

WOODLOT LICENCE W1832 SITE PLAN

Woodlot Licence	W1832	Cutting Permit	C	Block	2	Opening #	
Total Area (ha)	3.0	Net Area to be Reforested (NAR) (ha)	2.3	Non-Productive - Natural (ha)	0.0	Non-Productive - Un-Natural (ha)	0.6
Area of Reserve (ha)	0.0	Type of Reserve	Uniform		Air Photo #s	BCC98051 #173-175	
Harvest Method	CONVENTIONAL GROUND SKID Equipment – Conventional ground based machinery. ie Feller Buncher; Hoe, Crawler tractor, or Skidder. Season of Harvest – Any.						
Silvicultural System	CLEARCUT with reserves – The cutblock consists predominantly of age class 5 Lodgepole Pine leading type with a minor component of Douglas fir, Larch, Western red Cedar and Hemlock. There is a minor veteran Fd and Lw.						
Comments:	<p>Mountain Pine Beetle (IBM) salvage harvest. The area of this proposal is not on an approved FDP. This application is consistent with Section 22.01 of the WLFMR that allows the expedited harvest and access of bark beetle infested timber without the area of proposed harvesting or any associated road construction being identified in an FDP.</p> <p>Pursuant to the explanation of intent of section 22.01 the following applies:</p> <ol style="list-style-type: none"> Harvesting of bark beetle infested timber” means harvesting timber that is infested with larvae or adult bark beetles or must be removed incidentally to facilitate the removal of bark beetle infested timber. The WL holder does not need to request an exemption from the FDP process. The WLFMR provides an automatic exemption to eliminate associated paperwork. There is no arbitrary maximum limit on the amount of volume that could be covered under the CP application (i.e. if half the WL area was beetle infested a CP application could cover half the WL area). <p>This cut block is designed to recover timber that is damaged or imminent risk to be damaged by mountain pine beetle. This stand has been severely infested by mountain pine beetle since 2003 with current Lodgepole pine infection levels approaching 80%.</p>						
Silviculture System Comments.							
Trees to be Retained	Species	Fd, Lw, Cw, Hw, Ep					
	Function	<ul style="list-style-type: none"> Future Seed source Mitigate visual concerns Act as wildlife trees Current and future course woody debris Future crop trees 					
Trees to be Removed	Characteristics	<p>Mountain Pine Beetle salvage harvest. The following merchantable stems will be harvested:</p> <ul style="list-style-type: none"> All Lodgepole Pine and White Pine. Western Larch that is heavily infested with mistletoe. Stems with a high diameter to height ratio which will be highly susceptible to blowdown and snowpress following harvesting. Stems damaged during harvest operations or stems that pose a safety hazard or operability constraint. Stems that require felling to provide machine access within the cutblock. <p>Based on the cruise compilation approximately 163 sph will be retained following harvest. A high degree of variation in actual stem per hectare and basal area per hectare retention is expected due to the uneven (natural) species distribution within the cutblock and to statistical imperfections.</p>					
Initial Basal Area (m ² /ha)	42.3 – (based on the compiled cruise)			Residual Basal Area (m ² /ha)	6.0- (based on the compiled cruise) Range 0 – 14 m ² /ha		
SU	NAR (ha)	Biogeoclimatic Ecosystem Classification			Regeneration Method	Preferred Species	Acceptable Species
		Zone	Variant	Site Series			
1	2.4	ICH	dw	01a ^(75%) / 01b ^(25%)	Planting	Pl, Fd, Lw	Pw, Hw, Bg, Cw, Sxw
Comments:		Majority of block has flat to rolling terrain with the 01B site series predominant in the receiving areas and the 01A predominant on elevated benches.					
Elevation range if planting is specified		1000 to 1035 meters					

The free growing stand will be established in accordance with the stocking specifications in the Woodlot Licence Forest Management Regulation (November, 1998) Division 2 of Part 6 and Table A of Schedule A. White Pine acceptability will be consistent with Section 83 of the Woodlot Licence Forest Management Regulation. Larch seedlings will not be planted within a 20 meter radius of residual DML infected Lw.

PERMANENT ACCESS STRUCTURES

Rationale for greater than 7% of the total cutblock area being occupied by permanent access structures:

- Small cutblock size with a main access road and landing within it.
- Block includes panhandle access corridor through unharvested stands for access roads from Woodlot Mainline road. The road corridor increases the proportion of cutblock area occupied by permanent access structures.

Roads	Length	343	Width	15m	Area	0.5
Landings	Number:	1	Length	60	Width	20
					Area	0.1 ha
Small Decking Areas	Number:	0	Length	N/A	Width	N/A
					Area	N/A
Skid/Forwarder Trails	Length	N/A	Width	N/A	Area	N/A
Total Harvested Area (ha)	3.0	Total Area of Permanent Access (ha)	0.6 ha	Maximum % of the Total Cutblock Area to be occupied by Permanent Access Structures	21%	
Trails that will be used for repeated harvest entries are proposed as permanent access structures.			N/A			
Roads, landings, borrow pits, or quarries within this cutblock are proposed for rehabilitation.			No			

REHABILITATION MEASURES

Describe the structures to be rehabilitated as well as the measures and timing for rehabilitation if the measures in the WLFMR will not be used.

Structures	N/A	Measures and Timing	N/A
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SOIL DISTURBANCE SU 1

Maximum Percentage of the Net Area to be Reforested to be occupied by Soil Disturbance: 5% of NAR

Rationale for greater than 5% of the NAR being occupied by soil disturbance: N/A

SU 1	Compaction Hazard	Erosion Hazard	Displacement Hazard
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EXCAVATED OR BLADED TRAILS

Cutbanks into Mineral Soil	Maximum Ht. (cm)	N/A	The equipment to be used for trail construction if other than excavator	Cat and/or excavator
	Average Ht. (cm)	N/A		

Approximate location where the trails will be built

- No excavated trails proposed.
- Minor topographic blading associated with random skidding will be used where required within the cutblock.

If within a Community Watershed	Soil Erosion Hazard	N/A	Risk of Sediment Delivery to Stream	N/A
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WILDLIFE TREE STRATEGY

Selection Criteria Cutblock is located in the Pedro Landscape unit and requires 8% Wildlife Tree Patch retention.

Level of Retention Woodlot 1832 is covered by a "Comprehensive Plan for Wildlife Tree Retention for WL1832", revised in October 2005. Further designation of Wildlife Tree Patches is not required.

MEASURES FOR COARSE WOODY DEBRIS

Little CWD from the pre-1912 stand survives. Current CWD levels are unevenly distributed throughout the block and range from 1 to 20 m³/ha with a diameter range of 10 cm to 30 cm.

Maintenance and retention strategies are as follows:

1. Increase existing CWD by avoiding broadcast burning treatment and leaving all non-merchantable logs on site.
2. Where post-harvest CWD levels are excessive and create a fire hazard, the first option will be to scatter CWD pieces throughout the harvest site to create a more even distribution.
3. A second option will be to machine pile excessive CWD and burn those piles in order to reduce fire hazard.
4. Larger pieces of CWD should be retained as dispersed pieces rather than piled.
5. Reserved stems will provide a recruitment source for future CWD, as larger pieces are deficient.

The anticipated average volume per hectare of CWD will range between 5 to 40 m³/ha with piece sizes ranging from 10 to 40 cm.

KNOWN UNGULATE WINTER RANGE

Post harvest stand structure or description of trees to be removed

Portions of CP C are located within mule deer winter range identified by the Ministry of Environment in Fall 2005.
 An ungulate winter range forest cover analysis was completed for the Woodlot based on the new UWR linework. The analysis parameters followed the ICH dw Mule Deer parameters stated in the UWR U-4-001 Order in that greater than 30 % of the forest cover polygons within the identified UWR had to be 81 years or older and have a crown closure of 40% or more.
 Results are as follows:
 Total UWR in the Woodlot = 405.0 hectares
 Total not suitable for UWR = 114.6 hectares (including proposed harvesting of CP C).
 Total suitable for UWR = 290.4 hectares (including proposed harvesting of CP C).
 Total % suitable for UWR = **72%**
 End result = 72% of the UWR area within the Woodlot meets or exceeds the requirements stated in the UWR U-4-001 Order.

FOREST HEALTH

Mountain pine beetle	This cut block is designed to recover timber that is damaged or imminent risk to be damaged by mountain pine beetle. This stand has been severely infested by mountain pine beetle since 2003 with current Lodgepole pine infection levels approaching 80%.
Measures:	IBM salvage harvest. To the extent possible all Lodgepole pine and White pine will be harvested. IBM infected trees within one tree length of the block boundary will also be harvested.
Root rot	No significant root rot activity observed to date.
Measures:	

RIPARIAN MANAGEMENT

Riparian Class of Feature	N/A	Designation on Map	N/A	Falling and/or Skidding or Yarding Across a Stream	No
Post Harvest Stand Structure		N/A			
Comments:	There are <u>no classifiable watercourses or wetlands</u> within or adjacent to the cutblock.				

NON-TIMBER RESOURCES AND RESOURCE FEATURES IN OR ADJACENT TO THE CUTBLOCK

Feature(s)	Measures to protect or accommodate or the reason for not protecting the feature(s)/ comments:
Cultural heritage resources and Archaeological sites	Based on an Archaeological overview re-assessment of woodlots in arrow district, dated May 15, 1997, completed by Kutenai West Consulting Ltd., the area under this plan was not recommended for AIA because it "does not have sufficient potential for archaeological site placement".
The Area is recognized as a midground Class 1 Scenic area.	As per the KBLUP Higher Level Plan Order Mapping (Map 9.1) the approximately 1 hectare of the cutblock is located within a midground Class1 Scenic Area. Visual concerns will be mitigated through the following: <ul style="list-style-type: none"> • Small cutblock size and irregular shaped boundaries limit the visible portion of this cutblock. Visible portions will mimic the size and shape of openings in the existing natural landscape. • The cutblock is located on flat, benchy, terrain with an approximate 25 meter variance in elevation within the visible portion of the cutblock. Noting this elevation difference the mature timber that completely surrounds the cutblock will further limit the amount of the cutblock that is visible from popular viewpoints. • The retention of stems within the cutblock will further mitigate visual impacts. Based on the small visible area and the above observations the Licensee feels that the visual quality objectives for the area will be maintained and a Visual Simulation package is not required.

Watershed	<p>The cutblock is located in the Dumont Creek (class 2 watershed). Most of the harvesting in CP C (23.1 ha of 28.1 ha total) is located in the Dumont watershed above the H60 line. The current weighted ECA in Dumont Creek is 23%. The area covered by CP C will increase the ECA by 5% to 28%. The remainder of the harvesting in CP C (5.0 ha) is located in the North Fork Creek watershed. The current ECA of North Fork Creek is at 20%. The area covered by this site plan will increase the ECA by 1% to 21% total. Attached is the equivalent clearcut assessment table. Due to the high IBM infection levels these ECA percentages levels will be achieved regardless of whether this block is harvested or not. These dead trees no longer transpire moisture, will quickly loose much of their snow interception and snow-shading functions, and will no longer play any role in snow melt dynamics once they fall to the ground over the next decade. We will mitigate the impacts of harvesting by leaving most stable non-pine stems in the harvest area, but no human choice or action can forestall the hydrological impacts from the alterations to vegetation cover that are already well under way in this area.</p>
Recreation	No recreation features are present in the area of this plan

** As agreed upon with the MoF the licensee acknowledges that this Site Plan was written in less than ideal conditions and may require additional field work and/or amendment at a future date.

SIGNATURE OF WOODLOT LICENSEE OR PERSON AUTHORIZED ON BEHALF OF THE WOODLOT LICENSEE(S)	RPF SIGNATURE AND SEAL
<p>_____ Signature Date (yy/mm/dd)</p>	
<p>SIGNATURE FOR DISTRICT MANAGER APPROVAL</p>	
<p>_____ Signature Date (yy/mm/dd)</p>	<p>_____ RPF Signature and Seal Date <u>2006/02/07</u> (yy/mm/dd) <u>Ken Williams</u> RPF Name (Printed)</p>

Equivalent Clearcut Assessment Table for Domestic Watersheds

Watershed Name	Watershed Area (ha)	Existing Non-Greened up Area (ha)	Current Weighted ECA	CP C Proposed Logging (ha)	Proposed Weighed ECA
Dumont Creek	596	116.4	23%	23.1	28%
North Fork Creek	798	119.4	20%	5.0	21%

Ungulate Winter Range Analysis

Summary of Area Within W1832 Crown Portion and Within Nov 23 2004 UWR Polygons		
Cover Class	Ha	% of Total UWR Area
Non-Forested	29.0	
Forage Units	40.5	
Not Suitable for UWR (\leq 80 yrs or \leq 39% CC, ICHdw) Includes Proposed CP C Harvest Area	114.6	28%
Suitable for UWR	290.4	72%
	405.0	