lake Water Committee which will make all 35 users members of the committee. A new water treatment center is planned and has been given the verbal go ahead by the Woodlot owners. The water pipeline will be upgraded in the near future from the highway to the treatment center.

Cedar Creek is S3 so it will have a 20 m reserve (no harvest) and a 20 m management zone. The 20 m no harvest zone will protect the water intake infrastructure.

At one water intake there is a dam and related infrastructure. From the dam there is a pipeline that travels west on Pipeline Road and it leads to a water turbine used to create electricity. The electricity generated is fed in to a power line that heads east on Pipeline Road and then south on Cedar Creek Mainline. Reviewing MAPVIEW it does not appear that this pipeline and powerline have a tenure associated with them.

Any forest based activities to be conducted will ensure that no damage occurs to the pipeline or hydro power line. Prior to any work being conducted on Pipeline Road, Strathcona Park Lodge will be contacted to ensure the location of the pipeline.

CONTIGUOUS AREAS OF SENSITIVE SOILS

- The location(s) of contiguous areas of sensitive soils are identified on the Schedule A map in Appendix 2, and in the Geotechnical Report in Appendix 2.

TEMPORARY OR PERMANENT BARRICADES THAT RESTRICT VEHICLE ACCESS

- Temporary or permanent barriers to restrict vehicle access are identified on the map in Appendix 2.
There are some locked gates as shown on the map.

PRIVATE PROPERTY WITHIN OR ADJACENT TO THE WLP AREA

- There are a number of places within the Schedule A and B lands where private property or a park are adjacent to the Woodlot Licence area. See the WLP map in Appendix 2 for the location of these parcels of land.

RESOURCE FEATURES OTHER THAN WILDLIFE HABITAT FEATURES AND OTHER FEATURES WHERE THE LOCATION MUST NOT BE DISCLOSED

At the time of preparing this woodlot licence plan, there were no resource features within the WLP that were established under

- the Government Actions Regulation.
- Forest *Practices Code of BC Act* regulation and made known by the district manager.

AREAS WHERE TIMBER HARVESTING WILL BE AVOIDED OR MODIFIED

Areas where timber harvesting will be AVOIDED:

- Timber harvesting will be avoided on the following areas:
- Recreation reserve along the west side of Village Bay Lake
 - Fish and Wildlife Reserve around Moses Meadow, extending over to Andrews Meadow and going down both sides of Bassett Creek to Village Bay
 - Areas of significant Karst features. Harvesting will be avoided in the area of any significant Karst features found within the Woodlot. To date, none have been identified. See Appendix 2 Karst report.

Areas where timber harvesting will be MODIFIED:

- The following areas will be subject to modified timber harvesting as described below.

Modified harvesting where practice requirements in the WLPPR apply

1. Harvesting will be modified to protect specific resource features, if found (bear dens, raptor nest trees),
2. Harvesting will be modified in the scenic areas established within the Woodlot Licence area,
3. Harvesting will be modified adjacent to licenced water intakes,
4. Harvesting may be modified within riparian management zones; up to 100% of basal area may be removed.
5. Harvesting may be modified adjacent to private land or areas of aboriginal interest,
6. Harvesting will be modified adjacent to reserved areas (Fish and Wildlife Reserves, Recreation Reserves) and Main Lake Chain Provincial Park,
7. Harvesting will be modified on the areas identified as having sensitive soils, including areas identified by a Geotech on Schedule A lands, where helicopter harvesting has been recommended in some areas.

Modified harvesting where practice requirements do not apply in the WLPPR

Specific Resource Features

Bear Dens/Raptor Nest Trees

Certain resource features will require harvesting practices to be modified. The type of feature referred to could include bear dens or raptor nesting trees. Harvesting will be modified in a manner to prevent the feature from being rendered ineffective. This will include ensuring the feature is windfirm (in the case of a nesting tree). Windfirming may be accomplished by harvest

block configuration, buffering the feature with leave trees or by crown sailing. Other types of harvesting modification could include buffering the feature to provide for thermal or visual cover.

Scenic Area

Some areas of Woodlot Licence W1898 are classified as having scenic values that are meant to protect the views from the adjacent areas (Village Bay Lake, Village Bay (ocean), and Valdez Road. A Government Action Regulation (GAR) was passed on December 14, 2005 specifying the Visual Quality Objectives for the areas covered under this WLP. Visual Quality Objectives are divided into five categories. These divisions and their corresponding definitions are:

VQO	Definition
Preservation	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is <ul style="list-style-type: none"> (i) very small in scale, and (ii) not easily distinguishable from the pre-harvest landscape
Retention	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is <ul style="list-style-type: none"> (i) difficult to see, (ii) small in scale, and (iii) natural in appearance
Partial Retention	Consisting of an altered forest landscape in which the alteration, when assessed from a significant viewpoint, is <ul style="list-style-type: none"> (i) easy to see, (ii) small to medium in scale, and (iii) natural and not rectilinear or geometric in shape
Modification	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is <ul style="list-style-type: none"> (i) is very easy to see, and (ii) is <ul style="list-style-type: none"> (A) large in scale and natural in its appearance, or (B) small to medium in scale but with some angular characteristics
Maximum Modification	Consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is <ul style="list-style-type: none"> (i) is very easy to see, and (ii) is <ul style="list-style-type: none"> (A) very large in scale, (B) rectilinear and geometric in shape, or (C) both

Modification of harvesting in scenic areas

In 2005 the Ministry of Forests went through the process of establishing Visual Quality Objectives (VQO) for Quadra Island. With the establishment of these VQOs (see map #1) the type and pattern of harvesting will have to be modified in certain areas within the Woodlot Licence.

Within the Woodlot Licence there are two types of scenic areas. The first type are visual corridors along identified roads and the second type are panoramic views. For the panoramic scenic areas the current system of Visual Landscape Management (VLM) works well. Individual units and the pattern of harvesting will be modified in order to ensure that the established VQOs are met.

For the visual corridor scenic areas the licensee will undertake the following strategies to meet the desired visual quality objective:

- Identify the various roads within the Woodlot Licence that are Visual Corridors.
- Work in association with adjacent woodlot licensees in order to coordinate all harvesting within the the Visual Corridors. Each licensee may have their own strategy for meeting the Visual Quality Objectives but it is important that the actions of all licensees meet the desired results (ie the stated VQO).
- A number of logging techniques may be used:
 - A forested buffer of 5 to 15 m wide may be left along the road to screen logging that may occur in the background.
 - The retention or partial retention polygon along the roads may be thinned
 - A vegetative screen (underbrush) may be left along the Village Bay or Valdez Road to screen harvesting activities
 - Small irregular patch cuts with leave trees may occur with the roadside visual polygons.
- One or more of these techniques may be used in any given harvesting unit in order to achieve the visual quality objectives.

Modification of harvesting adjacent to licenced water intakes

On the Schedule B lands there are no licenced water intakes within or directly adjacent to Woodlot Licence W1898. There are a number of licenced water intakes on the east side of Village Bay Lake but there are none on the west side of the lake. Woodlot Licence W1898 is only located on the west side of the lake. Many cabins on Village Bay Lake probably get water from the lake.

On the Schedule A lands there are numerous licenced water intakes located on Baikie (Cedar) Creek. On MAPVIEW it shows two different locations for the water intakes and multiple licences held at each of the intakes. The uses are power and domestic water. It is believed Strathcona Park Lodge holds the power licence. On the Schedule A lands there are numerous licenced water intakes located on Baikie (Cedar) Creek. There are ten water licences, and 35 users (pers. Comm. With Ian Baikie (representative for Cedar Creek Community) March 2023). An application is currently in process, under the Water Sustainability Regulation, to create the

Camp Lake Water Committee, and all 35 users will be members of the committee. A new water treatment center is planned, and the water pipeline will be upgraded from the highway to the treatment center. Cedar Creek is a S3 so there will be a 20 m reserve and a 20 m management zone on this waterbody. The 20 m no harvest zone will protect the water intake infrastructure. At the one water intake there is a dam and related infrastructure. From the dam there is a pipeline that travels west on Pipeline Road and it leads to a water turbine used to create electricity. The electricity that is generated is then fed into a power line that heads east on Pipeline Road and then south on Cedar Creek Mainline. Reviewing MAPVIEW it does not appear that this pipeline and powerline have a tenure associated with them.

Any forest based activities to be conducted with ensure that no damage occurs to the pipeline or hydro power line. Prior to any work be conducted on Pipeline Road, Strathcona Park Lodge will be contacted to ensure the location of the pipeline.

RETENTION OF TREES IN A RIPARIAN MANAGEMENT ZONE

Unless exempted or as provided for under WLPPR section 40, the woodlot licence holder will retain the following post-harvest stand structure in riparian management zones:

Description of Post-Harvest Stand Structure to be Retained in Riparian Management Zones				
A mix of deciduous and coniferous trees will be left. Age class structure of the retained trees will vary depending on original stand. It will be sought to leave a component from each age class found within the stand being harvested. Up to 100% of basal area may be removed. S5 and S6 creeks may have their riparian management zones clearcut.				
Trees to be Retained	Species: Dr, Mb, Fd, Hw, Cw, Bg, Ss			
	Characteristics: Windfirm, free of Root rot disease			
Range of Residual Basal Area: (m ² /ha)		OR	Range of Residual Trees/ha:	0-50%

Modification of harvesting for adjacent private property

Land Status	Boundary	Adjacent Property Classification	Modification of Harvesting within W1898
Sched A	South	Industrial forest land	Maintain windfirm edge.
Sched A	East	Industrial forest land	Maintain windfirm edge.
Sched A	North	Industrial forest land/ recreational	Maintain windfirm edge.

Sched A	West	Recreational/ highway corridor	Harvesting may occur within 10 years. Clearcuts fronting on Gold River Highway will be less than 2.0 hectares.
Sched B	South East, Lot 34	Residential	Resident lives in the northern portion of property. Maintain windfirm edge.
Sched B	North East	Recreational cabins	Woodlot borders private land in this area. There is one small private cabin lot adjacent to the Woodlot. Other cabin lots have a crown land buffer between them and the Woodlot. Maintain windfirm edge along Woodlot boundary and crown land cabin buffer.

Modification of harvesting adjacent to the Fish and Wildlife/ Recreation Reserve and Main Lake Chain Provincial Park

Harvesting will be modified adjacent to the Fish and Wildlife Reserve, the Recreation Reserve and the Main Lake Chain Provincial Park. In many cases there are existing constraints on the Woodlot Licence where it comes into contact to the reserve or the park (visuals, sensitive soils). The reserves or the park are meant to protect certain resource values. In some cases, harvesting within the Woodlot Licence may need to be modified in order to protect the integrity of the values that the reserves or the park are trying to protect.

Harvesting will be modified adjacent to Fish and Wildlife/ Recreation Reserve and Main Lake Chain Provincial Park by one or more of the following methods:

- leaving a higher number of wildlife trees per ha,
- creating smaller openings,
- orientation of harvest areas in order to reduce the potential for blowdown in reserve/park,
- crown modification in order to lessen the chance of blow down,
- designing harvest units to lessen the visual impact,
- non clearcut harvest methods.

These methods may be used when blocks are directly adjacent to one of the areas being sought to protect.

Modification of harvesting to protect resource values

Sensitive Soils: Sensitive soils have been identified on the Schedule A lands. The sensitive soils on the Schedule A Lands have been assessed by a geological engineer and harvesting conditions are listed within his report. At this time there are no known sensitive slopes within the Schedule B Lands. If an area with sensitive soils is encountered then a geological engineer will assess these sites and recommend harvesting practices.

CONSERVING AND PROTECTING CULTURAL HERITAGE RESOURCES (CHR)

The result or strategy applicable to the WLP area is as follows:



Result:

Should a CHR be made known the woodlot licence holder will, after due consideration of the factors listed in WLPPR, Schedule 1, Section 5, only carry out forest practices at a time and in a manner that will conserve and protect cultural heritage resources that are the focus of a traditional use by an aboriginal people that is of continuing importance to that people.

Woodlot Licence W1898 is within the traditional territory of the following First Nations: Wei Wai Kai, Wei Wai Kum, K'omoks, Klahoose, Tla'amin, and Homalco. The Nanwakolas Tribal Council coordinates all the referrals for the above listed First Nations, except the Homalco, Klahoose, and Tla'amin. This Woodlot Licence Plan has been sent to Art Wilson (Nanwakolas), and Chief Darren Blaney (Homalco). Furthermore, all First Nations were invited to provide information regarding their traditional uses of the Woodlot area. The appropriate groups will be contacted immediately if any previously unknown cultural heritage resources are discovered during operations. Cultural heritage resources on W1898 will be managed by the following results and strategies.

Cultural heritage resources will be protected and conserved, as per WLPPR, section 9(1)(d). Cultural heritage resources are defined as an object, a site, or a location that is the focus of a traditional use by an aboriginal people that is of continuing importance to that people, and not regulated under the Heritage Conservation Act. Archaeological resources or sites are protected by the Heritage Conservation Act, and are not cultural heritage resources.



Strategy:

The following strategy is proposed to conserve and protect cultural heritage resources that are the focus of a traditional use by an aboriginal people and of continuing importance to them. This strategy applies to cultural heritage resources that are not protected under the *Heritage Conservation Act*. The woodlot licence holder is committed to carrying out forest practices at a time and in a manner that is unlikely to damage or harmfully alter cultural heritage resources.

1. The WLP will be provided by the licensee to all relevant First Nations for their review. An information request from First Nations regarding traditional uses will be done by the licensee.
2. Any CHR identified by the licensee during operations will be shared with First Nations.
3. If First Nations identify any CHR, all operations in close proximity to it will stop immediately. First Nations will then be contacted so that a strategy can be developed to protect the CHR.

4. During road and cutblock layout, the licensee will identify the area occupied by the CHR, the characteristics of the CHR, if the CHR is to be protected or conserved, and what measures will be used in forest practices in the area if the CHR is to be conserved.
5. For each CHR identified by First Nations for protection, the licensee will execute or authorize a forest practice only to the extent that the forest practice does not damage or render ineffective the CHR.
6. For each CHR to be conserved, identified by First Nations, the licensee will execute or authorize a forest practice only to the extent that the forest practice is consistent with the constraints, if any, specified in the road or cutblock design.
7. If any First Nation comments are received after the WLP is approved, the licensee will respond to them. Additionally, First Nations will be engaged if they have any asserted interests.
8. A District Cedar Strategy currently does not exist, but the licensee is committed to being involved if one does develop in the District.
9. The licensee is committed to reforestation with Red cedar, where ecologically suitable, to provide for recruitment of Red cedar. Furthermore, Red cedar is being conserved in Reserve areas.

The WLP will be referred to all First Nations. The licensee will maintain a good working relationship and have two way communications. All factors in WLPPR sec.5, Schedule 1 have been considered in developing this CHR strategy.

WILDLIFE TREE RETENTION STRATEGY

The proportion of the woodlot licence area occupied for wildlife tree retention purposes is defined in the Performance Requirements section of this WLP.

The proportion of the woodlot licence area occupied by wildlife trees will be achieved through:

- Dispersed retention (Individual wildlife trees or small clumps of trees within a cutblock area)
- Patch retention (intact areas of forest)
- Areas where harvesting will be avoided

Trees that pose a safety hazard or are damaged by insects or disease and pose a forest health risk to adjacent trees or forests may not be retained either as an individual wildlife tree, in a patch or in an area where harvesting will be avoided or modified.

Woodlot Licence W1898 has a significant amount of land within reserves. These reserves will form the basis of the Woodlot's wildlife tree strategy. The Schedule A and B lands have a total of 153.1 hectares or 31.5% of the land base set aside as reserves, as per Table 2 in the 2020 AAC Calculation Report. It is expected this level of wildlife tree retention may increase as additional constrained areas are encountered (fish streams, sensitive soils, other resource features).

The bulk of the Wildlife tree retention areas are made up of the Moses Meadow Fish and Wildlife Reserve, the Village Bay Lake Recreation Reserve and the Cedar (Baikie) Creek reserve. See the WLP maps in Appendix 2 for the locations of the wildlife tree retention areas.

Summary of Wildlife Tree Retention Area Forest Cover Attributes

Wildlife Tree Retention Area	Forest Cover Attributes
Andrews Meadow	Three stand types 1. Very decadent Red alder stands with large second growth Sitka spruce (Ss) . High number of large Alder snags. Scattered Ss and Hemlock (Hw) understorey that will develop into long term large diameter wildlife trees. 2. 90 to 110 year old mixed conifer stands (Fd, Hw, Ss some Mb). Older second growth, some good large conifer wildlife trees. 3. 90 to 110 year old Fd. Minor amount of Dr. Some Alder and Fd snags.
Moses Meadow	This area dominated by older second growth, mainly Fd, 90 to 100 years old. Some larger diameter conifer snags developing. Minor amount of Dr along Moses Meadow.
Village Bay Lake Recreation Reserve	This area dominated by older second growth, mainly Fd, 90 to 100 years old. Some larger diameter conifer snags developing. Minor amount of Dr along Village Bay Lake. Scattered old growth Fd veterans and snags
Scattered riparian reserves	Mixed forest of Fd and Dr. High levels of large (30 to 60 cm DBH) Dr snags. Some conifer snags.
Cedar Creek	Even aged 30 to 40 year old mixed stand of Fd, Hw, Dr and Mb. This WTP is not yet producing larger diameter trees for wildlife.

Wildlife tree retention areas

Conditions Under Which Trees May Be Removed from Wildlife Tree Retention Areas:

Wildlife trees patches and/or individual wildlife trees in WTR areas may be removed if they are:

- A safety hazard;
- Infested with insects or pathogens which threaten the health of adjacent trees; and/or
- Wind thrown or damaged to the extent that the identified wildlife objectives cannot be met.
- If they become an obstacle or impediment to access or operations. If providing access to adjacent stands the number of high quality wildlife trees removed will be kept to a minimum.

Replacement of Trees Removed from Wildlife Tree Retention Areas:

The woodlot owner will ensure that the proportion of the woodlot licence area occupied for wildlife tree retention that is defined in the Performance Requirements section of this WLP will

be maintained over time. Replacement of WTR areas will be designated prior to harvest of the original patches and will be recorded in the Site Plan, RESULTS or other supporting documents. The woodlot owner will replace the portion of the WTR area from which the timber is being harvested with one or more WTR areas that provide an equivalent area, number of trees or habitat.

The most likely reason that some trees may be required to be removed from a wildlife tree retention area is they have become too dangerous to work around. If this is the case then the dangerous wildlife tree will be removed and will be replaced with an adjacent tree(s).

DISPERSED RETENTION

Applicable (dispersed retention of individual wildlife trees **will** be used)

In addition to the areas permanently set aside as wildlife tree areas, individual wildlife trees will also be identified and set aside throughout the rest of the Woodlot Licence. These individual wildlife trees will have attributes as listed below. The density of these individual wildlife trees will vary. Factors affecting the density of individual wildlife trees can include: stand type, age, location within Woodlot Licence, silvicultural system being employed, forest health and other management objectives.

(a) Species and Characteristics:

Species: Conifers - Fd, Cw, Hw, Bg, Pl, Ss

Deciduous - Dr, Mb V, Tw, W (V – Cherry, Tw – Yew, W – Willow)

All old growth coniferous and deciduous species found within the license area will be eligible for retention as wildlife trees.

Characteristics:

To the extent practicable, trees that exhibit one or more of the following attributes will be retained.

- internal decay, heart rot or cavities;
- crevices, cracks or loose bark that is suitable for wildlife;
- large brooms;
- active or recent wildlife use;
- suitable for wildlife use including a large nest, a hunting perch or a bear den;
- a veteran tree; i.e. one of the largest trees on site as determined by height or diameter;
- important as habitat for species at risk and/or local wildlife
- All age classes, coarse branching, broken tops, poor form, windfirm, safety of working around

(b) Conditions Under Which Individual Wildlife Trees May Be Removed:

Individual wildlife trees may, subject to the proper authorization being in place, be removed if they are:

- a safety hazard;

- a fire hazard,
- diseased or infested with insects which threaten the health of adjacent trees, or
- obstructing access or operations.

(c) Replacement of Individual Wildlife Trees:

An individual wildlife tree that is removed will be replaced with another tree with acceptable attributes as described in section (a) “Species and Characteristics”.

Replacement will occur within 12 months after the removal and will be recorded and tracked within the Site Plan or a suitable wildlife tree tracking summary.

MEASURES TO PREVENT THE INTRODUCTION OR SPREAD OF INVASIVE PLANTS

The following measures will be implemented to reduce the introduction and spread of invasive plants that may result from the woodlot licence holders’ forest practices:

- Minimize soil disturbance
- As soon as practicable or within one year following the completion of operations, all newly constructed roads, landings, pits, and quarries that are greater than 0.25 hectares, and have exposed mineral soil that will support vegetation will be seeded at an industry acceptable rate using Canada Common #1 Forage Mixture as defined by the Seed Act.
- Minimize the transport of invasive plant seed by removing burrs from clothing, pets, and equipment, and by checking the undercarriage of vehicles and removing invasive plants before leaving an infested area
- Learn to identify invasive plants and recognize early stages of invasive plant development. This includes educating contractors to identify priority invasive plants that exist or threaten to establish within the plan area
- Report new infestations of priority invasive plant species
- Establish well stocked stands of trees that will eventually suppress invasive plants
- Annually monitor invasive plants and keep a record of where they are established. Currently Himalayan blackberry exist on the woodlot but there is potential for new species to arrive, such as Giant hogweed or Scotch Broom.
- Carry out control measures, before invasive plants reproduce, on road edges and other areas where the primary forest activities of the woodlot licence holder have created favourable seedbed for the spread of invasive plants. Control measures include pulling out Scotch Broom and Himalayan Blackberry so that the roots are exposed, preventing further proliferation.
- Where applicable, clean sand, gravel, and rock quarries of invasive plants before transporting material to the Woodlot area
- To the extent possible, not park or stage equipment or vehicles, or sort logs on large concentrations or infestations of invasive plants;

- To the extent practicable, begin work in un-infested areas before moving to infested areas.

MEASURES REGARDING NATURAL RANGE BARRIERS

Exempted

Not applicable. There are no range areas in the Woodlot Licence.

STOCKING INFORMATION FOR SPECIFIED AREAS

The stocking standards indicated below apply to areas where the establishment of a free growing stand is not required and harvesting is limited to commercial thinning, removal of individual trees, or a similar type of intermediate cutting, and for harvesting special forest products; i.e. for the purposes of WLPPR sections 12 & 34(3).

The Uneven-aged Stocking standards for single-tree selection as found in the ministry publication “Reference Guide for FDP Stocking Standards” are adopted. A copy of these stocking standards are included in Appendix 1A.

PRACTICE REQUIREMENTS

EXEMPTIONS

None.

ALTERNATIVE PERFORMANCE REQUIREMENTS

Soil Disturbance Limits

Default: WLPPR section 24(1)(b)
8% of net area to be reforested.

Permanent Access Structures

Default: WLPPR section 25
The maximum area occupied by permanent access structures is:

- For Cutblocks ≥ 5 ha: 7% of the total cutblock area.
- For Cutblocks < 5 ha: 10% of the total cutblock area.
- For the WL Area: 7% of the total Woodlot Licence area.

Stocking Standards

The stocking standards for the purposes of section 12 and 34(3) of the Woodlot Licence Planning and Practices Regulation are found in Appendix 1A. These stocking standards apply to all thinning operations that may occur within W1898. For even aged management stocking standards see Appendix 1B.

Alternative: WLPPR s. 35(1)(a): The stocking standards, regeneration dates and free growing dates are indicated in Appendix 1B. These standards are very similar to those found in the MoF publication “Reference Guide for Forest Development Plan Stocking Standards” except for two situations. The first variation is that they allow for the greater use of Cw and Pw in Root rot areas. The second variation is to allow a greater use of Hw and Cw in areas within plantations that have high levels of shading.

Width of Stream Riparian Areas

Default: WLPPR section 36(4)(b)
The minimum widths of the RRZ, RMZ and RMA are as described in WLPPR section 36(4)(b).

Width of Wetland Riparian Areas

Default: WLPPR section 37(3)(b)
The minimum widths of the RRZ, RMZ and RMA are as described in WLPPR section 37(3)(b).

Width of Lake Riparian Areas

Default: WLPPR section 38(2)(b)
The minimum widths of the RRZ, RMZ and RMA are as described in WLPPR section 38(2)(b).

Restrictions in a Riparian Reserve Zone

Default: WLPPR section 39(1)
Cutting, modifying or removing trees in a RRZ is limited to the purposes described in WLPPR section 39(1).

Restrictions in a Riparian Management Zone

- Default: WLPPR section 40(1)(b)(c) or (d)
The construction of a roads in a riparian management zones will be limited to the conditions described in WLPPR sections 40(1)(b),(c) and (d).

Wildlife Tree Retention

If not exempted, the proportion of the Woodlot Licence area that will be occupied by wildlife trees will be:

- Default: 8 % specified for the area in a land use objective (WLPPR section 52(1)(a))

Coarse Woody Debris

If not exempted, the minimum amount of coarse woody debris that will be left on areas where there is a requirement to establish a free growing stand will be:

- Coastal Default: WLPPR section 54(1)(b)
A minimum retention of 4 logs per ha ≥ 5 m in length and ≥ 30 cm in diameter at one end.

Resource Features

If not exempted, the woodlot licensee will:

- Default: WLPPR section 56(1)(b)
Ensure that forest practices do not damage or render ineffective a resource feature.

II. APPENDICES

APPENDIX 1A: STOCKING STANDARDS FOR SPECIFIED AREAS

Stocking Standards for Uneven Aged Silvicultural Systems

These layered stocking standards apply for the purposes of sections 12 and 34(3) of the Woodlot Licence Planning and Practices Regulation to areas where the establishment of a free growing stand is not required and harvesting is limited to commercial thinning, removal of individual trees, or a similar type of intermediate cutting, or the harvesting of special forest products.
 These standards apply to all non clearcut systems.

Target from Table A standards (stems/ha)	Layer**	Stocking***			Target from Table A standards (stems/ha)	Layer**	Stocking***		
		Target pa	MIN pa	MIN p			Target pa	MIN pa	MIN p
		(well-spaced/ha)					(well-spaced/ha)		
1200 ID 86000 (all layers)	1	600	300	250	800 ID 86003 (all layers)	1	300	150	150
	2	800	400	300		2	400	200	200
	3	1000	500	400		3	600	300	300
	4	1200	700	600		4	800	400	400
1000 ID 86001 (all layers)	1	400	200	200	600 ID 86004 (all layers)	1	300	150	150
	2	600	300	250		2	400	200	200
	3	800	400	300		3	500	300	300
	4	1000	500	400		4	600	400	400
900 ID 86002 (all layers)	1	400	200	200	400 ID 86005 (all layers)	1	200	100	100
	2	500	300	250		2	300	125	125
	3	700	400	300		3	300	150	150
	4	900	500	400		4	400	200	200

* Maximum regeneration delay is seven years. For a seven-year regeneration delay, the early free growing is 12 years and the late free growing is 15 years. Regeneration delay can be met immediately following harvest if the residual stand has no significant damage or pest problems and meets minimum stocking standards. If regeneration is achieved immediately following harvest, earliest free growing date is 12 months after completion of harvest and the latest date is 24 months after completion of harvest.

Appendix 1B: STOCKING STANDARDS FOR CLEARCUT SILVICULTURAL SYSTEMS

Vancouver Forest Region			Campbell River Foprest District					Licencee: Buttle Lake Resources				Woodlot Licence W1898				June , 2023								
ID #	BEC		Preferred Species					Acceptable Species								Stocking (w/s)			Min inter tree dis	Regen delay	FTG date	Tree ht > brush %	Comments	
	Zone & variant	Site Series	1	Ht (min)	2	Ht (min)	3	Ht (min)	1	Ht (min)	2	Ht (min)	3	Ht (min)	4	Ht (min)	Tar P&A sph	Min P&A sph	Min P sph	MITD	Max yrs	Late yrs		
	CWHxm	01/04	Fd	3.0					Pw ⁵	2.5	Hw ⁸	2.0	Cw	1.5	Lw ⁸	1.5	900	500	400	2.0	3	20	150	None zonal site
	CWHxm	02	Fd	2.0					PI	1.25	Pw ⁵	2.5					400	200	200	2.0	3	20	150	Avoid logging – xeric site, shallow soils
	CWHxm	03	Fd	2.0					Cw	1.0	Pw ⁵	2.5	PI ⁶	1.25	Lw ⁸	1.5	800	400	400	2.0	3	20	150	none
	CWHxm	05/07	Cw	2.0	Fd	4.0			Bg	3.5	Pw ⁵	2.5					900	500	400	2.0	3	20	150	None
	CWHxm	06	Fd	3.0	Cw	1.5	Hw	2.0	Pw ⁵	2.5							900	500	400	2.0	3	20	150	
	CWHxm	10	Act	4.0	Dr ⁴	4.0	Mb ⁴	4.0									800	400	400	1.5	3	20	150	Flood Plain low bench
	CWHxm	11 ¹	Cw	1.0					PI ¹	1.25							400	200	200	1.5	3	20	150	Avoid logging – wet and very poor
	CWHxm	12 ¹	Cw	1.0					Hw ⁴	1.5	Pw ⁵	2.5	SS ⁷	1.5			800	400	400	1.5	3	20	150	Organic soils, avoid ground based harvesting
	CWHxm	13/14 ^{1,2}	Bg	3.5	Cw	2.0	Fd ¹	4.0	Ss ^{7,9}	1.5							900	500	400	1.5	3	20	150	Fluctuating water table
	CWHxm	15 ^{1,2}	Cw	2.0					Ss ^{7,9}	1.5							800	400	400	1.5	3	20	150	Fluctuating water table
	CWHxm	01/06	Act	4.0	Dr ⁴	4.0	Mb	4.0									1200	1000	800	1.5	3	20	150	High Density hardwood management
	CWHxm	05/07/08/091/12/13/14 ^{1,3} / 15 ^{1,2}	Act	4.0	Dr ⁴	4.0	Mb	4.0									1200	1000	800	1.5	3	20	150	High Density hardwood management
	CWHxm	01/04/06	Cw	1.5	Pw ⁵	2.5			Fd ³	Hw ⁸	2.0						900	500	400	2.0	3	20	150	Alternate species root rot
	CWHxm	02	Pw ⁵	2.5	PI ⁶	1.25			Fd ³	2.0							400	200	200	2.0	3	20	150	Avoid logging – xeric site, shallow soils
	CWHxm	03	Cw	1.0	Pw ⁵	2.5	PI ⁶	1.25	Fd ³	2.0	Lw ⁸	1.5					800	400	400	2.0	3	20	150	Alternate species root rot
	CWHxm	05/07	Cw	2.0	Pw ⁵	2.5			Fd ³	4.0	Bg ³	3.5					900	500	400	2.0	3	20	150	Alternate species root rot
	CWHxm	11	Cw	1.0					PI ⁶	1.25							400	200	200	2.0	3	20	150	Alternate species root rot
	CWHxm	12	Cw	1.0	Pw ⁵	2.5			Hw	1.5	Ss ⁷	1.5					800	400	400	2.0	3	20	150	Alternate species root rot
	CWHxm	13/14 ²	Cw	2.0					Bg ³	3.5	Fd ³	4.0	Ss ^{7,9}	1.5			900	500	400	2.0	3	20	150	Alternate species root rot

These standards are very similar to those found in the MoF publication “Reference Guide for Forest Development Plan Stocking Standards” except for two situations. The first variation is that they allow for the greater use of Cw and Pw in root rot areas. The second variation is to allow a greater use of Hw and Cw in areas within plantations that have high levels of shading. These Stocking Standards and apply for the purposes of section 35(1) (a) of the Woodlot Licence Planning and Practices Regulation to areas harvested under this Woodlot Licence Plan where the establishment of a free growing stand is required under section 29(3) of *FRPA*.

Foot Notes

1. Elevated microsites are preferred.
2. These sites represent areas with strongly fluctuating water tables. They are often found as mosaics in combination of other sites. Elevated microsites are preferred, either mechanical or natural.
3. Bg and Fd are not acceptable within 10 m of second growth stumps, except stumps of Cw, Pw, Lw and deciduous species.
4. Avoid gleyed soils and frost pockets.
5. Pw must be free of blister rust within 10 cm of the stem and be pruned as per the Ministry guidelines or be blister rust resistant stock (> 50% resistance). Pw may occupy 5 % on all sites except sites 04 and 05 where 20% will be the upper limit of the free growing composition. When used for root rot treatment no limit on percent composition is set.
6. Restricted to nutrient very poor sites.
7. Risk of weevil damage, use resistant stock where possible.
8. Hw is not acceptable on site series 04. Larch will be used as an alternative species if available or as MoF policy provides clearance.
9. May be planted on prepared mounds.

APPENDIX 2: THE WOODLOT LICENCE PLAN MAP
APPENDIX 3: GEOTECHNICAL REPORT

REVIEW AND COMMENT

A) ADVERTISING

[Enter Details]

B) REFERRALS

[Enter Details]

C) COPY OF WRITTEN COMMENTS RECEIVED

[Enter Details]

D) REVISIONS MADE BECAUSE OF WRITTEN COMMENTS RECEIVED

[Enter Details]

E) EFFORTS MADE TO MEET WITH FIRST NATIONS

[Enter Details]

II Supplemental Information Required to be Submitted in Support of the Proposed Woodlot Licence Plan

1. Review and Comment

a) Advertising

b) Referrals/ Field Tours

III. SUPPLEMENTAL INFORMATION

EXEMPTIONS

[Enter Details]

RATIONALE IN SUPPORT OF PROPOSED ALTERNATIVE PERFORMANCE REQUIREMENTS

[Enter Details]