Husby Group
Haida Gwaii
Forest Stewardship Plan

2018–2023

May 2018

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Appendices

1.0 Clarifications

In this Forest Stewardship Plan (FSP, "the Plan", "this Plan"), where terms are used which are defined in the Haida Gwaii Land Use Objectives Order (HGLUOO), the Forest and Range Practices Act, or the Forest Planning and Practices Regulation, the definition of the term is as per the Order, Act or Regulation (e.g., "tree-length" and "intergovernmental process" are as defined in the HGLUOO). Where there is confusion or conflict between the HGLUOO, the FRPA or the FPPR, the order of precedence is as follows: HGLUOO, then the FRPA, then the FPPR.

"Plan Area" means the tenure areas indicated in Table 1, covered by FDU A (refer to FSP map in Appendix A).

"Plan Holder" means the signatory to the FSP, as indicated in Table 1, below.

"Active Bear Den" means a Bear Den identified by a qualified professional that either has a bear actively using it or illustrates signs that a bear is or will be using that den for over winter use in that year.

"Adaptive Management Plan" means a monitoring or research initiative that is developed and implemented during operational planning, timber harvesting, silviculture treatment, or road construction, including maintenance and deactivation phases, to examine the outcomes of management strategies and practices that vary from default requirements, the results of which will inform the development of future management strategies and practices.

"Cedar" means, unless specified otherwise, western red cedar (*Thuja plicata*) or yellow cedar (*Cupressus nootkatensis*).

"Culturally Modified Tree" or "CMT" means, for the purposes of this Order, a tree that was modified prior to 1920 by Haida people as part of their cultural use.

"Development Area" means a specific location associated with an individual cutblock or road and defined by boundaries shown on a site plan where timber harvesting is planned or carried out, and includes any stand level retention, management zones, reserve zones, mapped reserves, or other areas where timber harvesting is restricted or managed pursuant to this Order or the Forest and Range Practices Act and the regulations made thereunder.

"Diameter at Breast Height" or "dbh" means the outer bark diameter of a tree, measured at 1.3m from the forest floor, on the high side, or from point of germination if the tree roots are elevated above ground or tree is lying on ground (consistent with the Provincial Cruising Manual).

"Direct Tributary" means a portion of a tributary stream that: is a minimum of 100m in length, and has the same stream order as the most downstream reach of the tributary.

"Operational Feasibility" means that a Qualified Professional rationalizes that a goal can be completed without unreasonable difficulty, without employing unnecessary means, and without incurring extreme costs to achieve the same outcome by removing the factor that will require said difficulty, unnecessary means and incurring extreme costs.

"Practicable" is as intended in FRPA General Bulletin Number 3, dated June 9, 2005.

"Qualified Professional" means a person who:

a) is registered and in good standing in British Columbia with an appropriate professional organization constituted under a British Columbia statute, who is acting under that association's code of ethics and is subject to disciplinary action by that association; and
b) is acting within his or her area of expertise and scope of practice.

"Significant Public Viewpoint" is a place or location on water or land that is accessible to the public, provides a viewing opportunity and has relevance to the landscape being assessed, e.g., a stretch of highway or waterway leading toward a harvest unit where the harvest unit is within the drivers' field of view while watching road (not adjacent), a highway rest stop, recreation site park, marine anchorage, group of homes, settlement or community or a tourist-related commercial enterprise.

"Stand Level Retention" means small intact patches of trees and understory vegetation that are located in a development area to assist in meeting the land use objectives in this plan. With respect to Stand Level Retention as it pertains to Western Yew they will include "the yew patch(s)" and as many other trees creating shade to the yew and managing those trees for wind firmness while harvesting potential merchantable trees within the retention area without damaging the yew or eliminating shade.

"Tree-length" is used throughout the Plan in regards to the widths of reserve and management zones. Tree-length is as defined in the HGLUOO, and the associated HGLUOO Schedule 5. The site-specific tree-length that will be used for the cutblock (i.e., height assigned) will be documented in the Site Plan. Only one method will be used for each individual cutblock. The HGLUOO definition provides two methods for determining the tree-length, depending on whether the stand is old-growth or young/ immature, as follows:

1) Using the site-series that the feature is in and then referencing HGLUOO Schedule 5. As site-series information is required to reference Schedule 5, the Plan Holder will need to determine the predominant site-series adjacent to the feature by field-verifying the site-series. "Adjacent area" must include an area at least equal to the distance of the final tree length buffer assigned.

2) By measuring the tallest trees in the area adjacent to the feature. It should be noted that this method would be inappropriate for areas that have been previously harvested (i.e., there are no mature trees to measure).

Method 2 will be used exclusively, except for areas that have been previously harvested where the stand has yet to become mature; in only this case, Method 1 will be used. The method used will be documented in the Site Plan.

"High priority invasive plants" are those listed in Table 10 of this Plan.

"Western Yew Patch" means five or more western yew trees where each yew tree is within 5 meters of another yew tree.

"Individual Western Yew Tree" is a western yew tree that is not included in a Western Yew Patch.

The abbreviation "s." is used to indicate a numbered section or sections of the indicated Act or Regulation.

The capitalized word "Section" or "Sub-section" is used in the singular or plural to refer to or cross-reference a numbered clause or section within this FSP.

Where the HGLUOO or Schedules contained therein are referenced in this Plan, the areas are as they were on the date of approval of this FSP.

2.0 Abbreviations

"AFU" means active fluvial unit

"AIA" means an Archaeological Impact Assessment completed by a Professional Archeologist

"BEC" means Biogeoclimatic Ecosystem Classification

"CFI" means Cultural Feature Identification

"CSA" or "CS Area" means Cedar Stewardship Area

"CP" means Cutting Permit

"DDM" means Delegated Decision Makers

"ECA" means Equivalent Clearcut Area

"FDU" means Forest Development Unit

"FRPA" means the Forest and Range Practices Act

"FPPR" means the Forest Planning and Practices Regulation

"GAR" means the Government Actions Regulation

"GWM" means General Wildlife Measure

"HTFF" means Haida Traditional Forest Feature

"HTHF" means Haida Traditional Heritage Feature

"IAPP" means the Provincial Invasive Alien Plant Program

"LU" means "Landscape Unit", which are as established in the HGLUOO, Schedule 1

"HGLUOO" or "LUO" means the Land Use Objectives Order for Haida Gwaii (dated December 16, 2010)

"MOF" or "MFLNRO" means Ministry of Forests, Lands & Natural Resource Operations & Rural Development

"NAR" means Net Area to be Reforested

"NWIPC" means the Northwest Invasive Plants Council

"PAS" mean Permanent Access Structure

"QP" means a Qualified Professional

"RBA" means Residual Basal Area

"RMA" means Riparian Management Area

"RMZ" means Riparian Management Zone

"RP" means Road Permit

"RRZ" means Riparian Reserve Zone

"TEM" mean Terrestrial Ecosystem Mapping

"TFL" means Tree Farm License

"TL" means Timber License

"TSL" means Timber Sale License

"WHA" means Wildlife Habitat Area

3.0 Application

FRPA s. 3(4)

Plan Signatories & Tenures

This FSP applies to the Plan Holder and tenures indicated in Table 1, below.

Table 1: Plan Signatories and Associated Tenures Subject to this FSP, by FDU

Plan Signatory	Tenure	FDU
Husby Group		
- Husby Forest Products Ltd.	FL A16869	A
- Dawson Harbour Logging Co. Ltd.	FL A75084	A
-		

Designations in Effect prior to Submission

FPPR s. 14(2)

The FSP map shows the designations and other areas listed in FPPR s. 14(3) that were in effect on the date the FSP was submitted for approval.

Designations in effect at the time of submission are summarized in Table 2, below.

Table 2: Designations in Effect in the Plan Area at Time of Plan Submission

Designation Category	Designation Details	FDU	Date Designated
Ungulate Winter Ranges	N/A	N/A	N/A
Wildlife Habitat Areas	Northern Goshawk: WHA #6-001 WHA #6-002	A	September 13, 2001 May 14, 2003
	Marbled Murrelet: WHA #6-041 WHA #6-046	A	April 7, 2003
Fisheries Sensitive Watersheds	N/A	N/A	N/A
Scenic Areas	VQOs established for the TSA VQOs for TSA and TFLs consolidated and mapped	A	December 22, 2005
Community Watersheds	Honna River, Slarkedus Creek, Tarundl Creek Queen Charlotte Community Watershed	A	June 15, 1995 Sept. 11, 1997
Old-Growth Management Areas	N/A	N/A	N/A
Areas in which commercial timber harvesting is prohibited	As shown on the FSP Map (Protected Areas, Reserves, Private Land/ areas outside of FDU A)	A	N/A

Recreation Sites	Rennell Sound, Kagan Bay, Clapp Basin, Small Lake, Moresby	A	Objectives Effective December 31, 1997
Recreation Trails	Riley Beach, Five “5” Mile Beach, Slatechuck Mountain, Sleeping Beauty	A	Objectives Effective December 31, 1997

Areas within FDUs Subject to Cutting Permit or Road Permit

FPPR s. 14 (2)(b) and 14(3)(j)&(k)

Tables 3, 4 and 5 below, show the areas within the Plan Area that are subject to a CP, RP or TSL held by (or entered into) by The Plan Holder and in effect on the Date of Submission.

The FSP Supporting Information Map also illustrates the information presented in Tables 3, 4, and 5.

Table 3: Active Cutting Permits

Plan Signatory	Tenure	Approved CPs (TSLs for BCTS)
Husby Group		
- Husby Forest Products Ltd.	FL A16869	148, 149, 150, 152, 153, 154, 210 (non-consensus), 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222 (non-consensus), 223 (non-consensus), 224 (non-consensus)
- Dawson Harbour Logging Co. Ltd.	FL A75084	810

Table 4: Active Road Permits

Plan Signatory	Tenure	Approved RPs
Husby Group		
- Husby Forest Products Ltd.	FL A16869	R06269, R06268, R07497, R07084
- Dawson Harbour Logging Co. Ltd.	FL A75084	R11023

Table 5: Active Salvage Permits

Plan Signatory	Tenure	Salvage Permits (CP)
Husby Group		
- Husby Forest Products Ltd.	FL A16869	471, 488
- Dawson Harbour Logging Co. Ltd.	FL A75084	N/A

4.0 Term

FRPA s. 6(1)(a)(b); 6(2)

The term of this FSP commences on the date of the FSP approval by the DDM and expires 5 years after the date of approval, or another date specified in writing by the Minister or DDM.

5.0 Map

FRPA s. 5(1)(a) and FPPR s. 14

The FSP map appended to this document (Appendix A) shows the forest development unit (FDU), tenures and other features of the Plan Area. The map also provides an overview of the Plan Area, including major topographic features and related information that will take effect with the approval of this FSP.

6.0 Results & Strategies

Haida Gwaii Land Use Objective Order

On December 16, 2010 the Minister of Forests, Lands and Natural Resource Operations signed the Haida Gwaii Land Use Objectives Order, which established objectives for the purposes of the Forest and Range Practices Act. Results and Strategies have been created to meet all of these objectives, the Forest Range and Practices Act (FRPA) and Objectives Established Under Government Regulation (GAR), as provided below. The Results and Strategies apply to FDU A.

Cultural Objectives

Cedar Stewardship Areas
HGLUOO s. 3

6.1 The Plan Holder will not harvest within CS Areas (as identified in the HGLUOO, Schedule 3).

6.2 Despite Section 6.1 above, circumstances may arise where harvesting within Cedar Stewardship Areas (CS Areas) for commercial purposes is desired. Where harvesting is proposed within a CS Area, the Plan Holder will ensure all of the following:

a) any proposed harvest activities within CS Areas are consistent with the outcome of an intergovernmental process, completed by the Plan Holder; and

b) ensure the total area of the CS Area harvested is ≤ 10% of the total of all CS Areas 2,536.3ha, as indicated in Table 6 (below), and that no more than 250ha is harvested in a 10-year period; and

c) the CS Area harvest within a given Landscape Unit, for each 10-year period, will be proportional to the occurrence of CS Areas within the LU (see Table 6, below); and

d) the Plan Holder will maintain a ledger, updated and submitted annually at a minimum to the CHN and the MoFLNRO District, which tracks any CS Area harvest activities; and

e) where CS Areas overlap tenures outside of the Plan Area, the Plan Holder will make reasonable efforts to consult with the relevant tenure holder(s) to ensure that CS Area harvest levels do not exceed the limits described in b) and c), above.

Table 6: Maximum CS Area Harvest by Landscape Unit

Landscape Unit	CS Area (ha)	Maximum 10-Year CS Area Harvest Potential (ha)	Maximum Total CS Area Harvest Potential (ha) (10% threshold)
Eden Lake	3,150.8	31.5	315.1
Honna	1,362.7	13.6	136.3
Ian	5,857.2	57.5	585.7
Jalun	210.8	2.1	21.1
Louise Island	228.1	2.3	22.8
Lower Yakoun	6,933.9	67.3	693.4
Masset Inlet	3,310.7	33.1	331.1
Naikoon	284.7	2.8	28.5
Otun	473.0	4.7	47.3
Rennell	304.7	3.0	30.5
Sewell	69.1	0.6	6.9
Skidegate Lake	1,335.9	13.3	133.6
Tlell	933.2	9.3	93.3
Yakoun Lake	897.7	8.9	89.8
Total	**25,352.5**	**253.5**	**2,536.4**

* The Maximum 10 Year Cedar Stewardship Area Harvest Potential cannot exceed 250.00ha.

Cultural Feature Identification
HGLUOO s. 4

6.3 Prior to commencing harvesting or road construction activities in a development area, the Plan Holder will ensure that a Cultural Features Identification Survey has been completed and submitted to the District and CHN for the proposed area by a surveyor certified by the Council of the Haida Nation. The survey results will be electronically submitted to the Council of the Haida Nation greater than or equal to 30 days prior to Cutting Permit and or Road Permit submission.

Haida Traditional Heritage Features
HGLUOO s. 5

6.4 "Haida Traditional Heritage Features" (HTHFs) are defined as being those features listed in Schedule 2 of the HGLUOO. To identify and protect Class 1 and Class 2 HTHFs the following strategies are employed:

a) Potential HTHFs will be identified and assessed through the Cultural Features Identification Survey, completed by certified surveyors.

Where potential Class 1 or 2 features could be present, based on the CFI standards for requirement of an AIA, the CFI survey area will extend a minimum of the reserve zone width required to buffer a Class 1 HTHF beyond the proposed harvest boundary.

b) Where potential HTHFs are identified, AIAs will be completed by a professional archaeologist who holds a valid permit for archaeological work on Haida Gwaii, including subsurface work

and tidal zones. A person designated by Council of the Haida Nation, preferably those who have completed the CFI work, will be in attendance with the archaeologists to confirm the finding and search for other features.

c) Where a development area is below 25m in elevation, AIAs will be completed by a professional archaeologist and a person designated by Council of the Haida Nation.

d) Where any HTHF or Culturally Modified Tree(s) are found, AIAs will be completed by a professional archaeologist and a person designated by Council of the Haida Nation will be in attendance.

e) Where the CFI surveyor expects a likelihood of subsurface features, AIAs will be completed by a professional archaeologist and a person designated by Council of the Haida Nation.

f) Where archaeological evidence is documented in an adjacent area, AIAs will be completed by a professional archaeologist and a person designated by Council of the Haida Nation.

For all AIA work where potential Class 1 or 2 features may be present, the survey area will extend a minimum of the reserve zone width required to buffer a Class 1 or 2 HTHF beyond the proposed harvest boundary.

All confirmed findings by the archaeologists will be recorded and submitted to the Provincial Archaeological Site Registry through the BC Archaeology Branch. This will ensure Site registration, recording and location of the feature, and protection of the archaeological feature under the Heritage Act.

6.5 Where Class 1 HTHFs are located, they will be retained and a 500m (minimum width) reserve, measured from the edge of the HTHF, will be maintained to protect the HTHF, subject to a) and b), below.

a) Where a reduction in the reserve is required for road access, other infrastructure, or to address a safety concern and no practicable alternative exists, the Plan Holder may reduce the size of the reserve consistent with the outcome of a completed intergovernmental process and in accordance to an alteration permit issued by the BC Archaeological Branch.

b) Where necessary to address site-specific values, the reserve may be decreased by up to 0.5 tree-lengths from the outer edge of the zone, provided that there is no net loss of reserve area within the development area. Site-specific values will be determined by the signing Forester and documented within the Site Plan.

6.6 Where Class 2 HTHFs are located, they will be retained and a 100m (average width) reserve, measured from the edge of the HTHF, will be maintained to protect the HTHF, subject to a) and b), below.

a) Where alteration, removal or reduction of the Class 2 HTHF or reserve is required for road access, other infrastructure, or to address a safety concern and no practicable alternative exists, the Plan Holder may alter, remove, or reduce the HTHF and/ or the size of the reserve consistent with the outcome of a completed intergovernmental process and in accordance to an alteration permit issued by the BC Archaeological Branch.

b) Where necessary to address site-specific values, the reserve may be decreased by up to 0.5 tree-lengths from the outer edge of the zone, provided that there is no net loss of reserve area within the development area. Site-specific values will be determined by the signing Forester and documented within the Site Plan.

6.7 The Plan Holder will, prior to commencing timber harvesting and road construction activities within the FDU to which this FSP applies, engage a Qualified Professional to conduct an assessment related to karst caves, significant surface karst features, and very high- or high-vulnerability karst terrain.

6.8 The Plan Holder will manage any area known or found to contain karst resource features as recommended in the assessment completed by a Qualified Professional consistent with FPPR 70(1).

6.9 The Plan Holder will provide information related to karst resource features encountered at the request of the applicable government agency.

Haida Traditional Forest Features
HGLUOO s. 6

6.10 Where Class 1 HTFFs are located, they will be retained and a 1.0 tree-length (average width) reserve, measured from the edge of the HTFF, will be maintained to protect the HTFF. Adjacent to the reserve a 1.0 tree-length (average width) management zone, measured from the edge of the reserve, will be maintained to protect the integrity of the reserve, subject to a) and b), below.

a) Where necessary to address site-specific values, the Class 1 HTFF management zone maintained under Section 6.10 above may be decreased by up to 0.5 tree-lengths from the outer edge of the management zone, provided that there is no net loss of management zone area within the development area.

b) The area of the reserve and/or management zone may be modified in shape or size, if necessary for road access, other infrastructure, or to address safety concerns or to protect the feature from windfall, provided that:

i.) an adaptive management plan is developed and implemented, and

ii.) the size of the management zone is consistent with the outcome of a completed intergovernmental process.

6.11 Despite section 6.10 above, the Class 1 HTFF may be altered or removed provided that:

a) alteration or removal is required for road access and there is no practicable alternative for road location or infrastructure, and
b) an intergovernmental process is completed

6.12 Where Class 2 HTFFs are located within a development area, ≥ 50% of the identified occurrences will be retained in stand level retention and documented in the Site Plan.

6.13 Despite 6.12 above, less than 50% of Class 2 HTFFs can be retained provided the retention of less than 50% is:

a) consistent with the outcome of an intergovernmental process, and
b) removal is required for road access or other infrastructure and no practicable alternative exists Where Indian Hellebore Class 2 HTFF is located in a Development Area and 50% of Indian Hellebore is not in stand level retention or outside the harvest area, the Plan Holder will maintain a minimum of 50% of the Indian Hellebore by.
a) Prescribing directional falling away from the feature,
b) Retain non-merchantable trees around the feature to protect it from logging damage,
c) Establishing a machine free zone around the feature.

Cedar Retention
HGLUOO s. 7

6.14 Where development areas are either:

a) > 10ha and the pre-harvest cedar (western red cedar and yellow cedar) content is >30%; or
b) ≤ 10ha and the pre-harvest cedar (western red cedar and yellow cedar) content is >60%;

then the Plan Holder will retain a minimum of 15% of the combined pre-harvest cedar composition of the development area, measured in hectares.

The areas that contribute to the cedar retention requirements will be calculated by adding up the weighted cedar content for the contributing areas, in hectares, based on the most current inventory mapping for the applicable polygons.

The Plan Holder will meet the 15% cedar retention requirement using all of the following strategies:

c) Areas designated to contribute to the cedar retention requirements will first be located within reserves, management zones, and stand level retention areas already designated for other objectives, excluding areas already designated for other development areas.
d) Where existing cedar reserves are insufficient to meet the cedar retention requirements, then additional cedar retention areas will be established.
e) Cedar retention areas will be located such that the retention areas are large and contiguous to the extent practicable. Cedar retention areas that contribute to meeting the 15% retention requirement will be ≥ 1.0ha in size and contain a range of diameters of western redcedar and yellow-cedar representative of the pre- harvest stands..

6.15 Where development areas have pre-harvest cedar (western red cedar and yellow cedar) composition greater than 20% in the harvested area, as indicated in the cruise compilation (measured in percent of cedar sph, not including dead potential or dead useless), then the Plan Holder will regenerate the area according to the minimum post-harvest cedar composition and strategies listed below, subject to Section 6.16.

The cedar regeneration requirement will be met on an individual development area basis. The cedar regeneration requirement for a cutblock will be calculated by multiplying the NAR times the applicable Minimum Post-Harvest Cedar Composition, as indicated in Table 7, below. The location of planted cedar within the cutblock will be at the discretion of the Qualified Professional, and consistent with approved stocking standards.

Table 7: Minimum Post-Harvest Cedar Composition, based on Pre-Harvest Cedar Composition

Pre-harvest Cedar Composition %	Minimum Post-Harvest Cedar Composition (sph)
20–29	100
30–39	150
40–49	175
50–59	200
60–69	250
70–79	300
80–89	350

90–100	400

The Plan Holder will use the following strategies to meet this objective:

a) The Plan Holder will meet the cedar regeneration requirement through planting and/ or natural regeneration.

b) Plant a representative percentage of Yellow Cedar and Western Red Cedar that were present on site prior to harvest.

c) For areas that have been planted with cedar, where the cedar content falls below 80% of the Minimum Post-Harvest Cedar regeneration requirement, a prescription will be developed by a Qualified Professional and will be submitted for an Intergovernmental process for approval.

d) The Plan Holder will refer to the Silviculture Survey Procedures Manual regarding Cedar acceptability criteria will be as follows:

    i) Regenerated cedar will only be accepted if they are of good form and vigour.

    ii) Regenerated cedar will only be accepted if they are ≥ 1.2m tall.

e) The cedar regeneration requirement due-date will be no later than 20 years, post-harvest commencement. The Plan Holder will complete a cedar requirement survey which will be made available to the Province and CHN.

f) A Qualified Professional will determine if seedling protectors are needed and the timing of removal.

6.16 The cedar regeneration requirement for a given cutblock may be lower than the limit set in Section 6.15 above, provided that the new requirement is consistent with the outcome of a completed intergovernmental process.

Western Yew Retention
HGLUOO s. 8

6.17 Where western yew patches are located within a development area, they will be protected by establishing stand level retention areas, commonly referred to as “yew retention areas”.

6.18 Despite 6.17 above, western yew patches may be altered or removed to accommodate operational requirements for road and bridge construction, where no practicable alternative exists.

6.19 Where individual western yew trees are identified within a development area and do not meet the definition of a western yew patch, the Plan Holder will target retaining 100% of individual western yew trees within the development area. The majority of individual yew will be excluded from the harvest area and will be in retention or reserve where applicable. Individual stems inside the harvest area will be placed in stand level retention where possible or retained on their own with site-specific instructions to not damage or destroy the Western Yew.

6.20 Despite 6.19, where 100% of individual Western Yew trees cannot be retained in a Development Area because of safety, or it is not practicable, the Plan Holder will remove individual Western Yew to the minimum extent practicable. An Intergovernmental Process will occur if 75% or greater of the total stems of Western Yew cannot be retained in the Development Area.

Cultural Cedar Stands
HGLUOO s. 9

6.21 Where cultural cedar stands are located, they will be retained and a 0.5 tree-length (minimum width) reserve will be maintained to protect the identified feature. The reserve will be protected by establishing a 1.0 tree-length (average width) management zone, measured from the outer boundary of the reserve, subject to 6.22, 6.23, and 6.24 below.

6.22 Where alteration or removal of a cultural cedar stand is required for road access, other infrastructure, to address a safety concern, or for operational feasibility, the Plan Holder may alter or remove the cultural cedar stand, consistent with the outcome of a completed intergovernmental process and in accordance with an alteration permit issued by the Archaeological branch, when required. The harvested CMT will be managed in accordance with the direction of the Haida Nation. Monumental cedar will be provided to the Haida Gwaii Cultural Wood Access Program.

6.23 Where a reduction in the size of the reserve is required for road access, other infrastructure, for operational feasibility, or to address a safety concern, the Plan Holder may reduce the area of the reserve(s) consistent with the outcome of a completed intergovernmental process, and provided that the integrity of the cultural cedar stand is maintained.

6.24 Where a reduction in the size of the management zone is necessary to address operational constraints or a safety concern, the Plan Holder may reduce the area of the management zone(s), consistent with the outcome of a completed intergovernmental process, and provided that the integrity of the reserve zone is maintained.

CMTs (Culturally Modified Trees)
HGLUOO s. 9

6.25 Where CMTs are located, they will be retained and a 0.5 tree-length (minimum width) reserve will be maintained to protect the identified feature. The reserve will be protected by establishing a 1.0 tree-length (average width) management zone, measured from the outer boundary of the reserve, subject to 6.26, 6.27, and 6.28 below.

6.26 Where alteration or removal of a CMT is required for road access, other infrastructure, to address a safety concern, or for operational feasibility, the Plan Holder may alter or remove the CMT, consistent with the outcome of a completed intergovernmental process and in accordance to an alteration permit issued by the Archaeological branch, when required. The harvested CMT will be managed in accordance with the direction of the Haida Nation.

6.27 Where a reduction in the size of the reserve is required for road access, other infrastructure, for operational feasibility, or to address a safety concern, the Plan Holder may reduce the area of the reserve(s) consistent with the outcome of a completed intergovernmental process, and provided the integrity of the CMT is maintained.

6.28 Where a reduction in the size of the management zone is necessary to address operational constraints or a safety concern, the Plan Holder may reduce the area of the management zone(s), consistent with the outcome of a completed intergovernmental process, and provided the integrity of the reserve zone is maintained.

Monumental Cedar
HGLUOO s. 9

6.29 Where monumental cedar >120cm dbh are located, they will be retained and a 0.5 tree-length (minimum width) reserve will be maintained to protect the identified feature. The reserve will be protected by establishing a 1.0 tree-length (average width) management zone, measured from the outer boundary of the reserve, subject to 6.30, 6.31, and 6.32 below.

6.30 Where alteration or removal of a monumental cedar >120cm dbh is required for road access, other infrastructure, to address a safety concern, for operational feasibility, or because of a request from the Haida Gwaii Cultural Wood Access Program to harvest >120cm monumental, the Plan Holder may alter or remove the >120cm dbh monumental cedar consistent with the outcome of a completed intergovernmental process. The harvested monumental cedar will be provided to the Haida Gwaii Cultural Wood Access Program.

6.31 Where a reduction in the size of the reserve is required for road access, other infrastructure, for operational feasibility, or to address a safety concern, the Plan Holder may reduce the area of the reserve(s) consistent with the outcome of a completed intergovernmental process, provided the integrity of the monumental cedar is maintained.

6.32 Where a reduction in the size of the management zone is necessary to address operational constraints or a safety concern, the Plan Holder may reduce the area of the management zone(s) consistent with the outcome of a completed intergovernmental process, and provided the integrity of the reserve zone is maintained.

6.33 When monumental cedars <120cm dbh are identified, they will be retained and a 0.5 tree-length (minimum width) reserve will be maintained to protect the identified feature. The reserve will be protected by establishing a 1.0 tree-length (average width) management zone, measured from the outer boundary of the reserve, subject to 6.35 and 6.36 below.

6.34 Despite section 6.33, a <120cm dbh monumental cedar identified in a development area and not located within a cultural cedar stand may be harvested, subject to:

a) the greater of 10% or one monumental cedar are protected within the development area, and/or

b) the harvesting of the monumental cedar tree is requested in writing by the Haida Gwaii Cultural Wood Access Program.

6.35 Where a reduction in the size of the monumental cedar reserve is required for road access, other infrastructure, for operational feasibility, or to address a safety concern, the Plan Holder may reduce the area of the reserve(s) consistent with the outcome of a completed intergovernmental process, and provided the integrity of the monumental cedar is maintained.

6.36 Where a reduction in the size of the monumental cedar management zone is necessary to address operational feasibility or a safety concern, the Plan Holder may reduce the area of the management zone(s) consistent with the outcome of a completed intergovernmental process, and provided the integrity of the reserve zone is maintained.

6.37 When monumental cedars are harvested, 100% of the monumental cedars will be marked and provided to the Haida Gwaii Cultural Wood Access Program.

Social Objectives

Forest Stewardship Plan Implementation

6.38 The Plan Holder will adhere to the 2018 Haida Gwaii FSP Implementation Agreement regarding results and strategies of this Plan.

Information Sharing

FPPR s. 10

6.39 The Plan Holder will ensure that a primary forest activity will not cause damage to a cultural heritage resource that is:

a) referred to in Section 10 of the FPPR, as it was on the Date of Submission;
b) likely to be adversely impacted by that primary forest activity;
c) not conserved or protected through: (i) legislation, plans or policies; or (ii) other means or arrangements, developed or accepted through information sharing with the Haida Nation; and
d) important, valuable and scarce in the context of a traditional use by the Haida Nation, based on input from the Haida Nation;

6.40 The Plan Holder will share information with the Haida Nation related to primary forest activities that are proposed within the traditional territory of the Haida Nation:

a) according to established agreements between government and the Council of the Haida Nation regarding information sharing timelines and required content of information provided; or
b) as determined by a Qualified Professional based on the factors in FPPR Schedule 1, Section 4 where no agreements between governments (Council of the Haida Nation and the Province of BC) exist.

6.41 The Plan Holder will, at a minimum of once annually or as requested, provide the Council of the Haida Nation with an opportunity to share information, including digital maps and spatial data, regarding Cultural Heritage Resources that are the focus of traditional use and continued importance to the Haida Nation.

6.42 The Plan Holder will keep a record of any information provided by the Haida Nation on cultural heritage resources that are the focus of traditional use and continued importance within the Plan Area.

6.43 The Plan Holder will adhere to FPPR s. 22 (1) and will consider any written comment received regarding the Plan that is relevant to the Plan.

6.44 The Plan Holder will adhere to FPPR s. 22 (2) and will at time of Plan submission provide:

a) a copy of the notice published under FPPR s. 20,
b) a copy of each written comment received under FPPR s. 21,
c) a description of any changes made to the plan as a result of the comments received under FPPR s. 21, and
d) a description of the efforts made to comply with the requirements of FPPR s. 21 (1) (d).

Development Area Referral

6.45 The Plan Holder will provide maps, including digital maps and spatial data, of proposed development to the Council of the Haida Nation, a minimum of 30 days prior to cutting authority submission.

Public Engagement

6.46 The Plan Holder will, at a minimum of once annually, host, co-host or participate in a public engagement meeting on Haida Gwaii where the Plan Holder will present draft Development Areas, the Plan Holder will receive comments and will provide due consideration of all comments received regarding draft Development Areas.

6.47 The Plan Holder will post on its website, the current FSP, Appendices, FSP supporting documentation and a map illustrating draft Development Areas. The Draft Development Areas will be approximations of the final Development Areas. Cutblocks and Roads do not have to appear as Draft Development Areas to prior to approval of the applicable Cutting or Road Permit.

Annual Reporting and Data Submission
HGLUOO s. 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, and 23

6.48 Where applicable features prescribed under the HGLUOO are identified (refer to Table 8 below), and associated reserves (including cedar reserves), management zones, and stand level retention areas are established or managed by the Plan Holder, the feature(s) and associated reserves, management zones, and stand level retention areas will be documented and the development area digital spatial data will be submitted by the Plan Holder at the CP or RP (whichever is first) application to the Council of the Haida Nation and the Province of BC.

Table 8: Summary for HGLUOO Objectives Requiring Annual Reporting and Data Submission

Objective Requiring Annual Reporting & Data Submission	Reporting Element	FSP Section Reference
Class 1 HTHFs	HTHF & Reserve	6.4(b)
Class 2 HTHFs	HTHF & Reserve	6.6
Class 1 HTFFs	HTFF & Reserve	6.10
Class 2 HTFFs	HTFF & applicable Stand Level Retention	6.11
Cedar Retention	Cedar Retention Areas	6.14
Western Yew Retention	Western yew Patches, individual yew tree retention, & applicable stand level retention	6.17
Cultural Cedar Stands, CMTs & Monumental Cedar	Cultural Cedar Stands, CMTs, Monumental Cedar, Reserves, Reserves & Management Zones	6.29, 6.33
Development Area	Digital Spatial Data	6.49
Type I Fish Habitat	Type I Fish Habitat, Reserve & applicable Management Zone	6.60
Type II Fish Habitat	Type II Fish Habitat, Reserve Zone & Management Zone	6.62
Active Fluvial Units	Active Fluvial Unit & Management Zone	6.64, 6.65, 6.66
Forested Swamps	Forested Swamp & Management Zone	6.84
Ecological Representation	Old Forest Reserves	6.89
Red & Blue-listed Plant Communities	Red & Blue-listed Plant Communities	6.93, 6.94, 6.95
Black Bear Dens	Black Bear Dens (existing & newly discovered) No Work Zones	6.96
Forest Reserves	Forest Reserves	6.116, 6.117
Goshawk Nests	Nest and Restricted Activity Zone	6.102, 6.104

Recreation Resources
FRPA s. 180, 181

6.49 As of the date of Plan submission, there are five recreation sites and four recreation trails, and no interpretive sites, established, with designated objectives, within the Plan Area (refer to Table 2, above).

6.50 Prior to proposing timber harvest or road construction in an area adjacent to a designated recreation site or trail with established objectives, the Plan Holder will consult with the government agency responsible for the recreation site or trail, to ensure that the proposed activity will be conducted in accordance with the established objectives applicable to the area.

6.51 Where “non-motorized access” is the applicable established objective for the designated recreation site or trail, and proposed new road construction will provide motorized access to the recreation resource, the Plan Holder will:

a) deactivate the road within one year following completion of primary forest activities, to a condition which re-establishes the degree of motorized access similar to that which existed prior to harvest operations; or
b) obtain written approval from the government agency responsible for the recreation site or trail, to maintain access for further operations or activities; such access will be established as per the approval.

Visual Quality
FPPR 9.2, GAR s. 7(2), FRPA s. 180, 181

Visual Quality Objectives (VQOs) have been established for the Scenic Areas on Haida Gwaii (mapping consolidated for TSA and TFLs on December 22, 2005).

6.52 The Plan Holder will design roads and cutblocks to conform with the Visual Quality Objectives set for identified visual polygons at a landscape level. Design of said roads and cutblocks will adhere to the "Guide to Visual Quality Objectives" guidebook and Haida Gwaii Natural Resource District Stewardship Policy for Managing Visual Resources on Haida Gwaii.

6.53 The Plan Holder will verify that designed cutblocks in areas with Visual Quality Objectives adhere to the visual quality objectives by completing a Visual Impact Assessment.

6.54 Where block openings along the Highway 16 corridor are not planned to be shallow, block openings will not be in direct line of sight with a visual buffer retained along the highway and the opening. Right of way corridors leading to openings from the highway will be designed such that they are angled to minimize view into the opening while still meeting Ministry of Transport highway junction requirements. Gravel pits and slash piles will not be established in the line of sight from highway along Right of Way corridors.

6.55 The Plan Holder will compile an initial assessment that will include establishment of sight lines. If it is determined that the cutblock is visible from significant public viewpoints a Visual Impact Assessment will be completed and compiled to ensure the design of the roads and cutblocks adhere to the visual quality objective.

6.56 The Plan Holder will conduct road construction or timber harvesting activities within Scenic Areas such that they conform to the established VQOs, unless it is for the following exceptional circumstances beyond the control of the Plan Holder: (a) it is to recover timber damaged from natural causes and the action must be completed expeditiously; or (b) the activities are otherwise required by applicable government.

6.57 If harvesting and/or road building occurs and the VQO is exceeded, as per subsections (a) or (b) above, then the Plan Holder will ensure that good design principles are followed and the VQO is exceeded to the minimum extent required.

6.58 The Plan Holder will adopt newly approved VQOs, polygons and policy during the life of the FSP for activities not under an issued CP or RP.

Aquatic Habitats

6.59 For the purposes of this FSP, the locations of Type I and II fish habitat are as indicated in Schedule 4 of the HGLUOO, unless a field assessment indicates otherwise. Where there is a conflict between the HGLUOO and the field assessment as to where the Type I or II fish habitat is located, the field assessment shall prevail.

For the purposes of defining stream riparian classes, the following is provided:

a) The riparian reserve begins at the outer edge of the Type I or II fish habitat, including the active floodplain.
b) The riparian management zone begins at the outer edge of the riparian reserve, or if there is no riparian reserve, the edge of the stream channel bank. As the HGLUOO does not specify a RMA width for Upland Streams this FSP will adopt the FPPR requirements regarding Riparian Management Areas.

Type I Fish Habitat
HGLUOO s. 10

6.60 With reference to individual development areas, where Type I fish habitat occurs, it will be retained and a 2.0 tree-length (minimum width) riparian reserve, measured from the outer edge of the Type I habitat, will be maintained to protect the Type I fish habitat, subject to Section a) and b) below:

a) Where necessary to address site-specific values, the Type I reserve identified under Section 6.60 above may be increased or decreased by up to 0.5 tree-lengths, measured from the outer edge of the reserve, provided that there is no net loss of Type I reserve area within the development area.
b) Within an individual development area, up to 5% of the total area of the Type I habitat reserve may be altered or removed, provided that:
    I. the integrity of the Type I fish habitat is maintained; and
    II. the alteration or removal is required for road or bridge construction or to address a safety concern and no practicable alternative exists; or

6.61 Despite section 6.60 the area of the reserve zone in a development area may be altered or removed, provided that:

a) the alteration or removal is required for road and bridge construction, or to address a safety concern, and there is no practicable alternative;
b) an assessment of risk to the fish stream from the forest development and disturbance is completed by a qualified professional;
c) the integrity of the Type I fish habitat is maintained;
d) an adaptive management plan is developed and implemented; and
e) an intergovernmental process is completed.

Type II Fish Habitat
HGLUOO s. 11

6.62 With reference to individual development areas, where Type II fish habitat occurs, it will be retained and a 1.0 tree-length (minimum width) riparian reserve, measured from the outer edge of the Type II habitat, will be maintained to protect the Type II fish habitat. Adjacent the reserve a 0.5 tree-length (average width) management zone will be established to protect the reserve, subject to all of the following:

a) Within an individual development area, up to 5% of the total area of the Type II habitat reserve may be altered or removed, provided that the integrity of the Type II fish habitat is maintained.
b) Within an individual development area, the total area of the Type II habitat management zone may be reduced by up to 20%, measured in hectares or basal area.
c) The retention of trees within the management zone will be based on consideration of the likelihood of damages to the reserve caused by windthrow.

6.63 Despite Section 6.62 the combined area of the reserve zone and management zone may be reduced further, provided that:

a) the alteration or removal is required for road and bridge construction, or to address a safety concern, and there is no practicable alternative; and
b) an assessment of risk to the fish stream from the forest development and disturbance is completed by a qualified professional; and
c) the integrity of Type II fish habitat is maintained; and
d) an adaptive management plan is developed and implemented; and
e) an intergovernmental process is completed.

Active Fluvial Units (AFUs)
HGLUOO s. 12

6.64 With reference to individual development areas, where naturally occurring AFUs occur, any forest located within the AFU will be retained and a 1.5 tree-length (minimum width) management zone, measured from the outer edge of the AFU, will be established to protect the AFU.

6.65 Despite Section 6.64 above, within an individual development unit, the amount of mature and old forest within the AFU management zone(s) may be reduced by up to 10%, measured in hectares.

6.66 In addition to Section 6.65 above, within an individual development unit, the amount of mature and old forest within the AFU management zone(s) may be reduced by an additional 10%, measured in hectares, provided that:

a) sufficient functional riparian forest is retained to protect the integrity of the AFU; and
b) an adaptive management plan is developed, documented, and implemented prior to reducing the size of the AFU management zone(s)

Upland Stream Areas
HGLUOO s. 13

6.67 Within each watershed Sub-unit indicated on HGLUOO Schedule 6, and where development areas are proposed by the Plan Holder, the Plan Holder will do the following:

a) ensure that a watershed analysis is completed by a Qualified Professional that indicates the watershed condition and the upland stream area; and
b) ensure that rates of harvesting within a watershed Sub-unit are consistent with the watershed analysis results and that >70% of the forest, measured in hectares, in the upland stream area is hydrologically recovered; and
c) maintain an updated ledger that tracks the development activities within watershed sub-units.

6.68 Despite Section 6.67, <70% of the forest, measured in hectares, in the upland stream area may be retained, provided that the Plan Holder ensure the following, subject to a through d, below:

a) the revised upland stream area retention percentage is consistent with the outcome of a completed intergovernmental process; and
b) a watershed assessment is completed by a Qualified Professional that indicates the watershed sub-unit sensitivity to forest development and disturbance; and the amount, type and distribution of forest cover that is required to sustain natural hydrological and fluvial process; and
c) the rates of harvesting within a watershed sub-unit are consistent with the watershed assessment results provided in Sub-section b); and
d) an adaptive management plan is documented and implemented prior to reducing the upland stream area retention percentage below 70%, measured in hectares.

6.69 Where upland streams are direct tributaries to Type I or II fish habitat, sufficient vegetation, which may include trees, will be retained to maintain stream bank and channel stability, as determined by a Qualified Professional in consideration of the factors in FPPR Schedule 1, Section 2.

6.70 In upland stream areas, where stream channels are incised, have steep gradients, and support riparian plant communities that are dependent on high-humidity microclimates, sufficient trees and vegetation will be retained to maintain the riparian plant communities.

Sensitive Watersheds
HGLUOO s. 14

6.71 Within each sensitive watershed indicated in HGLUOO Schedule 7, and where development areas are proposed by the Plan Holder, the Plan Holder will do the following:

a) ensure that a watershed analysis is completed by a Qualified Professional that indicates the watershed ECA condition; and
b) maintain, on an ongoing basis, a ledger which tracks the development activities within the sensitive watersheds.

6.72 Within each sensitive watershed indicated in HGLUOO Schedule 7, and where development areas are proposed by the Plan Holder, harvest rates will be consistent with the following:

a) For watersheds ≥ 500ha, up to 5% of the watershed area may be harvested in a 5-year period.
b) For watersheds < 500ha, up to 10% of the watershed area may be harvested in a 10-year period.
c) Despite sub-sections a) and b) above, no harvesting will occur in sensitive watersheds with an ECA ≥ 20%.
d) Harvest rates and ECAs will be based on the watershed analysis required under Section 6.71, above.

6.73 Despite Section 6.72 above, for a given sensitive watershed, the Plan Holder may maintain a rate of harvest and/ or an ECA that exceeds the indicated thresholds, provided the Plan Holder ensures the following:

a) the revised rate of harvest and/ or ECA threshold is consistent with the outcome of a completed intergovernmental process; and
b) a watershed sensitivity assessment is completed by a Qualified Professional that indicates the watershed sensitivity to past, current, and proposed forest development and disturbance, and the amount, type and distribution of forest cover that is required to sustain natural hydrological and fluvial process; and
c) the rates of harvesting within a watershed sub-unit are consistent with the watershed assessment results provided in Sub-section b), above; and
d) an adaptive management plan is developed, documented, and implemented prior to increasing the rate of harvest and/ or ECA for the watershed.

Community Watersheds
FPPR s. 8.2

6.74 To meet the objective described in Section 8.2(2) of the FPPR within a community watershed, the Licensee will:

In conjunction with other potentially affected forest agreement holders, and preceding the commencement of primary forest activities, engage a Qualified Professional(s) to conduct a Watershed Assessment (WA) for the community watershed in which the activities are proposed. Through the engagement of a Qualified Professional(s), the assessment will be prepared to address the objectives described in Section 8.2(2) by assessing the equivalent clearcut area (ECA), road densities, terrain stability, and general stream morphology and function. Subsequent assessments will be conducted at least once every 5 years, unless no primary forest activities have occurred or are proposed to occur in the community watershed(s) during that period; and ensure that planned primary forest activities are designed and implemented to be consistent with the results and recommendations in the Watershed Assessment.

Wetland Riparian Classes
FPPR s. 48

6.75 Where a wetland meets the definition of Type I or II fish habitat, as defined in the HGLUOO, then the wetland is classed as Type I or II fish habitat and managed accordingly; otherwise the Plan Holder adopts the FPPR requirements in relation to wetland riparian classes and minimum RMA zone widths.

Lake Riparian Classes
FPPR s. 49

6.76 Where a lake meets the definition of Type I or II fish habitat, as defined in the HGLUOO, then the lake is classed as Type I or II fish habitat and managed accordingly; otherwise the Plan Holder adopts the FPPR requirements in relation to lake riparian classes and minimum RMA zone widths.

Restrictions in a Stream, Wetland, or Lake Riparian Management Area
FPPR s. 50

6.77 For Type I fish habitat, Type II fish habitat, upland streams, and wetlands and lakes that do not meet the definition of Type I or II fish habitat, as defined in the HGLUOO, the Plan Holder adopts the FPPR requirements in relation to restrictions within a riparian management area.

6.78 For wetlands and lakes that do not meet the definition of Type I or II fish habitat, as defined in the HGLUOO, the Plan Holder adopts the FPPR requirements in relation to restrictions within a riparian reserve zone.

Retention of Trees within the Riparian Management Zones
FPPR s. 12(3)

6.79 Retention of trees within riparian management zones (RMZs) will be as follows:

a) For Upland Streams, the retention of trees within riparian management zones, measured in basal area, will be prescribed by the signing Forester and documented within the Site Plan in consideration of the factors listed in FPPR Schedule 1, Section 2 as of the date of submission of the FSP.
b) For wetlands and lakes that do not meet the definition of Type I or II fish habitat, as defined in the HGLUOO, with respect to FPPR s. 12(3), unless specific wildlife and/ or biodiversity values are identified in the riparian management area of a wetland or lake, retention of trees within the RMZ will be based on consideration of the likelihood of damages to the riparian feature. Basal area retention will range up to 100%, as deemed appropriate by the signing Forester and documented within the Site Plan in consideration of the factors listed in FPPR Schedule 1, Section 2 as of the date of submission of the FSP.

Biodiversity

Soils
FPPR s. 5 (not subject to approval)

6.80 The Plan Holder undertakes (FPPR s. 12.1(1)) to comply with the legislated requirements setting limits for soil disturbance and for permanent access structures as outlined in FPPR s. 35 and 36.

Maximum Cutblock Size
FPPR s. 64

6.81 The Plan Holder undertakes (FPPR s. 12.1(3)) to comply with the legislated requirements in relation to maximum cutblock size (FPPR s. 64).

Adjacency
FPPR s. 65

6.82 The Plan Holder undertakes to comply with the legislated requirements in relation to harvesting adjacent to another cutblock (FPPR s. 65).

6.83 As per FPPR sec. 12.4(2), the Plan Holder will adhere to FPPR s. 65 for all areas within FDU A, with the following exceptions, which will only apply to the Plan Area within the Eden Lake Landscape Unit, as shown in HGLUOO Schedule 1:

a) Section 65 (3)(a) is replaced with: at least 75% of the net area of the existing cutblock to be reforested is stocked such that the average height of the well-spaced trees is a minimum of the free growing height as specified in the approved Stocking Standards, located in Appendix B; and
b) Section 65 (3)(b)(ii) is stocked such that the average height of the well-spaced trees is a minimum of the free growing height as specified in the approved Stocking Standards, located in Appendix B.

Forested Swamps
HGLUOO s. 15

For clarity, forested swamps refer to the following BEC types: CWH wh1 – 12; CWH wh2 – 06; CWH vh2 – 13 (referred to as western red cedar-Sitka spruce/ skunk cabbage ecological communities under the HGLUOO).

6.84 With reference to individual development areas, where forested swamp areas ≥0.25ha occur, they will be retained and a 1.5 tree-length (average width) management zone will be established to protect the forested swamp.

6.85 Within management zones established under Section 6.84 above, >70% of the forest, measured in hectares, will be retained as mature or old forest.

6.86 Despite Section 6.85 above, the amount of mature or old forest retained in the management zone may be reduced to 60%, measured in hectares, provided that:

a) the amount of mature and old forest retained is sufficient to maintain the integrity of the forested swamp; and
b) an adaptive management plan is documented and implemented prior to reducing the percentage of mature and old forest below 70%, measured in hectares.

Ecological Representation
HGLUOO s. 16

6.87 Within each Landscape Unit (LU) indicated in HGLUOO Schedule 10, and where development areas are proposed by the Plan Holder, prior to development activities the Plan Holder will do the following:

a) Ensure that an ecological representation analysis is completed by a Qualified Professional that indicates the current inventory of old forest by site series and LU.
b) Form an agreement that documents:
    i. who is responsible for completing the ecological representation analysis; and
    ii. how the required old forest retention will be allocated; and
    iii. how any required old forest recruitment, consistent with Section 6.91 below, will be allocated; and
    iv. who is responsible for tracking the old forest retention.

6.88 The Plan Holder will maintain a ledger, updated annually at a minimum, which tracks the depletions and additions to the old forest inventory by site series and LU.

6.89 Where development activities are proposed within a forest area that is classified as a rare or common site series, consistent with HGLUOO Schedule 10, the Plan Holder will retain an amount (measured in hectares) of old forest greater than or equal to the applicable target listed for said site series in Schedule 10, consistent with Section 6.87 above.

6.90 Where practicable, old forest areas that are retained consistent with Section 6.87 above will include habitat for local species at risk and regionally important wildlife, including, but not limited to:

a) Northern Goshawk nesting and foraging habitat; and
b) Marbled Murrelet nesting habitat, Great Blue heron nesting habitat, and Northern Saw-Whet Owl core nesting areas; and
c) Black Bear dens and denning habitat.

6.91 Where there is insufficient old forest available to meet the requirements under Section 6.89 above, the Plan Holder will identify, retain, and recruit old forest stands where necessary, through natural processes (passive), and may implement voluntary interventions (active), to meet the representation requirements in the shortest possible timeframe. To meet this objective, older stands will be chosen before younger stands when identifying recruitment areas.

Strategies that will be used to identify, retain, and recruit old forest stands include:

a) Identifying mature stands (of the appropriate site series) in the LU that are already constrained for other reasons and designating them as reserves set aside to meet the ecological representation requirements.
b) Where there are not enough mature stands (of the appropriate site series) in the LU that are not already constrained for other reasons, unconstrained stands will be identified and designated as reserves set aside to meet the ecological representation requirements.

6.92 Where mature stands have been designated as reserves set aside to meet the ecological representation requirements, voluntary management intervention strategies to be used to help recruit old forest stands in the earliest possible timeframe include:

a) Fertilization treatments, to help accelerate rates of growth and promote old-growth characteristics; and
b) Stand thinning or stand modification treatments to help accelerate rates of growth and promote old-growth characteristics.

Red- and Blue-Listed Ecological Communities
HGLUOO s. 17

6.93 With reference to individual development areas, where red- or blue-listed ecological communities ≥0.25ha occur, they will be retained.

6.94 Despite Section 6.93 above, up to 5% of the area of each type of red-listed ecological community occurring in a development area may be altered or harvested if required for road access or to address a safety concern and no other practicable option exists.

6.95 Despite Section 6.93 above, up to 30% of the area of each blue-listed ecological community occurring in a development area may be altered or harvested if:

a) the harvesting is required for road access or to address a safety concern and no other practicable option exists; or
b) the harvesting is required for a reason other than the one specified in Sub-section a) above, provided that the harvesting is consistent with the outcome of a completed intergovernmental process.

Wildlife

Black Bear Dens
HGLUOO s. 18

6.96 With reference to individual development areas, where a Black Bear den exists and its existence is confirmed by a Qualified Professional, a 20m radius (minimum width) reserve zone will be maintained around the den to protect the den. The reserve zone will be protected by maintaining a 1.0 tree-length (average width) management zone, measured from the outer edge of the reserve zone.

6.97 Where a Black Bear den exists, and a Qualified Professional confirms the den is active, then a minimum two tree length no-work zone from the management zone will be applied during the winter hibernation season between November 15 to April 15 and extended to May 15 if a cub is present. All primary forest activities including hauling will not occur in the no-work zone between the dates listed above.

6.98 Despite Section 6.96 above, alteration or removal of a Black Bear den or its reserve zone, or both, may occur provided that: the alteration and/or removal is consistent with the outcome of a completed intergovernmental process; and the alteration and/or removal is required for road access or to address a safety concern; and the alteration and/or removal does not occur during the winter hibernation season.

6.99 For the purposes of recruiting future Black Bear den sites, where practicable: suitable Western Red Cedar or Yellow Cedar will be retained within the management zone identified in Section 6.96 above; and trees, snags, stumps and logs >80cm in diameter will be retained within stand level retention associated with the development area.

Despite Section 6.96 above, alteration or removal of trees within the management zone may occur, outside of the winter hibernation season, consistent with any of the following: the alteration and/or removal is required to accommodate operational requirements for road or bridge construction and no practicable alternative exists; or for any existing road under active tenure, the alteration and/or removal is required to accommodate: road maintenance, deactivation, the removal of danger trees, brushing and clearing within a right-of-way, for safety purposes; or the alteration and/or removal is required to mitigate the impact of windthrow.

Marbled Murrelet Nesting Habitat
HGLUOO s. 19

6.100 Within each Landscape Unit, and where development areas are proposed by the Plan Holder, prior to development activities, the Plan Holder will:

a) retain an amount of Marbled Murrelet nesting habitat within each LU greater than or equal to the LU target area listed in HGLUOO Schedule 9; and
b) ensure the nesting habitat referred to in sub-section a) above is within the areas shown in HGLUOO Schedule 11; or may be a different area than identified in HGLUOO Schedule 11, provided the nesting habitat is Class 1 or 2, as identified by a Qualified Professional; and
c) maintain a ledger, updated annually at a minimum, which tracks the depletions and additions to the Marbled Murrelet nesting habitat retention inventory, by LU.

6.101 For each LU, and where development areas are proposed by the Plan Holder, the Plan Holder will do the following, prior to development activities within the applicable LU:

a) complete a Marbled Murrelet nesting habitat retention inventory; and
b) The Plan Holder will be responsible to ensure the amount of nesting habitat is maintained in a landscape Unit by weighted average of tenure in that landscape
c) in respect to the WHAs, comply with the applicable GWMs, as per FPPR s. 69.

Northern Goshawk Habitat
HGLUOO s. 20

6.102 The Plan Holder will retain all Northern Goshawk reserves as shown in HGLUOO Schedule 12.

6.103 The Plan Holder will provide nest identification training to their forestry development team.

6.104 If the Plan Holder discovers a potential Northern Goshawk nest that is outside of the HGLUOO Schedule 12 reserves, the Plan Holder will do all of the following:

a) cease harvesting and road-building activities within 800m of the potential nest immediately and report the location of the potential nest to the Council of the Haida Nation and the Province of BC as soon as practicable; and
b) have the nest and surrounding area assessed by a Qualified Professional; and
c) where the qualified registered professional determines the nest to be a Northern Goshawk nest, a reserve zone will be maintained around the nest site, that is a minimum of 200ha and that maximizes the best available nesting and foraging habitat available, to protect the integrity of

the nest site, consistent with the assessment and recommendations of a Qualified Professional; and

d) report the location of the confirmed nest to the Council of the Haida Nation and the Province of BC as soon as practicable; and
e) A restricted activity zone will be maintained during the breeding season, with a minimum radius of 800m around the nest site; and
f) Where some or all of the reserve zone maintained under section 6.100 (c) has been previously altered or harvested the Plan Holder will provide for the recruitment of mature forest and old forest in that reserve through natural processes and voluntary management intervention.

6.105 Despite Sections 6.102 and 6.104 above, Northern Goshawk reserves (HGLUOO Schedule 12) and reserve zones may be reduced, provided that:

a) the reduction is consistent with the outcome of a completed intergovernmental process; and
b) the reduction is required for road access, where no practicable alternative exists, or to address a safety concern; and
c) the reduction does not occur during Northern Goshawk breeding season; and
d) there is no net loss to the Northern Goshawk reserve area.

6.106 In respect to the WHAs, the Plan Holder will comply with the applicable GWMs, as per FPPR s. 69.

Great Blue Heron Nesting Habitat
HGLUOO s. 21

6.107 With reference to individual development areas, where Great Blue Heron nest sites occur they will be retained and a 350m (minimum width) reserve, measured from the edge of the nest site, will be maintained to protect the nest site. Additionally, the reserve will be ≥ 45ha in size.

6.108 The Plan Holder will provide nest identification training to their forestry development team.

6.109 Where the Plan Holder discovers a new potential Great Blue Heron nest site, the Plan Holder will:

a) cease harvesting and road-building activities within a 350m radius of the potential nest immediately and report the location of the potential nest to the Council of the Haida Nation and the Province of BC as soon as practicable; and
b) have the nest and surrounding area assessed by a Qualified Professional; and
c) where the Qualified Professional determines the nest to be a Great Blue Heron nest, a reserve will be established consistent with 6.107 above; and
d) the location of the confirmed nest will be reported to the Council of the Haida Nation and the Province of BC as soon as practicable; and
e) unless confirmed by a Qualified Professional to be inactive three consecutive years during the Great Blue Heron breeding season (reconfirmed annually), a restricted activity zone will be maintained during the breeding season, with a minimum radius of 150m measured from the edge of the reserve.

Northern Saw-Whet Owl Nesting Habitat
HGLUOO s. 22

6.110 The Plan Holder will retain all Northern Saw-Whet Owl reserves, as shown on HGLUOO Schedule 12.

6.111 The Plan Holder will provide nest identification training to their forestry development team.

6.112 Where the Plan Holder discovers a new potential Northern Saw-Whet Owl nest that is outside of the HGLUOO Schedule 12 reserves, the Plan Holder will:

a) cease harvesting and road-building activities within a 180m radius of the potential nest immediately and report the location of the potential nest to the Council of the Haida Nation and the Province of BC as soon as practicable; and
b) have the nest and surrounding area assessed by a Qualified Professional; and
c) where the Qualified Professional determines the nest to be a Northern Saw-Whet Owl nest, a reserve will be established around the nest site that is a minimum of 10ha and centered on the nest; and
d) the location of the confirmed nest will be reported to the Council of the Haida Nation and the Province of BC as soon as practicable.

6.113 Where practicable, Northern Saw-Whet Owl core nesting areas will be identified and retained within stand level retention and other reserve or management zone areas and distributed across the landscape, with a target maximum inter-patch spacing of 1,400m.

Forest Reserves

Wildlife Tree Retention and Harvest Restrictions
FPPR s. 66, 67

6.114 The Plan Holder will undertake (FPPR s. 12.1(4)) to comply with the legislated requirements in relation to wildlife tree retention (FPPR. s. 66) and restriction on harvesting in a wildlife tree retention area (FPPR. s. 67).

Forest Reserves
HGLUOO s. 23

6.115 The Plan Holder will retain all the Forest Reserves, as shown in HGLUOO Schedule 8.

6.116 Despite Section 6.115 above, the area of an individual Forest Reserve may be reduced by up to 5%, provided that:

a) applicable results and strategies within this FSP address the target requirements indicated in HGLUOO Schedules 9 and 10; and
b) the remaining Forest Reserve is ≥ 5.0ha; and
c) the reduction is necessary to:
    i. accommodate operational requirements for road or bridge construction, where no practicable alternative exists; or
    ii. accommodate road maintenance, deactivation, removal of danger trees, brushing and clearing within a right-of way, or for safety purposes, on any existing road under active tenure; or

iii. to mitigate the impact of windthrow.

6.117 Despite Section 6.115 above, a portion of a Forest Reserve may be moved to another location within the same Landscape Unit, provided that:

a) the alteration of the Forest Reserve is consistent with the outcome of a completed intergovernmental process; and
b) applicable results and strategies within this FSP (eg., Marbled Murrelet and Ecological Representation) address all of the target requirements indicated in HGLUOO Schedules 9 and 10 for the applicable LU; and
c) the portion removed is ≤ 20ha; and
d) the areas retained are > 200m in width; and
e) the relocation does not result in any Forest Reserve that is < 5.0ha; and
f) the relocation follows the recommendations of an assessment completed by a Qualified Professional which focuses on identifying candidate reserve areas consistent with meeting the HGLUOO objectives established for Marbled Murrelet nesting habitat and ecological representation.

Recruitment in Reserves, Management Zones, & Stand Level Retention Areas
HGLUOO s. 5, 6, 10, 11, 15, and 20

6.118 Where some or all of the reserves, management zones, or stand level retention areas established under the applicable HGLUOO objectives (refer to section 10, below) have been previously altered or harvested, the Plan Holder will provide for recruitment of mature and old forest in the reserve, management zone, or stand level retention area, as applicable, through natural processes (passive recruitment), and may promote recruitment through voluntary interventions (active recruitment).

For the management zones associated with Cultural Cedar Stands, CMTs, and Monumental Cedar, the Plan Holder will maintain or recruit, in the shortest possible timeframe, at least 90% of the forest as mature and old forest, through natural processes (passive), and may promote recruitment through voluntary interventions (active). Where the recruitment strategy is to use natural processes (passive), the Plan Holder will not harvest any of the existing mature or old forest in the management zone until the 90% threshold has been attained.

Table 9: Recruitment Summary Table, by HGLUOO Objective

Objective Requiring Recruitment	Recruitment Location	FSP Section Reference
Class 1 HTHFs	Reserve	6.6(b)
Class 2 HTHFs	Reserve	6.6
Class 1 HTFFs	Reserve	6.10
Class 2 HTFFs	Applicable Stand Level Retention	6.11
Cultural Cedar Stands, CMTs, & Monumental Cedar	Management Zones	6.29
Type I Fish Habitat	Type I Fish Habitat & Reserve	6.60
Type II Fish Habitat	Type II Fish Habitat & Reserve	6.62
Active Fluvial Units	Active Fluvial Unit & Management Zone	6.64
Forested Swamps	Management Zone	6.84
Existing Northern Goshawk Reserves	Reserve	6.102
New Northern Goshawk Nesting Reserves	Reserve	6.104

7.0 Measures for Invasive Plants

Table 10: Invasive Plants known to occur in the Plan Area 2018, including Invasiveness Class

Haida Gwaii IPMA Plant List		
Red font indicates species has been identified within the IPMA		
REDRR	**High Priority**	**Lower Priority**
Bishop's Goutweed	Common tansy	Bull thistle
Cutleaf blackberry	Bohemian knotweed	Canada thistle
Cypress spurge	Dalmatian toadflax*	Common burdock
Diffuse knapweed	Gorse*	Common comfrey*
English holly*	Himalayan blackberry*	Oxeye daisy
English ivy*	Himalayan knotweed	Yellow toadflax*
Garden yellow loosestrife*	Japanese knotweed	Bladder campion
Himalayan balsam	Scotch Broom*	Common bugloss
Marsh plume thistle	Spotted hawkweed	Meadow goat's-beard
Mountain bluet	Tansy ragwort*	Mossy stone crop
Orange hawkweed	Yellow archangel	Scentless chamomile
Spotted knapweed	Yellow flag iris	
St. John's wort	Giant knotweed	
Wormwood*		
Yellow hawkweed		
Baby's-breath		
Black knapweed		
Blueweed		
Brown knapweed		
Chicory		
Field scabious		
Giant hogweed		
Greater knapweed		
Hoary alyssum		
Leafy spurge		
Meadow knapweed		
Mouse-eared hawkweed-**Prov. EDRR**		
Nodding thistle		
Plumeless thistle		
Purple loosestrife		
Russian knapweed		
Russian thistle		
Scotch thistle		
Sulphur cinquefoil		
Whiplash hawkweed		
Wild carrot		
Wild chervil		
Yellow floating heart		
*English holly & ivy outside of gardens	*Dalmatian toadflax to be confirmed	*Common comfrey near agriculture
*Garden yellow loosestrife sample to be collected 2017	*Gorse outside containment polygon around Sandspit	*Yellow toadflax to be confirmed
*Wormwood species to be identified	*Himalayan blackberry outside of VQC	
	*Scotch broom outside of containment	
	*Tansy Ragwort outside of containment	

Table 10 above is the most up to date table available. If the table is updated during the life of this plan the Plan Holder will use the most up to date table. Where the introduction or spread of invasive plants is likely the result of forest practices of the Plan Holder, the Plan Holder will do the following, unless the Plan Holder deems the area to be part of the road way.

Training

7.1 The Plan Holder will provide forestry workers with training in the identification and recognition of invasive plants that are, or may potentially be, within (i.e., known to occur in adjacent areas) the Plan Area.

Monitoring & Reporting

7.2 A Qualified Professional will review the provincial IAPP application during the block development phase and the results will be documented in the SP occurrences.

7.3 The Plan Holder will monitor for the presence of invasive plant species during forest development fieldwork, silviculture surveys, routine inspections, and general travel. Where new invasive plant incidences are identified, they will be reported within 30 days to the NWIPC, or by filing a report in the IAPP application directly.

7.4 Where new occurrences or existing invasive plants are detected (either a newly introduced plant species, or a new location of a plant species known to already exist within the Plan Area), the site will be assessed by a Qualified Professional. Where practicable, an appropriate action plan will be prepared and implemented to address the invasive plant occurrence.

Sanitation & Disposal

7.5 Contractors and sub-contractors employed by the Plan Holder are required to ensure machines are cleaned and provide notification of such prior to being transported from an area known to contain invasive plant species to areas without. The Plan Holder will provide information on the location of known invasive species within the FDU to contractors working for the Plan Holder.

7.6 Invasive plant disposal will be done by using best practices as recommended by the NWIPC, to the extent practicable, as prescribed by a Qualified Professional.

Re-vegetation

7.7 For newly (after the date of Plan commencement) developed areas (roads and cutblocks) that result in exposed mineral soils as determined by a Qualified Professional (where contiguous area is greater than 0.1ha, with a contiguous minimum width of greater than 5m, excluding the roadway, the Plan Holder will do the following:

a) Re-vegetate the exposed area as climatic and soil conditions allow and within one year of disturbance, if:
   - the disturbed area is not to be reforested and is not the running surface of a road; and
   - the soil disturbance is likely to result in the introduction or spread of the established invasive plants; and
   - re-vegetating the site will materially reduce the likelihood of the spread of the invasive plants.

b) Monitor the seeded areas for one year from the date of initial seeding to determine if the seed germinates to the extent necessary to occupy the areas of exposed soil; and

c) If within one year of the area being initially seeded, the seed does not germinate to the extent necessary to occupy the areas of exposed soil, the Plan Holder will re-seed the area as soon as

practicable. Where seeding alone is not successful, fertilization and scarification treatments will be considered, where feasible.

For re-vegetation, the Plan Holder will use Haida Gwaii Reseeding Mixture (according to Canada's Seeds Regulations), or better.

Roadside Brushing

7.8 Prior to prescribing roadside machine-based brushing a Qualified Professional will determine if invasive plants are in the area of the proposed brushing.

7.9 The Qualified Professional will, where practicable, modify roadside brushing treatment timing and methods to minimize the spread of established invasive plants.

8.0 Stocking Standards

Stocking Standards - General

FPPR s. 44

8.1 FPPR s. 44(1) applies in all situations or circumstances under the Plan where a free growing stand is required to be established under FRPA s. 29. FPPR s.45 is not applicable to this FSP.

8.2 For the purposes of FPPR. s 44(1a) and (b), Appendix B specifies the regeneration date, free growing height, and stocking standards for the situations or circumstances in which FPPR s. 44(1) applies.

Stocking standards for development areas with free growing obligations have been provided in Appendix B. Stocking standards are to be assigned and documented within Site Plans, by the prescribing Forester.

Special Forest Products Stocking Standards

FPPR s. 16(4)

The Plan Holder may implement programs for special forest products, including shake, shingle, cant, and whole logs. The special forest products programs will involve the harvest of dead and down wood only. The Plan Holder will implement the special forest products programs under designated salvage permits or licenses.

8.3 Where harvesting of special forest products (FPPR s. 44(3)(i)) occurs, stocking standards will be applied as follows:

a) Where areas are subject to a Site Plan and associated stocking standards, the designated standards will be implemented or maintained.
b) Where there is no Site Plan, the following standards will apply to the area:
    i. the harvest activities will not cause the total yield for the standards unit to be less than the yield had the harvesting not occurred; and
    ii. at the conclusion of the harvesting, a species composition will be retained in the standards unit that is substantially the same as the species composition of the standards unit immediately prior to the harvesting; and
    iii. at the conclusion of the harvesting, tree health and vigour in the standards unit will be left substantially the same as it was immediately prior to the harvesting.

8.4

Standards Applying to Pre-FSP Plans and Prescriptions

FRPA s. 197

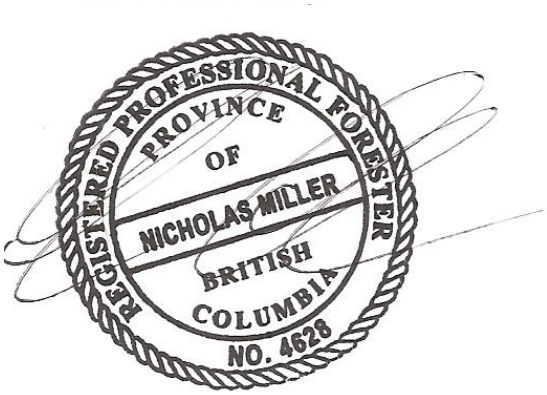
For cutblocks where stocking standards set out in the Code or in a pre-Code prescription would otherwise apply (including a Site Plan, Silviculture Prescription, or Pre-Harvest Silviculture Prescription), the FSP Holder may elect to meet these standards, for the purposes of otherwise specifying stocking standards under FRPAs. 197(4, 5 or 7) within an FDU as specified by FPPR s. 14(1)(d or e) and where ecologically appropriate, have stocking standards approved under this Plan apply to standards units within such cutblocks. For each standards unit, this selection is to be made prior to the previously specified Late Free Growing date by electronically updating the Ministry's RESULTS system to indicate the replacement FSP standard.

9.0 Signatures of Persons Required

Plan Holder & Authorized Plan Holder Signatures

Plan Holder	Authorized Signatory & Title	Signature	Date
Husby Group 6425 River Road Delta, BC V4K 5B9 Ph: (604) 940-1234 Fx: (604) 940-1236	Robert Sandberg RPF VP Forestry and Engineering		May 2, 2018

Signing Forester

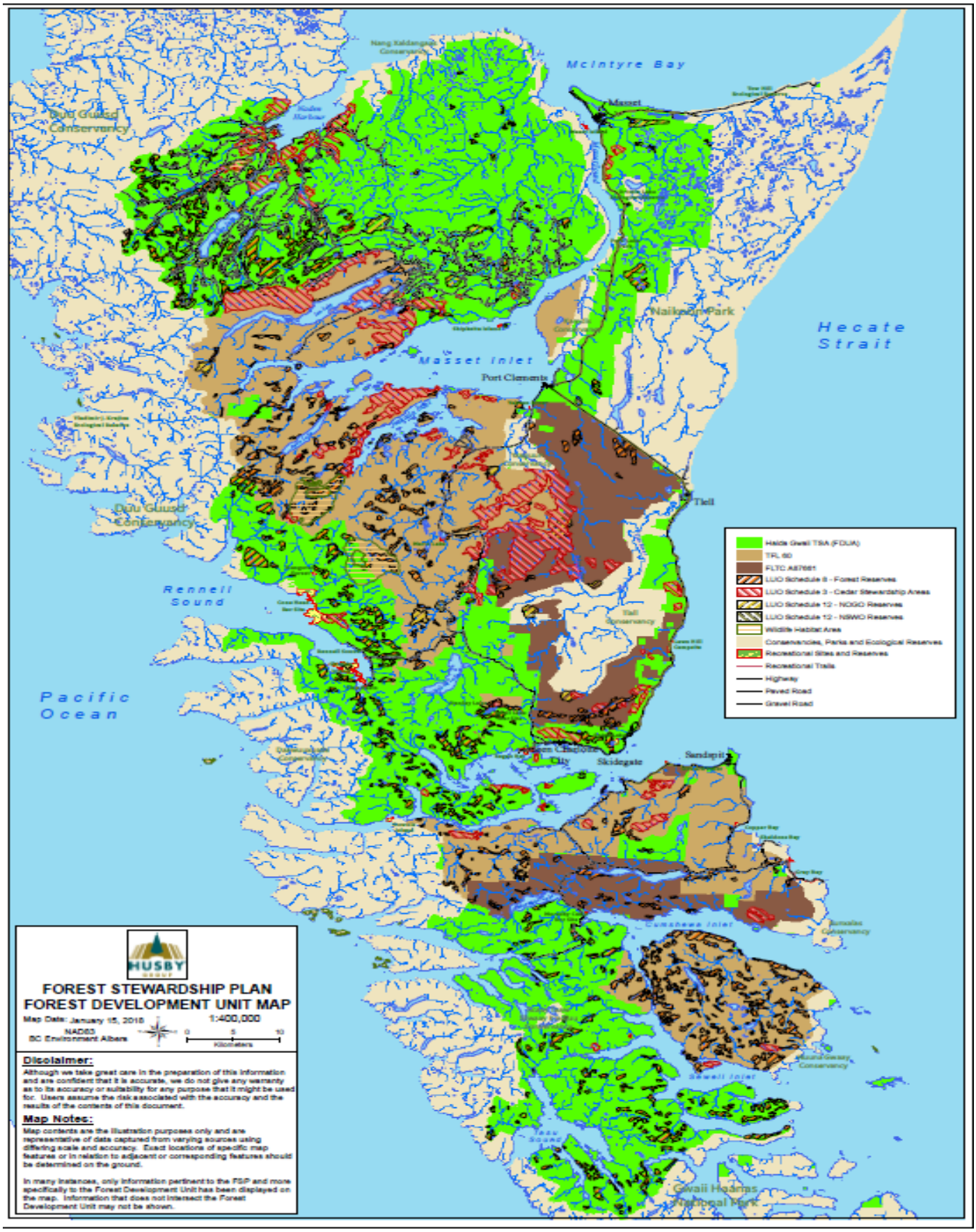


Nicholas Miller, RPF –

Date: May 2, 2018

I certify that the work described herein fulfills the standards expected of a member of the Association of British Columbia Forest Professionals and that I did personally supervise the Work.

Appendix A: FSP Map


McIntyre Bay
Masset
Naikoon Park
Hecate Strait
Masset Inlet
Port Clements
Tlell
Rennell Sound
Pacific Ocean
Skidegate
Sandspit
Gwaii Haanas National Park
Haida Gwaii TSA (FDUA)
TFL 60
FLTC A87661
LUO Schedule 8 - Forest Reserves
LUO Schedule 9 - Cedar Stewardship Areas
LUO Schedule 12 - NCGO Reserves
LUO Schedule 12 - NSWO Reserves
Wildlife Habitat Area
Conservancies, Parks and Ecological Reserves
Recreational Sites and Reserves
Recreational Trails
Highway
Paved Road
Gravel Road
HUSBY GROUP
FOREST STEWARDSHIP PLAN
FOREST DEVELOPMENT UNIT MAP
Map Date: January 15, 2018
1:400,000
NAD83
BC Environment Albers
0 5 10
Kilometers
Disclaimer:
Although we take great care in the preparation of this information and are confident that it is accurate, we do not give any warranty as to its accuracy or suitability for any purpose that it might be used for. Users assume the risk associated with the accuracy and the results of the contents of this document.
Map Notes:
Map contents are the illustration purposes only and are representative of data captured from varying sources using differing scale and accuracy. Exact locations of specific map features or in relation to adjacent or corresponding features should be determined on the ground.
In many instances, only information pertinent to the FSP and more specifically to the Forest Development Unit has been displayed on the map. Information that does not intersect the Forest Development Unit may not be shown.

Appendix B: Stocking Standards

CWHwh1 – even aged

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Hw/2.0 Ss/3.0 Cw/1.2 Dr/4.0	900	500	2.00 (Dr/1.5)	6	20
01s	Hw/2.0 Cw/1.2 Ss/3.0 Plc/2.0	900	500	2.00	6	20
02	Cw/1.2 Hw/1.3 Plc/1.3 Ss/2.0	900	500	2.00	6	20
03	Ss/3.0 Cw/2.0 Hw/2.8 Yc/1.2 Dr/4.0	900	500	2.00 (Dr/1.5)	6	20
04	Cw/1.2 Hw/1.3 Yc/1.2 Plc/1.3 Ss/2.0 Dr/4.0	900	500	2.00 (Dr/1.5)	6	20
05	Hw/2.8 Cw/1.2 Ss/3.0 Dr/4.0	900	500	2.00 (Dr/1.5)	6	20
06	Hw/2.8 Cw1.2 Yc/1.2 Ss/3.0 Hm/2.8 Dr/4.0	800	400	1.50	6	20
07	Ss/3.0 Cw/2.0 Hw/2.8 Dr4.0	900	500	2.00 (Dr/1.5)	6	20
08	Ss/3.0	900	500	2.00 (Dr/1.5)	6	20

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
	Cw/2.0					
	Dr/4.0					
10	Cw/1.2	800	400	1.50	6	20
	Yc/1.2					
	Hw/1.3					
	Plc/1.3					
	Ss/2.0					
	Hm/0.8					
11	Plc/1.3	400	200	1.50	6	20
	Cw/1.2					
	Yc/1.2					
12	Cw/1.2	800	400	1.50	6	20
	Hw/1.3					
	Yc/1.2					
	Plc/1.3					
	Ss/1.3					
13	Cw/1.2	400	200	1.50	6	20
	Hw/1.3					
	Plc/1.3					
	Ss/2.0					
14	Ss/3.0	900	500	2.00	6	20
	Hw/2.0					
	Cw/1.5					
15	Ss/3.0	400	200	1.50	6	20
	Cw/1.5					
	Plc/2.0					
	Hw/2.0					
16	Ss/3.0	900	500	2.00	6	20
	Hw/2.0					
	Cw/1.5					
17	Ss2.0	400	200	1.50	6	20
	Cw/1.2					
	Hw/1.3					
18	Ss/2.0	400	200	1.50	6	20
*Mixed wood strategy on the CWHwh1 site series' 03, 05, 06, 07, and 08: where red alder is being managed as a leading species it will comprise ≥ 80% of the Free Growing stand; the target density will be 800–1200 sph; estimated rotation age of 50–70 years, with a target of 30cm dbh at rotation age.						

CWHwh2 – even aged

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Hw/2.0	900	500	2.00	6	20
	Cw/1.2					
	Ss/1.5					
	Yc/1.5					
	Hm/1.0					
02	Hw/2.0	900	500	2.00	6	20
	Cw/1.2					
	Yc/1.5					
	Ss/1.5					
	Hm/1.0					
03	Hw/2.0	900	500	2.00	6	20
	Cw/1.2					
	Yc/1.5					
	Ss/1.5					
04	Hw/2.0	800	400	1.50	6	20
	Cw/1.2					
	Yc/1.5					
	Ss/1.5					
05	Yc/1.2	400	200	1.50	6	20
	Cw/1.2					
	Hw/1.3					
	Hm/0.8					
	Ss/1.0					
06	Yc/1.2	800	400	1.50	6	20
	Cw/1.2					
	Hw/1.3					
	Hm/0.8					
	Ss/1.0					

CWHvh2 – even aged

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Cw/1.2 Hw/2.0 Yc/1.5 Dr/4.0 Ss/3.0 Plc/1.3	900	500	2.00 (Dr/1.5)	6	20
02	Plc/1.3 Cw/1.2 Yc/1.2 Hw/1.3	400	200	1.50	6	20
03	Cw/1.2 Hw/1.3 Plc/1.3 Yc/1.2 Ss/2.0 Dr/4.0	800	400	1.50 (Dr/1.5)	6	20
04	Hw/1.8 Ss/3.0 Cw//1.2 Dr/4.0 Yc2.0	900	500	2.00 (Dr/1.5)	6	20
05/06	Cw/1.5 Ss/3.0 Hw/1.8 Yc/1.5 Dr/4.0	900	500	2.00 (Dr/1.5)	6	20
07	Cw/1.5 Ss/3.0 Hw/1.8 Yc/1.5 Dr/4.0	900	500	2.00 (Dr/1.5)	6	20
08	Ss/3.0 Cw/1.5 Hw/1.8 Dr/4.0	900	500	2.00 (Dr/1.5)	6	20
09	Ss/4.0 Hw/1.8 Cw/1.5	900	500	2.00	6	20

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
11	Cw/1.2 Yc/1.2 Hw/1.3 Plc/1.3	800	400	1.50	6	20
12	Cw/1.2 Yc/1.2 Plc/1.3	400	200	1.50	6	20
13	Cw/1.2 Yc/1.2 Ss/2.0 Hw/1.3 Plc/1.3	800	400	1.50	6	20
14	Ss/2.0 Cw/1.2 Hw/1.3 Plc/1.3	400	200	2.00	6	20
15	Ss/3.0 Cw/1.5 Hw/2.0	900	500	2.00	6	20
16	Ss/3.0 Cw/1.5 Hw/2.0 Plc/1.5	400	200	2.00	6	20
17	Ss/2.0 Cw/1.2 Hw/1.3	900	500	2.00	6	20
18	Ss/2.0 Cw/1.2	400	200	2.00	6	20
*Mixed wood strategy on the CWHvh2 site series' 03, 04, 05/06, 07 and 08: where red alder is being managed as a leading species it will comprise ≥ 80% of the Free Growing stand; the target density will be 800–1200 sph; estimated rotation age of 50–70 years, with a target of 30cm dbh at rotation age.						

MHwh – even aged

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Hw/1.0 Yc/1.2 Hm/1.0 Cw/1.2 Ss/1.5	900	500	2	6	20
02	Hm/1.0 Yc/1.2 Cw/1.2 Hw/1.0 Ss/1.0	400	200	1.5	6	20
03	Hw/1.0 Ss/1.5 Cw/1.2 Yc/1.2 Hm/1.0	900	500	2	6	20
04	Cw/1.2 Yc/1.2 Hw/2.0 Hm/1.0 Ss/2.0	900	500	2	6	20
05	Cw/1.2 Yc/1.2 Hw/2.0 Hm/1.0 Ss/1.5 Plc/2.0	900	500	2	6	20
06	Cw/1.2 Yc/1.2 Hw/0.8 Hm/0.8 Ss/1.5	800	400	1.5	6	20
07	Cw/1.2 Yc/1.2 Hw/0.8 Hm/0.8 Ss/1.0	900	500	1.5	6	20
08	Cw/1.2 Yc/1.2	400	200	1.5	6	20

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
	Hw/0.8					
	Hm/0.8					
09	Cw/1.2	800	400	1.5	6	20
	Yc/1.2					
	Hw/0.8					
	Hm/0.8					
	Ss/1.0					

Species Acceptability

Ecologically suitable species are provided in the stocking standards in the tables above. The suitability/ acceptability of regeneration will be determined in the field by a Qualified Professional based on site-specific soil moisture, nutrient, aspect, and elevation characteristics and tree performance in response to the site. Tree species that are ecologically suitable and commercially valuable are listed in the standards provided in Appendix B.

Sitka Spruce (Ss)

On marginal sites: CHWwh1 (01s, 04, 10, 12); CWHwh2 (02, 05, 06); CWHvh2 (01, 13); MHwh (02, 03, 04, 06, 07, 09) where Ss is accepted, it will only be accepted to a maximum of 50% of the minimum stocking density. Furthermore, on these sites, Ss will be limited in terms of its acceptance at regen and Free-Growing to microsites that are medium or better, in terms of productivity (Soil Nutrient Regimes C-E). Sitka spruce will be targeted on elevated and productive microsites. In terms of elevation, Ss will be focused on lower elevation sites (especially in the MH subzone) and planted within the applicable elevation range for the stock.

Lodgepole Pine (Plc)

On marginal sites: CHWwh1 (01s, 02, 04, 10, 13, 14); CWHwh2 (02, 05, 06); CWHvh2 (11, 13, 14, 16); and MHwh (05) where Plc is accepted, it will only be accepted to a maximum of 50% of the minimum stocking density. Furthermore, on these sites, Plc will be limited in terms of its acceptance at regen and Free-Growing to microsites that are medium or poorer, in terms of productivity (Soil Nutrient Regimes A-C). Lodgepole pine will be targeted on depressions, folisolic, and other poor productivity microsites.

Red Alder (Dr)

Natural red alder ingress will be defaulted to a preferred species on all sites within 3 metres of any stream banks where harvesting is permissible.

An acceptable red alder crop tree must:

a) Be free from brush competition (consistent with the crop tree to brush height ratio for the BEC applicable BEC unit).
b) Not have a tree pith that is laterally displaced more than 30cm from the location of the root-crown pith.
c) Not originate from a cut stump.
d) Have one dominant live leader.
e) Not have a wound that is greater than 10% of the stem circumference nor is greater than 10% of the total length of the stem.
f) Not have any fungal infections or insect infestations affecting tissues below the bark surface, visible without destructive sampling.
g) Not be browsed so as to limit its ability to become a crop tree.

Minimum Inter-Tree Distance

Minimum inter-tree distances have been specified in the stocking standards tables above; however, for all sites, the minimum inter-tree distance may be reduced to 1.5m in the following circumstances:

a) within the roadside work area as defined in FPPR s.35(1); or

b) immediately adjacent to stream or riparian areas, naturally Non-Productive Areas, or areas ($50m^2$) covered with unplantable slash; or
c) on helicopter logged areas; or
d) on any talus site; or
e) immediately adjacent to retained single trees.

Brush Competition at Free Growing

The crop tree to brush height ratio at Free Growing is as follows:

a) For CWHwh1, CWHwh2 and CWHvh2 BEC units, the ratio is 150%.
b) For MHwh BEC Units, the ratio is 125%.

Mixed Conifer–Hardwood Management

Red alder may be the leading species in mixed-hardwood/ conifer (i.e., micro-patch mixed wood) management situations. Where red alder is the leading species (≥ 80%), the hardwood stocking standard may be applied. Where red alder is not the leading species, it will not be accepted as a crop tree.

On an annual basis, the Plan Holder area to be managed to hardwood stocking standards will be a maximum of 100ha.

Where red alder is included as a suitable species, the strategy will to pre-stratify the development area, and assign conifer or red alder stocking standards, as appropriate, consistent with the Site Plan. The minimum patch size for identifying and assigning the alder stocking standard will be 0.25ha.

Appendix C: Land Use Order Schedules

Haida Gwaii Land Use Orders Schedules can be found in the following link:

http://www.haidagwaiimanagementcouncil.ca/land_use_orders.html