

Dunster Community Forest SITE PLAN Block KW 10

X ORIGINAL
2019-05-10
(Y M D)

FOREST DISTRICT Prince George		LOCATION 5-9 km Kiwa West ML		LICENCE K3O		TIMBER MARK K3O002	CUTTING PERMIT 2	BLOCK KW 10
FOREST REGION Omineca		TSA Robson						
Total Area Under Plan ¹ (TAUP) (ha)	Reserve Area ² (ha)	NAR ³ (ha)	Area to be harvested ⁴ (ha)	NP unn ⁵ (ha)		NP nat ⁶ (ha)	FIELD WORK BY (print) Ray Thiessen, TFT Dan Peterson	DATE COMPLETED 2018 07 13
11.3	1.1	9.9	10.2	Existing 0.0	Proposed 0.3	0.0		

¹ Gross Block Area ² External + Internal Reserves ³ Net Area to be Reforested ⁴ Roads and NAR ⁵ NP Unnatural – roads and landings ⁶ NP Natural

MANAGEMENT OBJECTIVES AND CONSISTENCY WITH PLANS

This prescription is consistent with the Dunster Community Forest Agreement K3O Forest Stewardship Plan (FSP) 2016-2021, for the Prince George Forest District, approved June, 2016.

Management Objectives:

To harvest mature timber in compliance with the company Forest Stewardship Plan (FSP) and to reforest with a free growing crop of conifers in accordance with the FSP Stocking Standards.
 To produce conifer saw-logs managed over an 80-100 year rotation.
 To maintain wildlife tree patches and wildlife trees over the harvested area for wildlife use.
 To manage succession in areas where portions have previously been logged.

ASSESSMENT COMPLIANCE

The Site Plan is in compliance with the Forest Stewardship Plan, Forest Range and Practices Act and Forest Practices and Planning Regulation.

- A) Visual Impact VQO Max Modification
- B) Terrain Stability NOT REQUIRED
- C) Gully (coast only) N/A
- D) Pest Incidence N/A
- E) Archaeological Impact Low
- F) Riparian Yes
- G) *The SP is consistent with the results/recommendations of these assessments (A-F).*

- H) Field Assessments
 - Y BEC
 - Y Soil Hazards
 - Y Indicators of Potential Slope Instability

ECOLOGY AND RESOURCE INFORMATION									
Elevation (m a.s.l.) Average: <u>1410</u> Range: <u>1380 - 1440</u>					Critical Site Factors: None				
					Slope		Humus	Soils	
Block (SU A)	Net Area (ha)	BGC Zone Subzone Variant	Site Series	Edatope Moist / Nutr.	Avg. % & Range	Aspect/ Slope Position	Form & Depth (cm)	Texture C.F.%	Rooting Depth (cm) Restricting Layer/Type
KW 10	9.9	ESSFmm1	01	3 / B	19 2 / 40	S	Mor / 20	30	35
NP existing	0.0								
NP Permanent Access	0.3								
Internal Reserves/WTP	0.0								
External Reserves/WTP	1.1								
Total Area Under Plan	11.3								

ECOLOGY COMMENTS
Some small unmappable areas, (<1 ha) where terrain issues prohibit safe harvest, may be retained on a site specific basis. Trails will follow natural benches reducing the potential for erosion on steeper slopes.

OTHER RESOURCE VALUES

FOREST HEALTH				
SU	Code	(%)	Additional Comments:	Current Risk to inventory:
A	IDB	10%	10 % Mortality in Bl. Condition is endemic to this zone. (Cause unknown). Possibly 2 year-cycle Budworm.	Moderate
Comments: Condition was reported to Omineca Region Entomologist on June 8, 2018. DCFS anticipates a visit from the regional etymologist in summer 2019 to assess cause.				

FIRE HAZARD ABATEMENT
Fire Hazard Assessment: Post harvest assessment of fire hazard will be carried out in accordance with Section 11 of the Wildfire Regulations.
Actions Prescribed: Road-side accumulations will be piled and burned following the post-harvest fire hazard assessment. Within the harvest area, high slash accumulations will be piled (either windrow or round piled) and burnt in order to address high hazard and/or to address reforestation issues (i.e. to create planting microsities to achieve stocking density). Some piles may remain unburned when they do not create undue fire or forest health risk. Target maintaining small piles near timbered edges (block boundary, WTP's, or riparian management zones) that would provide opportunities for wildlife use.

WILDLIFE

Values: Moderate use of area by moose, bear, and small animals.

Concerns/Actions/Comments: WTRAs have been placed on either side of the block where stream vessels occur, to retain the integrity of the riparian zone. This placement of the WTRA provides protection for bio-diversity, and shelter for ungulate grazers as well as small mammals and nesting birds.

NON-TIMBER TENURES

Range Tenure: RAN 072134
 Guide: Vincent Lorenz 701150
 Trapper: 704T006

Guides, Trappers, and Range Tenure Holder referrals have been addressed through the DCF 2016 Forest Stewardship Plan (2016-2021FSP) stakeholder referrals review and comment process. Notification will be sent out to these Tenure holders prior to commencement of harvest.

RIPARIAN AND STREAM MANAGEMENT

Riparian ID	Classification	RIPARIAN MANAGEMENT AREA		
		RRZ Width (m)	RMZ Width (m)	Comment / Activities / Restrictions
KW 10 Streams 1-4	NCD	NA	NA	Small ephemeral NCDs are in rocky ground and disappear mid-summer. There is low risk of Site Degradation. Debris will be kept out of any vessel or stream channel to assure the hydrological integrity of the site.

STREAM PROTECTION PLAN

All fuel storage will be located > 50m from streams and all fueling activities will occur > 50m from streams. Spill response is consistent with MOE hazardous materials response plan (July 2013).

Falling and Skidding within RMZ's: Attempt to fall timber away from the identified streams. However, this may not be possible for excessively leaning trees or unsafe or danger trees. Where these conditions occur, falling and skidding trees across the stream will occur. Where trees have blown down across the stream, attempt cutting with a feller-buncher and lifting the stem away from the stream and place it where it can be reached with skidding equipment. If this is not feasible due to safety concerns or the size of the stem, hand bucking will be required and trees will be skidded across the stream in order to extract them where no damage to the stream will occur. Where merchantable blowdown is difficult to access or is buried by deep snow, it may be left for wildlife/biodiversity purposes and stream objectives. Trees that cannot be felled safely are to be left for wildlife/biodiversity purposes.

Protection of Stream Banks: The minimum five-meter machine free zone buffer ribboned along classified streams will provide protection to the stream banks from harvesting equipment. Brush species, advanced regeneration, non-merchantable conifers and non-commercial stems will be maintained within the MFZ except where: (i) establishing a stream crossing, (ii) carrying out hand falling, (iii) skidding across or adjacent to the stream, (iv) removing trees to address a safety concern, or (v) carrying out vegetation management treatments to meet free growing requirements.

Stream Channel Debris Management Strategy: The objective is to minimize the amount of deleterious logging slash entering the stream channel. Where deleterious slash enters the stream channel, it will be cleaned concurrently with harvesting if possible (i.e. same season). In certain situations, such as winter harvesting, the inspection and cleaning of the stream channel may have to be delayed until the following spring/summer after snowmelt and run-off. Only slash deposited from harvesting is to be removed.

WATERSHED

This block is not within a community watershed.

RECREATION

No recreation features in the blocks

VISUAL LANDSCAPE

Actions Prescribed / Comments: The VQO for this block is Max Modification. The block is consistent with Dunster Community Forest FSP (2016-2021) Section 7.8.

SILVICULTURAL SYSTEM

SU	Description	Rationale
A	Clear Cut with Reserves	Clear-cuts will reduce the risk of blowdown events which have occurred in the vicinity in the past. Other than the WTR, the reserves will be dispersed, healthy, layer 2 and 3 conifers

Harvesting System: Conventional Skid, feller-buncher with a component of hand-falling in hard to reach areas. Roadside log or to landings where required by harvest constraints. Hoe-chuck on slopes > 40%.

Existing stand: SU A Timber type is 55% Sx, 40% Bl, 5% At and Ep, 15–45 cm dbh, evenly distributed. Small patches of L2 and L3 BL, (Sx), to be retained as reserves.

Post-Harvest Plan: The Hoe-chucker will disturb the ground across the block to help remove the significant azalea shrubs. He will gather shrubs and woody debris into piles for burning. This will help reduce anticipated competition at the planting stage and help reduce fire hazard on the plantation in the future.

Concerns: None

CULTURAL HERITAGE

First Nation referrals have been addressed through the Dunster Community Forest 2016-2021, Forest Stewardship Plan (FSP) stakeholder referrals and review and comment advertising. The Dunster Community Forest 2016-2021 Forest Stewardship Plan for the Prince George Forest District was approved in June, 2016. No comments were received specific to the proposed development within this prescription.

The archaeological potential for the block is LOW based on the 1995 LRMP Data for the Prince George Forest District. Therefore, an Archaeological Impact Assessment (AIA) was not conducted on this block. No archaeological sites or cultural heritage resources were identified within the harvesting area during the block fieldwork.

BIODIVERSITY

RESERVE (Type)	DESCRIPTION	AREA (ha)
Wildlife Tree Retention Area (WTRA)	External	1.1
Total Area Under Prescription (ha)		11.3
% WTR-Biodiversity		9.7 %

COMMENTS: WTRAs function as protection for Riparian Zones along Kiwa Creek and in block KW 04 along upper reaches of fish sensitive streams flowing into the Kiwa. The WTRAs promote Bio-Diversity by reserving sites in critical riparian zones.

LEAVE TREES

Wildlife trees are to be maintained where operationally feasible except for stems that require harvesting for safety, access, or development purposes (roadside work areas). Leave trees are intended to contribute to stand level biodiversity by providing nesting, denning, foraging and perching sites for wildlife and to aid in the future recruitment of coarse woody debris. Leave tree specifications are also consistent with the results and recommendation of the Visual Impact Assessment for this block. Target maintaining the following wildlife Trees.

- Where they occur, retain SX, BI (under 15 cm dbh), as well as Ep and At stems throughout the block (except those required for removal as noted above).

COARSE WOODY DEBRIS

CWD objectives will be met by leaving pieces of dead BI, (cut or blow-down), distributed over the site. At a minimum retain 4 logs per hectare, each being a minimum 2m in length and 7.5 cm in diameter at one end.

Deciduous trees will be left on site and utilized for immediate and long-term sources of CWD.

Debris piles and CWD accumulations may be left unburned for wildlife use when they do not create undue fire risk, forest health risk, or interfere with meeting minimum stocking density. In this case, target maintaining small piles near timbered edges (block boundary or riparian management zones) that would provide opportunities for wildlife use.

SITE SENSITIVITY RATING

SU	COMPACTION HAZARD	DISPLACEMENT HAZARD	SURFACE EROSION HAZARD	% MAXIMUM ALLOWABLE SOIL DISTURBANCE (NAR)
A	Moderate	Low	Moderate	10%

COMMENTS: summer harvest is preferable.

TERRAIN STABILITY

Terrain Stability Field Assessment (TSFA): A TSFA was not required for this block.

To avoid potential for instability after harvest, ensure runoff collected in roadside ditches is dispersed as required to maintain natural drainage patterns by:

- Installing sufficient number of appropriately located cross drain culverts in the road as necessary to maintain natural drainage
- Plan harvest activities and skidding patterns to avoid concentration of water onto steep slopes
- Rehabilitate any skid trails on slopes greater than 40% that may concentrate runoff or sedimentation onto steep slopes

CRITICAL SITE CONDITIONS AFFECTING TIMING OF OPERATIONS

SU A. Block has some wet area adjacent to NCDs in the SW portion. This block should be logged during the dry part of summer, July or August.

PERMANENT ACCESS STRUCTURES

Permanent Access Structures maximum area permitted is 7%, 11.3 ha / 0.3 ha = 3.4% (current)
 Default Landing Size: 0.25 ha
 Default Road Widths: 10 m

MAXIMUM ALLOWABLE SOIL DISTURBANCE FOR ROADSIDE WORK AREAS

Roadside harvesting operations, including decking, processing, loading, and any associated debris disposal or piling operations, in an area that is within the net area to be reforested (NAR), and is used to carry out those activities will NOT exceed 25% of the NAR.

TEMPORARY ACCESS

COMMENTS: Temporary access structures will be planted.

Maximum percent soil disturbance that may be temporarily exceeded by temporary access structures:

Road: (Width 0m X Length 0m) / 10000 = 0 ha

Bladed Trail: (Width 5m X Length 100m) / 1000 = 0.05 ha

Landings: (Width 50m X Length 50m) x 2 / 10000 = 0.5 ha

Percent Temporary Disturbance: Road, Trail and Landing Area 0.55 ha ÷ Gross Block Area 11.3 ha = 4.8%

Portion of cut block where Excavated / Bladed trails may be constructed: 10%

Max. Cutbank Height: 2.0

Average Cutbank Height: 1.5

Equipment used to construct trails: non-constrained.

FREE GROWING STOCKING STANDARDS

SU	BGC Zone Subzone Variant	Site Series	Regen Method	SS ID (FSP)	Area (ha)	SPECIES		WELL SPACED TREES/HA MIN. HOR.				Rege n Delay (yr.)
						PREF.	ACC.	TSS	MSS All	MSS Pref.	MIN. Hor. Dist (m)	
A	ESSFmm1	01	plant	1036775	9.9	BlSe	PI	1200	700	600	1.6	4

1. elevated microsites are preferred 29. risk of heavy browsing by moose 31. resistant stock mitigates risk of white pine blister rust 32. limited by growing season frosts 35. use of resistant stock mitigates risk of spruce weevil damage 71. avoid ribes spp-WPBR host

SU	FREE GROWING LATE yr.	FREE GROWING EARLY yr.	TARGET MAX. DENS. (stems/ha)	POST SPACING DENSITIES		MIN HT AT FREE GROWING (m)	CROP TREE SIZE VS. COMPETITION. (cm/%)
				MAX	MIN		
A	20	12	10,000	1800	700	PI - 1.6 Sx - 0.8 Bl - 0.8	150

Stand Layer Definition

Layer 1	Mature	trees >= 12.5 cm dbh
Layer 2	Pole	trees 7.5 cm to 12.4 cm dbh
Layer 3	Sapling	trees >= 1.3 m height to 7.4 cm dbh
Layer 4	Regeneration	trees < 1.3 m height

ADMINISTRATION

PLAN PREPARED BY: Ray Thiessen TFT REVIEWED BY: Ainslie Jackman, RPF		PLAN APPROVAL SEAL _____ R.P.F.'s SIGNATURE _____ DATE SIGNED (Y M D)
Date Signed (Y/M/D)	Licensee Acknowledgement of Commitment	