



Sechelt Community Projects Inc.
 #201 – 5606 Wharf Avenue
 P.O. Box 215, Sechelt, BC V0N 3A0

SP ORIGINAL DATE: Dec 19, 2011
 SP AMENDMENT #: _____
 SP AMENDMENT DATE: _____

SITE PLAN

BLOCK IDENTIFICATION

LICENCE NO.: K3F	FDU: CFA	LOCATION: Angus Creek	OPENING NUMBER: 92G051 -	BLOCK NUMBER: AN09
LATITUDE: Deg: 49 Min: 31' 44"		LONGITUDE: Deg: 123 Min: 44' 43"		UTM: Zone: 10 East: 446086 North: 5486516 NAD: 83
SEED PLANNING ZONE: Maritime	ELEVATION RANGE: 185 – 200m	AIR PHOTO No's:	ASPECT: S	TOTAL AREA UNDER THE PLAN (ha): 11.5

ECOLOGICAL CLASSIFICATION AND AREA SUMMARY (FPPR 34(1)(a))

Area Classification								Area Summary (ha)					
SU	Standards ID	BGZ	E.A.	Moist	Nutr	Silv. System	Harv. System	Area	NP UNN	NP NAT	Res. (no mod.)	Ret. Patch	NAR
1	1020020	CWHdm	01 (03 - 30%/ 05-20%)	(3)4	M(R)	Ret	Groundbased	5.5	0.3	--	--	--	5.2
Rd	PAS							0.3	0.3				
WTP	WTP							3.3			3.3		
RET	RET							2.7				2.7	
Area Totals								11.5	0.3	0.0	3.3	2.7	5.2

STOCKING STANDARDS (FRPA 29(1) and FPPR 34(1)(b))

FREE GROWING STOCKING REQUIREMENTS						
SU	NET AREA TO BE REFORESTED (ha)	REGEN DELAY (yrs)	LATE FREE GROWING (yrs)	MAX CONIFEROUS (st/ha)	POST SPACING DENSITY (st/ha)	
					MIN	MAX
1	5.2	3	20	--	--	--

PREFERRED/ACCEPTABLE SPECIES		
SU	PREFERRED SPECIES/MINIMUM HEIGHT (m)	ACCEPTABLE SPECIES/MINIMUM HEIGHT (m)
1	Fd/3.0 Hw ²⁴ /3.0	Pw ³¹ /2.5 Cw/1.5

WELL SPACED TREES/ha					
SU	WELL SPACED TREES/ha				HEIGHT RELATIVE TO COMP (% OR cm)
	TARGET	MINIMUM	MIN PREF	MIN HORIZ DISTANCE (m)	
1	900	500	400	2.0	150

RATIONALE FOR CHOICE OF STOCKING STANDARDS (Based on resource objectives and site assessment.):

As per the FSP Approved Stocking Standards.

Less than 30% of SU 1 includes minor inclusions of 03 site series, characterized by salal, rock outcrops and coarse soils; and will be managed based on the dominant site series (01). No variations to the stocking standards are required.

Less than 20% of SU 1 includes minor inclusions of 05 site series, characterized by swordfern and fine textured soils; and will be managed based on the dominant site series (01). No variations to the stocking standards are required.

Pw³¹ is a preferred on Root Rot Areas, and requires being rust-resistant or pruned to 1.5m prior to becoming free-growing. Hw²⁴ is preferred in the wetter portion of the variant.

SOILS (FPPR Sections 34(1)(b), 35 & 36)

SITE DISTURBANCE							
SU	HAZARD RATINGS <i>(if logging methods other than cable or aerial are proposed)</i>			SOIL CHARACTERISTICS <i>(if temporary access structures are proposed)</i>			
	SOIL COMPACTION	SURFACE SOIL EROSION	SOIL DISPLACEMENT	DEPTH TO UNFAVORABLE SUBSOIL (cm)		TYPE OF UNFAVORABLE SUBSOIL	SEDIMENT DELIVERY RISK
				MIN(cm)	MAX(cm)		
1	L	H	VH	30	90	Sands/Rock/Comp Till	-

SOIL DISTURBANCE LIMITS (FPPR Section 35)		
SU	MAXIMUM ALLOWABLE SOIL DISTURBANCE WITHIN THE NET AREA TO REFOREST (%)	MAXIMUM EXTENT SOIL DISTURBANCE LIMITS MAY BE TEMPORARILY EXCEEDED TO CONSTRUCT TEMPORARY ACCESS STRUCTURES (%)
1	5.0	0.0

COMMENTS:
 Spur AN115A is a temporary stub spurs will be built to facilitate harvesting and will be rehabilitated to a level sufficient to support minimum stocking levels. A trail (1.5m wide) will be left on the rehabbed road as a safety trail for forest workers post harvest.
 No Terrain Stability Field Assessment is required as in-block slopes are less than 60% or no areas of unstable ground were observed.

MAXIMUM PROPORTION OF TOTAL AREA UNDER PLAN ALLOWED FOR PERMANENT ACCESS (FPPR Section 36): 7%
 COMMENTS (i.e., permanent structures, including existing access, roads, landings, special stream crossing, etc.):

Within Block AN09, where slopes are within the slope limits set by the WCB, the use of Skidder/Feller-buncher ground based equipment is permitted. However if excessive soil disturbance occurs, skidder activity must cease and until soil conditions improved (i.e. dry out) or; alternately, hoe-forwarding equipment may operate where required in this cutblock provided that adequate puncheon or floatation mats are utilized where soil conditions warrant such measures to prevent excessive soil disturbance. Harvesting in the wetter microsites should be done during dry conditions so that disturbance is minimized and drainage is maintained. Where soil disturbance limits have exceeded 5% of the NAR, significantly compacted trails will be rehabilitated within one year of completion of harvesting. Where the NCD's are within the block, ensure that channel water is not diverted during operations and channel integrity is maintained. Any intercepted water must be immediately diverted off a skid road or yarding road.

The Powerline Trail (Sechelt Groves Society) is located with the block. Reestablish trail to pre-harvest conditions after harvesting is completed or, alternatively, re-locate the trail to a location recommended by the Sechelt Groves Society.

Special Management Area #1 – An area of the block is delineated as having sensitive sub-surface archeological importance; therefore overland harvesting techniques must be used. This area will be harvested using “handfall;hoechuck only using overland puncheon”. No mineral ground disturbance is permissible. If overland techniques cannot be followed or if sub-surface is being disturbed, the work in this area must cease and a SCPI representative be contacted for further instruction.

MAXIMUM ALLOWABLE SOIL DISTURBANCE FOR ROADSIDE WORK AREAS	
ROADSIDE HARVESTING OPERATIONS, INCLUDING DECKING, PROCESSING, LOADING AND ANY ASSOCIATED DEBRIS DISPOSAL OR PILING OPERATIONS WITHIN THE NET AREA TO BE REFORESTED MUST NOT CAUSE THE AMOUNT OF SOIL DISTURBANCE TO EXCEED: <u>25%</u>	

SILVICULTURE/HARVEST SYSTEMS (SCPI Internal Policy)

SILVICULTURAL SYSTEMS				
SU	SYSTEM	VARIANT	PHASE	RESERVE
1	RETEN	REMOV		G

COMMENTS:
 AN09 will be harvested using an Even-Aged Retention Silviculture System. The intent of this system is to maintain structural characteristics at the stand level for at least one rotation. The block has at least 60% forest influence where more than 50% of total area of the cutblock within one tree height from the base of a tree or group of trees, whether or not the tree or group of trees is inside the cutblock. During machine felling, where tree diameter exceeds the manufacturer specs, hand falling must be used. See Leave Tree Specifications below for more information.

LEAVE TREE SPECIES AND FUNCTIONS
 Minimum Leave Tree Characteristics Including Form, Health and Vigour

Three internal aggregate retention patches have been identified and dispersed trees are marked to be retained. The retention is intended to assist in meeting the definition of the Retention Silviculture System consists of mostly Fd and Cw veteran trees. Three WTP's have been established external, but immediately adjacent, to the opening boundary in order to contribute to stand and landscape level biological diversity. Both the aggregate retention patches and the WTP's are representative of the adjacent stand in terms of species composition and ecological classification. If the an "in-block" marked leave tree must be must felled for safety reasons, then a replacement tree of similar size, and species must be left in the same area. If possible, unmarked dispersed trees will be left, preferably in groups, and include small merchantable western red cedar in the 10-30cm DBH range.

WILDLIFE (FPPR Section 7(2))

TAILED FROG (*Ascaphus truei*)
Not applicable. An area of Tailed Frog habitat has been identified within the Chapman Landscape Unit which fulfills the requirements of the notice for Tailed Frog. This area is outside of the CFA FDU. This block is not in vicinity to any of these areas nor has creeks that exhibit favourable stream conditions for habitation (S5 stream class and permanent flow characteristics).

QUEEN CHARLOTTE (NORTHERN) GOSHAWK (*Accipiter gentilis laingi*)
Not applicable. Sufficient suitable Queen Charlotte (Northern) Goshawk habitat has been identified within the SCFD to fulfill the requirements of the notice for Queen Charlotte (Northern) Goshawk. This area is outside of the CFA FDU. This block is not in the vicinity to any known Goshawk habitat or nest sites.

MARBLED MURRELET (*Brachyramphus marmoratus*)
Not applicable. (1) To meet the requirements of Section 1 of the notice, SCPI will identify and conserve an amount of MAMU habitat of class 1, 2 or 3 equal to the amount of class 1,2, or 3 habitat in the NC landbase. (2) SCPI will not carry out or authorize timber harvesting or road construction in a manner that is inconsistent with retaining the amount of habitat specified in the MAMU notice. (3) Sufficient suitable Marbled Murrelet (MAMU) nesting habitat has been identified within the SCFD to fulfill the requirements of section 1 of the notice for MAMU. This area is outside of the CFA FDU. This block is not in vicinity to any of these Marbled Murrelet Habitat Areas.

COMMENTS:
 A search through the Conservation Data Center identified that AN09 is not within sensitive areas.
 Evidence of Deer and Bear were observed in area. As harvesting will increase foliar browse potential, monitor browse seedling damage post harvest.

WATER AND FISH (FPPR Sections 12(3), 12.1(2), 47-51, 52(2) &53)

Stream, Wetland or Lake Identification	Riparian or Lake Class	Reserve Zone Width (m)	Management Zone Width (m)	% Basal Area Retention	Prescription
--					No streams are within the block.
All other NCD's	NCD	0	0	0%	Non-Fish. Non-Classified Drainages are unmapped and may be identified as small seeps or wet areas. No action required as drainages are only capable of transporting fine twigs or needles.

COMMENTS:
 A riparian assessment was not completed as no streams are identified in the block.

WILDLIFE AND BIODIVERSITY – LANDSCAPE LEVEL (FPPR Sections 12.1(3), 64 & 65)

This block in conjunction with adjacent blocks does not exceed 40 ha as specified in FPPR Sections 64(a) and 65(2)(b). Adjacent blocks are greened-up as specified in FPPR Section 65.

WILDLIFE AND BIODIVERSITY – STAND LEVEL (FPPR Sections 12.1(4) & 67)

1.2 ha of Wildlife Tree Patches are required to meet the requirements for CWHdm (10% retention) as specified in Objective 2 as per "Chapman Landscape Unit Plan" (effective December 2, 2002).

Wildlife Tree Patches equal to 3.3 ha (40% of the harvest area; 29% of Total Area) has been established externally, but immediately adjacent, to Block AN09. This Wildlife Tree Patch contains old growth Fd and Cw veterans and is representative of the adjacent stand in terms of species composition, volume, basal area and ecological classification.

VISUAL QUALITY (FRPA Section 181)

A Visual Impact Assessment (VIA) has been completed by Chartwell Consultants Ltd. (Warren Hansen, RPF, dated Dec 08, 2011). The block is visible from designated viewpoints on Sechelt Inlet and meets the Visual Quality Objective (VQO) Partial Retention (PR) for VLU #1284. The VIA is included in the Site Plan file.

CULTURAL HERITAGE RESOURCES (FPPR Section 10)

Overview maps were provided to the Sechelt Indian Band with no block specific comment received. A Preliminary Archaeological Recce was conducted by Peter Merchant which found archaeological remains near the Powerline Hiking Trail, where a more thorough (AIA) was conducted. A Section 12 permit approval (BC Heritage Act) is required to conduct activities near the sites found to have arch remains. As per the consultant recommendations, SCPI has designated a SMZ to restrict harvesting techniques in order to minimize disturbance of the sensitive site. Conditions of the Section 12 Permit will be followed.

First Nation present use is low. Cw retention for cultural purposes is provided in the form of retaining Cw Vets and small merchantable trees within the WTP and retention patches. As well, Cw seedlings will be planted for reforestation purposes that can assist to provide for future cultural purposes.

Should unanticipated cultural materials or features (including archaeological materials, culturally modified trees, or human remains) be encountered during timber harvesting and related activities, all work in the immediate area will cease and the appropriate First Nations groups, the Archaeology Branch and a qualified archaeologist will be contacted.

INVASIVE PLANTS AND RANGE BARRIERS (FPPR Sections 17 and 47)

Scotch broom is present within the BC Hydro Right of Way adjacent to the block. Grass seeding of exposed seed-beds will be conducted concurrently with road construction activities.

Invasive plant infestations caused by Licencee forest practices will be destroyed and measures to minimize invasive plant spread will be implemented. These measures are outlined in Section 1.6 of the Forest Stewardship Plan.

COARSE WOODY DEBRIS MANAGEMENT STRATEGIES (FPPR Section 68)

A minimum of 4 logs per hectare, each being a minimum of 5m in length and 30 cm in diameter at one end, will be retained as per FPPR Section 68(a). Short term coarse woody debris objectives will be met by slash left on site after timber harvesting operations. Long term coarse woody debris objectives will be met by periodic windthrow and natural mortality of timber adjacent to the opening and the aggregate retention patch. Slash levels are anticipated to be moderate within the block.

MAP ATTACHMENT

The Site Plan Map forms an integral part of this Site Plan.

COMMENTS

This Site Plan is consistent with the Forest Stewardship Plan for the Community Forest Agreement (approved Dec 28, 2006).

SIGNING AUTHORITY

<p>Warren P. Hansen, RPF _____ RPF Signature Sechelt Community Projects Inc.</p> <p>3982 _____ RPF #</p> <p>_____ DATE</p>
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