



BCTS
BC Timber Sales
Kootenay

**SITE PLAN
KOOTENAY
BC TIMBER SALES**

Report Date 2021/08/03

TENURE IDENTIFICATION

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA0906	-	6	BF797			Lavington Fire 2	50 02 58 / 115 58 37

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
7.6	0.7	0.0	1.3	0.4	0.0	5.2

ADDITIONAL COMMENTS

CONSISTENCY STATEMENT
This site plan is consistent with the results and strategies identified in the BC Timber Sales Kootenay Business Areas 2017-2022 Forest Stewardship Plan. This block has been referred through Operating Plan # 21-2. This block is within the Rocky Mountain FDU as identified under the FSP.

SOIL DISTURBANCE

SU	Max. Allowable Soil Disturbance (%)	Max. Amount TAS May Exceed MASD Prior To Rehab (%)	Max. Allowable Soil Disturbance For Roadside Work Areas (%)	Maximum Permanent Access Structures (%)
1	5.0	5.0	25.0	7.0
SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS. AND HOW THEY AFFECT THE TIMING			
1	<p>SU1 has been impacted by Wildfire. Danger trees possible throughout area.</p> <p>Avoid operations during periods of excessive soil moisture such as spring freshet or after excessive rainfall .</p> <p>Ensure natural drainage patterns are maintain during and after completion of primary forest activities.</p> <p>SU situated on slopes >60%. Boulders may dislodge and present a rolling hazard to crews and machinery downslope.</p> <p>SU1 is planned for winch/tether assist harvest system.</p>			

RESULTS AND STRATEGIES

RESULT OR STRATEGY	HOW THE STRATEGY OR RESULT APPLIES TO THE SITE or RATIONALE (IF NOT APPLIED)
Biodiversity Emphasis	Harvest of this block is consistent with the result and strategy for Biodiversity Emphasis as described in the BCTS Kootenay Business Area 2017-2022 FSP as applied through the results and strategies for old growth management areas (OGMA) and mature management areas (MMA). Development of this block does not encroach on any mapped non-legal OGMA's or MMA's.
Community Watersheds	This block is not within a community watershed or a domestic watershed.
Connectivity	This block is not within area mapped for connectivity.
Consumptive Use Streams	Harvest of this block is not anticipated impact any consumptive use streams or water intakes licensed for domestic use. There are no domestic intakes within or within close proximity (within 1km) of the block.
Cultural Heritage Resources	<p>This block has been referred to First Nations through Operating Plan # 21-2.</p> <p>This block does not overlap any mapped archeological overview assessment (AOA) polygons. An archeological impact assessment (AIA) is not required.</p> <p>Chance Find: If during operations, a suspected First Nations artifact is found, operations in vicinity of the find are to cease immediately and the site supervisor is to notify the Timber Sales Manager (TSM) of the find. The TSM is to cease or modify operations to the extent necessary to protect the resource, and undertake the following steps:</p> <p>a. record the location of the artifact;</p> <p>b. evaluate the direct impact of the activities on the artifact;</p> <p>c. if the above evaluation determines it necessary, alter the design and/or prescription of the license, permit, or road to conserve, mitigate or protect the artifact; and</p> <p>d. communicate the outcome of the evaluation to the First Nation's whose artifact may be affected and offer to meet with the First Nation.</p>
Enhanced Resource Development Zones	Harvest of this block is consistent with the result specified for Enhanced Resource Development Zones-Timber as specified in the 2017-2022 BCTS Kootenay Business Area FSP. As per sec 64 and 65 of the Forest Planning and Practices Regulation (FPPR), maximum cutblock size and green-up requirements do not apply as timber harvesting on this block will be to recover timber damaged by wildfire.
Fire Maintained Ecosystems	This block is not within a fire-maintained (NDT4) ecosystem.
Fisheries Sensitive Watersheds	This block is not within a fisheries sensitive watershed.
Green-Up	Maximum cutblock size and green up requirements do not apply to this block as harvesting of timber is to recover timber damaged by wildfire (FPPR sec 64 (2), sec 65(4))

Invasive Plants		<p>Mapping by the Invasive Alien Plan Program (IAPP) does not indicate any known occurrences of invasive plants within or in close vicinity of the block, however there are mapped occurrences along the access route. As the block has been subject to wildfire resulting in exposed mineral soil, it is highly susceptible to the introduction of invasive plant species. As result, the following measures are to apply to timber harvesting operations:</p> <p>a. Vehicles, mechanized equipment, and culverts, are to be inspected for the presence of soil or plant material, including documentation on inspection forms, prior to being transported to or from work sites and if present, plant and soil materials are to be removed;</p> <p>b. To reduce the seedbed available to invasive plants , grass seeding is required on the following areas:</p> <ul style="list-style-type: none">- On all bladed skid trails once rehabbed as soil erosion hazard is high.- On the landing, once forestry operations and slash disposal have been completed. <p>Grass seeding is to be completed concurrent to, or during the first spring or fall after the completion of road construction and deactivation/rehabilitation activities, and no later than 12 months following mineral soil exposure. If utilizing a dry grass seeding method, seed shall be applied at a rate of 30-50 kilograms per hectare. Grass seeding is to use a high quality seed mix (a mix recommended by a MFLNRORD range specialist, if available, otherwise Canada Common #1 Forage mix or better grade) and obtain a certificate of analysis, providing a copy to the TSM upon request, to confirm that invasive plant seeds are not present in the seed mixes being utilized.</p> <p>3. Personnel completing post-harvest surveys will be required to identify and report all new observed infestations.</p>
Old and Mature Forests		This block does not overlap any mapped non-legal OGMA or MMA.
Other Resource Features		<p>No other resources as identified under sec 5 of the Government Action Regulation or established under the Forest Practices Code are known to be present within or adjacent to the block.</p> <p>Coarse Woody Debris: A a result of harvesting within the MS biogeoclimatic subzone , for all SU's within the net area to be reforested retain a minimum of 1.24m3/ha of coarse woody debris from a minimum of 4 logs/ha each being a minimum 2 meters in length, but 5 meters greater in length if available, and with a minimum of 20cm diameter at one end. To reduce the potential for build-up of Douglas-Fir Beetle and Spruce Beetle , to the extent practicable: select dead and dry over green material, retain material from species other than Douglas-Fir and Spruce, and leave Douglas-Fir and Spruce Stumps as low to the ground as possible.</p>
Range		There are no known range developments in or adjacent to the block. No known natural range barriers are anticipated to be impacted by harvesting of this block.
Recreation Sites & Trails		No authorized recreational features or tenures will be impacted by harvesting of this block.
Riparian		<p>One reach (reach 5) was identified within the block. The reach is perennial and has a continuous channel with obvious scour and alluvial disposition. Mean channel width as measured is 0.71m and 0.13m depth. The block has been classified as non-fish bearing (S6) as result of a downstream slope gradient barrier where the channel gradient exceeds 20% for >100m creating an assumed barrier to fish passage.</p> <p>Machine-Free Zone: As no reserve is required, a minimum 5m width MFZ has been placed along both sides of the stream channel where is bisects the planned harvest area. This is consistent with the MFZ requirement identified in the 2017-2022 BCTS Kootenay Business Area FSP.</p> <p>RMZ: A 20m RMZ is required by the FSP. As the in-block portion of the stream is adjacent to the existing road and has been damaged by wildfire, minimal retention will be left in the RMZ as to address windthrow and hazardous trees adjacent to the road. Where available, retain green Lw >30cm dbh within close proximity to the stream.</p> <p>No other other watercourses are present in this block.</p> <p>Felling and skidding of timber must be away from streams unless a safety hazard dictates otherwise or it is not practicable. All slash and debris introduced to stream channels must be carefully removed.</p> <p>Pre-existing coarse woody debris adjacent to streams should be left to the extent possible to provide protection against erosion and sedimentation.</p> <p>Stream Cleanout: All slash and debris introduced to stream channels as a result of forestry operations must be removed from all stream channels under the following requirements:</p> <ul style="list-style-type: none">a) Remove all introduced debris (tree stems, branches, and other woody debris) greater than 1 meter in length and shorter lengths if accumulated together from stream channels.b) Remove all introduced segments of tree stems/logs, or log ends of any length resulting from landing and timber processing activities from stream channels.c) Removal of harvesting debris is to be concurrent with logging (either prior to spring freshet or demobilization of skidding/yarding equipment, whichever is earlier).d) Place removed debris where it will not re-enter the stream as a result of downslope movement or stream peak flows.e) Do not remove pre-harvest embedded or natural woody debris.f) Do not use heavy machinery to remove fine harvest debris in areas where stream banks, natural woody debris, or riparian vegetation will be disturbed.

Road Site Plan		<p>Consistent with section 5.8.3 of the BCTS Kootenay Business Area 2017-2022 FSP, upon completion of rehabilitation activities, grass seed exposed soils on the rehabbed operational trails and landing during the first available spring or fall after completion of rehab activities/ hazard abatement as soil erosion hazard is high. Seeding is to occur no later than 12 months after soil exposure.</p> <p>If utilizing a dry grass seeding method, seed is to be applied at a rate of 30-50kg/ha.</p> <p>Grass seeding is to utilize a high quality seed mix (a mix recommended by a MFLNRORD range specialist if available, otherwise Canada Common #1 Forage mix or better grade. Obtain a certificate of analysis, providing a copy to the TSM upon request to confirm that invasive plant seeds are not present in the seed mix being utilized.</p>
Soils		<p>Avoid harvesting operations during periods of excessive moisture such as spring freshet or after periods of heavy rainfall.</p> <p>Temporary trails are to be rehabilitated where soil conditions permit after completion of operations . If trails cannot be fully rehabilitated due to unfavorable soil conditions, they must be left in a hydrologically stable state. Grass seed rehabbed areas as per FSP requirements as soil erosion hazard is high.</p> <p>Soil information from adjacent areas was used to infer soil characteristics for this block as result of safety concerns. Adjacent block (A48314-4) was found to consist of silt loam. Course fragment content is estimated at 45-50% based on field observations.</p> <p>Soils disturbance limits for Standard Units within this block are as follows based on soil hazard determinations:</p> <p>SU1: 5% of the Net Area to be reforested (NAR) of the SU. Soil displacement hazard is conservatively assumed as very high as result of hazard determinations.</p> <p>Roadside Work Areas: Soil disturbance must not exceed 25% of the area covered by roadside work areas.</p> <p>Temporary Access Structures: The maximum soil disturbance limit within each productive SU may be temporarily exceeded by 5% for the purpose of constructing temporary access structures, excluding the area covered by a roadside work area. Temporary access structures must be rehabilitated by the completion of harvest to a level not exceeding the maximum allowable soil disturbance limit for each SU.</p> <p>As slopes exceed 60% in this block, planned operational trails have been flagged in the field and a terrain stability assessment completed as required by section 5.1 of the 2017-2022 BCTS Kootenay Business Area FSP. No changes to the trail locations or block boundary were recommended as result of the assessment.</p> <p>PAS: The maximum allowable PAS for this block is 7% of the gross cutblock area (0.53ha). PAS is 0.7ha as result of small cutblock size and existing roads bordering two sides of the block. As per sec 36(a), PAS may be exceeded as result of cutblock size and topographical constraints .</p>
Visual Quality		<p>This block is not subject to visual quality objectives.</p>

Wildlife - Species at Risk		<p>WHAs: This block does not overlap any established wildlife habitat area (WHA).</p> <p>Wildlife Habitat Features: No wildlife habitat features as specified under Ministerial Order M213 "Wildlife Habitat Features in the Kootenay Boundary Region" are known to be present in this block based on observations at time of layout or based on current available BCTS mapping.</p> <p>Where a wildlife habitat feature is encountered during operations, the following actions are to be taken:</p> <p>a. Stop all primary forest activities that could impact the WHF and report the WHF to the project supervisor and BCTS representative.</p> <p>b. Determine a course of action, considering existing management strategies, BMPs, professional guidance documents and/or recommendations from a QRP.</p> <p>c. Document the decision(s) made with a rationale, implementing the elements from 2b as appropriate, through an updated or amended project plan before proceeding with any primary forest activities in accordance with the updated or amended project plan.</p> <p>Conservation Data Center (CDC): Publicly available mapping by the BC Conservation data Center (CDC) does not indicate any overlap with the known habitat of any regionally important species, species at risk, or species of management concern.</p> <p>Williamson Sapsucker: This block is outside of the East Kootenay Area of Occupation for Williamson Sapsucker as identified in "Best Management Practices for Timber Harvesting, Roads, and Silviculture for Williamson Sapsucker in British Columbia- East Kootenay Area of Occupancy". BMP's for Williamson Sapsucker therefore do not apply to this block.</p> <p>Species of Management Concern: No species of management concern or their habitat as identified in "Species of Management Concern in the Kootenay Business Area" (VAST 2014) were observed or readily identified within this block at time of layout.</p> <p>Fish Habitat: Fish habitat occurs downstream of the block. Monitor for sediment entering streams and take corrective action if required.</p> <p>In the event that a known species of risk or species of management concern is observed in the field during harvesting or road building activities notify the BCTS Project Supervisor as soon as possible. For observations note the location (gps coordinate) of the observation, the date of observation, the species, and the number of individuals seen or heard. Additionally (if possible), provide contact details of observer, details of the surrounding habitat where the observation occurred, and health of the animal observed.</p> <p>The BCTS supervisor once notified of the observation is to along with other planning staff /QPs recommend appropriate site level measures in mitigating impacts to the surrounding habitat.</p>
Wildlife - Grizzly Bear Habitat		<p>This block is not within an area specified for grizzly bear.</p> <p>Coarse woody debris is to be left in all SU's to provide habitat for insects and possible foraging for grizzly bears. Operators are to leave large diameter (>20cm dbh at one end and min 2m in length, 5+ meters in length if available) non-merchantable logs onsite. Minimum target is 4 pieces/ha.</p>
Wildlife - Ungulate Winter Range		<p>This block is not within ungulate winter range as established by UWR order U-4-008.</p>
Wildlife - Wildlife Tree Retention		<p>One WTRA totalling 1.34ha has been identified for this block. The WTRA consists of live, unburnt timber situated between the existing road and wetland further downslope of the block. This exceeds the FSP cutblock level WTRA requirement of 3.5% (0.26ha).</p> <p>Two additional reserves not contributing to WTRA requirements have been identified . They consist of the non-vegetated cutbanks of the existing road.</p>

STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	5.2	1062265	SX #201- Max 50% of pref & acc WS trees; BL #208- refer to specific advance regeneration requirements. **Additional information or requirements are contained in the text of the latest version of the approved Rocky Mountain Natural Resource District Stocking Standards and is the complete standard (more footnotes apply).
COMMENTS	2017-2022 BCTS Kootenay Business Area FSP #601 consolidated to Amendment #5		

ADMINISTRATION

Amendment number	Date Typed (Yr.Mo Dy)	Map Required?
ORIGINAL		

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
Chris Lovesey, RPF	
DATE SIGNED	
August 6/2021	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	

Map attached forms an integral part of the site plan.

SILVICULTURE PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA0906	-	6	BF797			Lavington Fire 2	50 02 58 / 115 58 37

ECOLOGICAL INFORMATION

SU	Ecology Unit	Area	Zone	Subzone	Variant / Phase	Site Series (series - %)	Elevation Avg (m)	Slope Avg (%)	Aspect	Slope Position	Rooting Depth (cm)	Soil Texture
1	1	5.21	MS	dw		104-100	1,460	65	NE	Middle Slope	40	SIL

STOCKING REQUIREMENTS				
ASSESSMENT DATES				
Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1062265	7	0	20
Min/Max Elevation Regime: 1415 / 1505				

SU : 1 REGENERATION LAYER									
PREFERRED SPECIES			ACCEPTABLE SPECIES			POST SPACING DENSITY(sph)		MAX CONIFEROUS (sph)	
Species	Min Ht. (m)	Footnotes	Species	Min Ht. (m)	Footnotes	Min	3000	Max	4000
						WELL SPACED TREES (sph)			
Fdi Douglas Fir - Interior	0.8		Sx Hybrid Spruce (SE x SW)	0.8		Target Pref/Acc	Minimum Pref/Acc	Minimum Pref	Min Horizontal Dist. Pref/Acc (m)
Pli Lodgepole Pine - Interior	1.4		Bl Subalpine Fir	0.8		1200	700	600	2.0
Lw Western Larch	1.4							Height Relative to Competition (%)	
								125	

OTHER REQUIRED STOCKING INFORMATION
2017-2022 BCTS Kootenay Business Area FSP #601 consolidated to Amendment #5

ACTIVITIES

SILVICULTURE ACTIVITY COMMENTS	
ACTIVITY	COMMENT

MANAGEMENT STRATEGY

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION			
Retain a minimum of 1.24m3/ha of CWD consisting of a minimum of 4 logs/ha with a minimum length of 2 meters (>5 meters if available) and a minnum diameter of 20cm at one end.			
Avoid leaving green Sx or Fd as CWD as result of bark beetle concerns .			
Cut Fd and Sx stumps as low as possible.			
Performance Std. (%):	Block Target (%):	Coarse Woody Debris (m3/ha):	1.2

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL		

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
Chris Lovesey	
DATE SIGNED	
August 6 / 2021	
I certify that the work described herein fulfils standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.	Chris Lovesey