BCTS
BC Timber Sales
Kootenay

SITE PLAN
KOOTENAY
BC TIMBER SALES

Report Date 2021/08/03

ORIGINAL

TENURE IDENTIFICATION

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA0906	-	7	BF798			Lavington Fire 2	50 05 07 / 116 01 48

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
113.7	5.7	0.0	10.6	10.1	0.0	87.3

ADDITIONAL COMMENTS

CONSISTENCY STATEMENT
This site plan is consistent with the results and strategies of the 2017-2022 BCTS Kootenay Business Area Forest Stewardship Plan (FSP). This block has been referred through Operating Plan #21-2. This block is located 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	10.0	5.0	25.0	7.0
2	10.0	5.0		

SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS. AND HOW THEY AFFECT THE TIMING
1	SU1 has been impacted by wildfire. Danger trees possible throughout area. Avoid operations during periods of excessive soil moisture such as spring freshet or after periods of heavy rainfall . Ensure natural drainage patterns are maintained during and after completion of primary forest activities. Slopes > 60% occur within the SU. Boulders may dislodge and present a rolling hazard to crews and machinery downslope. These slopes are planned for winch-assist/tether systems. SU1 is south facing. Drought conditions possible which may limit site productivity . Avoid placing slash within the MFZ adjacent to the wetlands.
2	See factors for SU1. Entirety of SU2 is planned for conventional harvest systems.

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 for Biodiversity Option as identified in the 2017-2022 BCTS Kootenay Business Area FSP. This block or associated road sections proposed for construction do not encroach on any significant area (>0.25ha) of mapped Old Growth Management Areas (OGMA) or Mature Management Areas (MMA).
Community Watersheds		This block is not within a community watershed or domestic watershed.
Connectivity		This block is not within an area mapped for connectivity.
Consumptive Use Streams		Harvest of this block is not anticipated to impact any consumptive use streams. There no water intakes licensed for domestic use within close proximity of the block (within 1km).
Cultural Heritage Resources		This block has been referred to First Nations through Operating Plan #21-2. This block overlaps portions of archelogical overview assessment polygons, Overlap occurs with AOA polygon I12-34 and I12-37. 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: a: record the location of the artifact; b. evaluate the direct impact of the activities on the artifact; 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 d. communicate the outcome of the evaluation to the First nations whose artifact may be affected and offer to meet with the First Nation.

Enhanced Resource Development Zones		Harvest of this block is consistent with the result for Enhanced Resource Development Zones as identified in the BCTS Kootenay Business Area 2017-2022 FSP. As per sec 64(2) and sec 65(4) of FPPR, green up and maximum cutblock size do not apply to this block as harvesting is 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 is to recover timber damaged by wildfire.
Invasive Plants		Mapping by the Invasive Alien Plant Program indicates that there has been reported occurrences of invasive plants within close proximity to the block and along the access route. As the block has been impacted by wildfire with duff removed and mineral soils exposed, it is highly susceptible to colonization by invasive plants. As result, in order to mitigate the spread of invasive plants, the following measures are to be followed during timber harvesting and road building activities: 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; b. To reduce the seedbed available to invasive plants, grass seeding is required on the following areas: Cut and fills slopes of all newly constructed permanent road sections. On all newly constructed landings once forestry operations and slash disposal are complete. On all rehabilitated temporary roads and bladed skid trails. On all permanent road sections covered under this site plan, once deactivated in accordance with deactivation plans prepared by a QRP. Grass seeding is to be completed during the first available 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. 3. Personnel completing post-harvest surveys will be required to identify and report all new observed infestations.
Old and Mature Forests		There is minor overlap with mapped OGMA and the harvest area of this block. Overlap is negligable (<0.25ha) and will not significantly impact landscape level OGMA targets. No replacement area is required.
Other Resource Features		No other resources as identified under section 5 of the Government Action Regulation or as established under the Forest Practices Code are known to be present within the block or within close proximity. 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.
Range		There are no known range developments within the block or adjacent to it. Harvest of this block is not anticipated to render ineffective any known natural range barrier.
Recreation Sites & Trails		Harvest of this block will not impact any known authorized recreation feature or tenure.
Riparian		No streams were identified within this TA0906-7. Several dry gullies are present, however there are no indications of seasonal flow. Wetlands: Two wetlands are present adjacent to TA0906-7. Both are situated within the MSdw subzone. Area measurements using ortho imagery suggest a W3 and W5 classification are appropriate. The Forest Planning and Practices Regulation require a 30m RMZ on a W3 wetland and a 10m RRZ and 40m RMZ for a W5. The entire Riparian Management Area (RMA) of these wetlands has been damaged by wildfire (Crown Fire) with 95-100% mortality anticipated. Many trees have damaged root systems making them prone to windthrow and a hazard to workers and road-users. As the RMA's are adjacent to the Bear Main FSR, minimal retention within the RMZ is prescribed as trees will be removed to the extent possible to address the hazard to forestry workers and other road users. A variable width machine-free zone has been flagged in effort to mitigate soil disturbance adjacent to the wetland. Drainage Structures Culverts of the sizes indicated in the Road site plan are to be installed at specified locations to ensure maintenance of drainage patterns. Additional cross drains are to be installed where necessary following guidance provided in the FLNRO Engineering manual. Culverts are to remove upon deactivation/rehabilitation consistent with prepared plans. Timber is to be fallen away from the wetlands unless unsafe to so so. Any debris entering a wetland as result of falling/skidding is to be removed.

Soils		Avoid harvesting operations during periods of excessive moisture such as spring freshet or after periods of heavy rainfall. All temporary trails and temporary roads are to be rehabiltated where soil conditions permit after completion of operations and/or hazard abatement. If trails/ roads cannot be fully rehabiltated due to unfavorable soil conditions, they must be left in a hydrologically stable state. Where rehabiltation occurs, scatter large woody debris and/or logging slash on rehabbed corridors to reduce soil erosion. Grass seed rehabbed areas as per FSP requirements as soil erosion hazard is high . Soil information from adjacent areas was used to infer soil characteristics for this block as result of safety concerns. Adjacent block (A90480-5) was found to consist of silt loam. Course fragment content is estimated at 40-60%. Completion of a soil hazard assessment key using inferred soil characteristics and onsite terrain characteristics indicates no sensitive soils are present (no hazards rated as very high). Soils disturbance limits for Standard Units within this block are as follows based on soil hazard determinations: SU1: 10% of the Net Area to be reforested (NAR) of the SU. SU2: 10% of the Net Area to be reforested (NAR) of the SU. Roadside Work Areas: Soil disturbance must not exceed 25% of the area covered by roadside work areas. 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 rehabiltated by the completion of harvest to a level not exceeding the maximum allowable soil disturbance limit for each SU. Permanent Access Structures: Maximum allowable PAS is 7% of the gross cutblock area (8.0ha). Planned PAS is 5.6ha. Slopes >60% occur in SU1. These slopes are planned for winch assist/ tether harvest systems. It is anticipated that bladed trails will not be required on these slopes as result of this. No terrain stability concerns were identified for this block. No bladed trails may be built on slopes >60% unless previously identified on the SP/HP map.
Visual Quality		This block is not subject to visual quality objectives.
Wildife - Species at Risk		Wildlife Habitat areas: WHA's: This block does not overlap any established wildlife habitat area. 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. Encounter with wildlife habitat feature: In the event that the agreement holder encounters a wildlife habitat feature not previously identified and accommodated for within this site plan, the following actions are to be taken immediately: - Stop all primary forest activities that could impact the wildlife habitat feature and report the WHF to the project supervisor and the BCTS representative. - Determine a course of action, considering management strategies, best management practices, professional guidance documents, and/or recommendations from a QRP; and - Document the decisions 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/amended project plan. Conservation Data Center (CDC): Publically available mapping by the BC Conservation Data Center (CDC) does not indicate any overlap with the known habitat of any regionally imporant species or species of management concern. 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 do not apply to this block. 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. 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. 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. en to ensure sediment is not transported downstream to fish bearing waters. Fish habitat is present downstream of this block. Operations must be monitored for the presence/occurrence of sedimentation resulting from road construction and if necessary corrective actions taken to ensure sediment is not transported downstream to fish bearing waters.

Wildlife - Caribou		During desktop review it was noted that this TSL is within provincial Caribou Matrix Habitat . The document "Interim Guidance for Operating in Southern Caribou Core and Matrix Habitat- BCTS Kootenay Business Area" provides guidance for when working in matrix habitat. Suggested practices include block aggregation, creating larger blocks, and increasing the frequency of larger patches. As this TSL is to salvage timber damaged by wildfire , larger blocks are planned creating large areas of early seral habitat with reduced cover for elk, moose, and deer consistent with these guidelines. No specific management practices in addition to what is stated in this site plan are required.
Wildlife - Grizzly Bear Habitat		This block is not within a WHA or specified area established for grizzly bears . 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. Where available, operators are to retain green advanced regeneration >1.3m tall or green alder along roadways to provide visual screening into the harvest area.
Wildlife - Ungulate Winter Range		This block overlaps area mapped as Managed Forest Moist habitat. As per UWR order U-4-008, general wildlife measures regarding UWR will not apply to this block as harvesting and road construction will be to recover timber damaged by wildfire.
Wildlife - Wildlife Tree Retention		Two WTRA have been identified for this block totalling 10.6ha. This is 9.3% of the gross cutblock area, exceeding the cutblock level requirement of 3.5% of the gross cutblock area identified in the 2017-2022 Kootenay Business Area FSP. Details of the WTRA are provided within the supporting documentation . In addition, one reserve not contributing to WTRA has been identified .

STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	43.3	1062263	**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).
2	44.0	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.

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THE FOLLOWING INFORMATION IS ATTACHED FOR INFORMATION ONLY AND DOES NOT FORM PART OF THE SITE PLAN

SILVICULTURE PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA0906	-	7	BF798			Lavington Fire 2	50 05 07 / 116 01 48

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	43.34	MS	dw		103-100	1,350	40	S	Middle Slope	40	SIL
2	2	44.00	MS	dw		104-100	1,313	35	E	Middle Slope	40	SIL

STOCKING REQUIREMENTS

ASSESSMENT DATES

Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1062263	7	0	20
2	1062265	7	0	20

Min/Max Elevation Regime: 1220 / 1430

SU : 1 REGENERATION LAYER

PREFERRED SPECIES		Min Ht. (m)	Footnotes	ACCEPTABLE SPECIES		Min Ht. (m)	Footnotes
Fdi	Douglas Fir - Interior	0.8		Pli	Lodgepole Pine - Interior	1.4	
Py	Yellow Pine	0.6					
Lw	Western Larch	1.4					

POST SPACING DENSITY(sph): Min 3000 Max 4000

MAX CONIFEROUS (sph):

WELL SPACED TREES (sph)

Target Pref/Acc	Minimum Pref/Acc	Minimum Pref	Min Horizontal Dist. Pref/Acc (m)
1000	500	400	2.0

Height Relative to Competition (%): 125

SU : 2 REGENERATION LAYER

PREFERRED SPECIES		Min Ht. (m)	Footnotes	ACCEPTABLE SPECIES		Min Ht. (m)	Footnotes
Fdi	Douglas Fir - Interior	0.8		Sx	Hybrid Spruce (SE x SW)	0.8	
Pli	Lodgepole Pine - Interior	1.4		Bl	Subalpine Fir	0.8	
Lw	Western Larch	1.4					

POST SPACING DENSITY(sph): Min 3000 Max 4000

MAX CONIFEROUS (sph):

WELL SPACED TREES (sph)

Target Pref/Acc	Minimum Pref/Acc	Minimum Pref	Min Horizontal Dist. Pref/Acc (m)
1200	700	600	2.0

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 (>5m if available) and a minimum diameter of 20cm at one end.

Avoid retaining green Sx or Fd as CWD due to concerns with bark beetles .

Cut stumps of Sx and Fd as short as possible.

Performance Std. (%): Block Target (%): Coarse Woody Debris (m3/ha): 1.2

ADMINISTRATION

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

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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.

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