



TENURE IDENTIFICATION

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1444	-	MZA02	BEA02		Kamloops TSA FDU	MacKenzie	51 49 13 / 120 07 14

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
13.0	0.2	0.0	0.5	0.0	0.0	12.3

ADDITIONAL COMMENTS

DEFINITIONS (ADD DEFINITIONS AS REQUIRED)
Site plan consistent with approved BCTS Kamloops TSA Thompson Rivers District FSP , April 1, 2020. MZA02 is a declared block as per the effective date of the FSP . Site plan prepared in accordance with FRPA Sections 10 (1), (2) and (3). Road CL R24163.03 (0+000 to 0+429) is outside of the block and will be managed under all conditions of this site plan.

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
SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS, AND HOW THEY AFFECT THE TIMING			
1	The majority of the block has soils with High Compaction Hazard. Soil Displacement Hazard is Low. Soil Erosion Hazard is High. Forest Floor Displacement Hazard is High. Mass Wasting Hazard is Moderate. The block has a surface rocks in the east section and seasonal wet area in the northwest section.			

RESULTS AND STRATEGIES

FSP:	FDU:
BCTS Kamloops FSP 671	Kamloops TSA FDU
Archaeological Objectives	
Result or Strategy Description	5.10 Archaeological Assessments
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	BCTS has referred this development to all potentially affected First Nations , as was determined through a search of the Consultative Area Database (CAD). All referral communication and management decisions have been documented in a BCTS Due Diligence Report signed off for approval by the Timber Sale Manager . This Site Plan is consistent with the management decisions and measures approved by the TSM . A "Stop Work Procedure" has been included in the Harvest Plan in the event that a previously unidentified Affected Archaeological Resource is discovered during operations .
Biodiversity Objectives	
Result or Strategy Description	5.5.1 General Biodiversity
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The Site is consistent with the strategies outlined in Section 5.5.1 of the FSP.
Result or Strategy Description	5.5.2 Landscape Level Biodiversity
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block falls within the Clearwater SBSmm NDT 3a Landscape Unit. This block is 12.3ha NAR and is adjacent to a greened up opening A 18688-179-2 in the north. The structural characteristics of the cutblock after timber harvesting will resemble an opening that would result from a natural disturbance. The Landscape Level Biodiversity conforms to FPPR Sections 64 Maximum cutblock size and 65 Harvesting adjacent to another cutblock.

Result or Strategy Description	5.5.4 Stand Level Biodiversity
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block has 0.5ha or 3.8% of the gross area allocated in Wildlife Tree Retention Areas (WTRA). (See Harvest Plan for details on Leave Trees)
Result or Strategy Description	5.5.3 Old Growth Management Areas
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is no OGMA within or adjacent to the block.
Cultural Heritage Objectives	
Result or Strategy Description	5.9 Cultural Heritage Resources
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	BCTS has referred this development to all potentially affected First Nations , as was determined through a search of the Consultative Area Database (CAD). All referral communication and management decisions have been documented in a BCTS Due Diligence Report signed off for approval by the Timber Sale Manager . This Site Plan is consistent with the management decisions and measures approved by the TSM . A "Stop Work Procedure" has been included in the Harvest Plan in the event that a previously unidentified CHR is discovered during operations.
Lakes Management Objectives	
Result or Strategy Description	5.3.1 Lakeshore Management Zones
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The block is within the Lakeshore Management Zone (LMZ) for Lake #1376 L1-1B(C). This lake is a Class C lake as per Clearwater Forest District Lakes Local Resource Use Plan (LRUP) Lakeshore Management Guidelines, August 1, 2001. A very small portion of the block (0.1ha) is within the LMZ. The guidelines in the LRUP states Class C Lakes: Visual Quality Objective (VQO) is partial retention (PR), and existing resource values have to be maintained. A Visual Impact Assessment (VIA) was not completed due to half of the harvest area within the LMZ is within 25% retention and the distance from the lake to the block is 180m of standing timber. There are no roads planned within the LMZ. The portion of the block within the LMZ is Not Visually Sensitive (NVS). The block is consistent with the guidelines in the BCTS FSP sec 5.3.1 and the Clearwater Lakes LRUP.
Result or Strategy Description	5.3.2 Walk-in Lakes
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no walk-in lakes adjacent to this block.
Measures	
Result or Strategy Description	6.2 Invasive Plants
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The Invasive Alien Plant Program (IAPP) database was reviewed and there are known occurrences of invasive alien plants over 2km away of the vicinity of the block. The closest site is Site ID 262108, Oxeye daisy, Yellow hawkweed, and Spotted knapweed. There are known plants located along the haul route Road 1 FSR: Site 291388, Hoary alyssum Site 291856, Spotted knapweed and Yellow hawkweed Site 291854, Hoary alyssum Site 291853, Spotted knapweed and Yellow hawkweed Site 316971, Spotted knapweed Site 296510, Yellow hawkweed species, Sulphur cinquefoil, Spotted knapweed Site 124721, Yellow hawkweed species, Spotted knapweed Site 296508, Yellow hawkweed species, Spotted knapweed Site 296509, Yellow hawkweed, Spotted knapweed Site 296507, Yellow hawkweed, Spotted knapweed Site 296783, Yellow hawkweed species, Spotted knapweed If primary forest activities result in creating a contiguous area(s) of disturbed soil, not including active running surfaces, equal to or greater than 0.25ha, it will be revegetated using a seed or forage mixture that meets or exceeds Canada Common #1 Forage Mixture as defined by the Canada Seeds Act and Regulation , or by using native forbs or shrubs. Where areas have been seeded, inspect the areas within 12 months of seeding to ensure successful establishment (i.e. >90% cover), and repeat one additional seeding if there is <90% cover.

Result or Strategy Description	6.1 Natural Range Barriers
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no natural range barriers in or adjacent to the block.
Range Objectives	
Result or Strategy Description	5.12 Range
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The range licence RAN077142 is held by Mamit Lake Ventures Ltd. A referral was sent to the range holder with no response.
Recreation Objectives	
Result or Strategy Description	5.6.1 Recreation Sites and Trails
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no Recreation Sites or Trails within or adjacent to this block.
Result or Strategy Description	5.6.2 Recreation and Tourism Zones
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a Recreation or Tourism Zone.
Riparian Management Objectives	
Result or Strategy Description	5.4.1 Stream Riparian Classes
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	All streams have been assessed and conform to FPPR Sections 47 (1), (2), (3)(a), (5), and (6) and Table 3 in the FSP. Refer to the Support Document and the Harvest Plan for specific details on each stream associated with this block.
Result or Strategy Description	5.4.6 Restrictions in a Riparian Management Zone
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	All Riparian Management Zones (RMZ) within the block conform to the percent retention detailed in the FSP. Refer to the Support Document and the Harvest Plan for specific details on each RMZ associated with this block.
Result or Strategy Description	5.4.2 Wetland Riparian Classes
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no classified wetlands within or adjacent to the block.
Result or Strategy Description	5.4.3 Lake Riparian Classes
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no lakes within or adjacent to the block. Lake#1376 L1-B(C) is 180m+ from the western block boundary. There are no riparian features in this block for this lake.
Result or Strategy Description	5.4.4 Restrictions in a Riparian Management Area
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no classified stream road crossings associated with this block.
Result or Strategy Description	5.4.5 Restrictions in a Riparian Reserve Zone
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no Riparian Reserve Zones (RRZ) within the harvest area of the block.

Result or Strategy Description	5.4.7 Restricted Operation of Machinery
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Machine Free Zones (MFZ) are not required as per Section 5.4.7.
Result or Strategy Description	5.4.8 Exceptions to Restricted Op of Machinery
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no access structures that cross classified streams under this Site Plan. Crossings of Machine Free Zones (MFZ) will be at designated and single point crossings only.
Settlement Area Objectives	
Result or Strategy Description	5.11 Settlement Area Objectives
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a Settlement Resource Management Zone.
Soil Management and Conservation Objective	
Result or Strategy Description	5.1 Soil Management and Conservation
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	PAS meets FPPR Section 36(1). TAS meets FPPR Section 35 (4)(b)(ii). See Harvest Plan for details.
Visual Objectives	
Result or Strategy Description	5.8.1 Visuals “Headwaters Visual Zone”
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not located in a Visually Sensitive Area . The block is Not Visually Sensitive (NVS). A Visual Impact Assessment is required as the block is within the LMZ for Lake #1376 L1-B(C). This lake is a Class C lake as per Clearwater Forest District Lakes Local Resource Use Plan (LRUP) Lakeshore Management Guidelines, August 1, 2001. The harvest area within the LMZ needs to meet Partial Retention from the lake. An VIA was not completed as the harvest area within the LMZ is 0.1ha and the distance from the lake is 180m of standing timber.
Result or Strategy Description	5.8.2 Visuals "Kamloops Visual Zone"
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within the Kamloops Visual Zone.
Water Objectives	
Result or Strategy Description	5.2.1 Community Watersheds
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a Community Watershed.
Result or Strategy Description	5.2.2 Water Licensees
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no licensed water users within or downstream of the block.
Result or Strategy Description	5.2.3.1 Channel Stability & Riparian Function
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a designated Fisheries Sensitive Watershed.

Result or Strategy Description	5.2.3.2 Minimizing Adverse Sediment Effects
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a designated Fisheries Sensitive Watershed.
Result or Strategy Description	5.2.3.3 Quantity & Timing of Flows
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a designated Fisheries Sensitive Watershed.
Wildlife Objectives	
Result or Strategy Description	5.7.1 General Wildlife Objectives
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within an Identified Wildlife Habitat Area . See the Support Document and Harvest Plan for details on the Migratory Bird Strategy.
Result or Strategy Description	5.7.2 Mule Deer Winter Range
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within Critical Deer Winter Range.
Result or Strategy Description	5.7.3 Moose
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within Critical Moose Winter Range.
Result or Strategy Description	5.7.4 Mountain Goat
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block in not within Mountain Goat Winter Range.
Result or Strategy Description	5.7.5 Flammulated Owl
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a Flammulated Owl Known Location Area . No evidence of this species was noted during field work.
Result or Strategy Description	5.7.6 Lewis's Woodpecker
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a Lewis's Woodpecker Known Location Area . No evidence of this species was noted during field work.
Result or Strategy Description	5.7.7 Spotted Bat
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not within a Spotted Bat Known Location Area . No evidence of this species was noted during field work.

STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	12.3	1065674	(Fdi9) Fdi-restricted to southerly aspects; (Fdi14) Fdi-restricted to lower elevations of biogeoclimatic unit; (Fdi32) di-limited by growing-season frosts; (BI10) BI-restricted to northerly aspects; (BI13) BI-restricted to upper elevations of biogeoclimatic unit MITD may be reduced to 1.5m if the site plan has identified site specific criteria as listed in the FSP. Regen delay will be 4 years unless site plan identifies natural regeneration when it can be set up to a max. of 7 years.
COMMENTS	LRM BEC Mapping (Source: BCGW, Mapping BGC, v.12 (2021)) locates MZA02 in the SBSmm biogeoclimatic subzone and the stocking standards for SBSmm 01(70) 05(10) 04(10) 06(10) BEC site series will be used.		

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 07 06	YES

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
BRENT FUKUMOTO	
DATE SIGNED	
2023/07/06	
I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to standards acceptable of a Registered Professional Forester.	

Map attached forms an integral part of the site plan.

SUPPORT DOCUMENT

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1444	-	MZA02	BEA02		Kamloops TSA FDU	MacKenzie	51 49 13 / 120 07 14

ASSESSMENTS

VISUAL IMPACT ASSESSMENT INFORMATION
<p>This block is not located in a Visually Sensitive Area . The block is Not Visually Sensitive (NVS).</p> <p>A Visual Impact Assessment is required as the block is within the LMZ for Lake #1376 L1-B(C). This lake is a Class C lake as per Clearwater Forest District Lakes Local Resource Use Plan (LRUP) Lakeshore Management Guidelines, August 1, 2001. The harvest area within the LMZ needs to meet Partial Retention from the lake. An VIA was not completed as the harvest area within the LMZ is 0.1ha and the distance from the lake is 180m of standing timber.</p>
PEST INCIDENCE SURVEY INFORMATION
<p>Pest Specific Comments</p>
<p>Forest Health Comments</p>
<p>The block is comprised of spruce, subalpine fir (balsam), lodgepole pine, and minor components of aspen and Douglas-fir types. There is some blowdown, most all lodgepole pine has grey Mountain Pine Beetle (IBM) damage, and there is minor balsam grey Western Balsam Bark Beetle (IBB) damage, and minor spruce grey Spruce Beetle (IBS) damage.</p>
ARCHAEOLOGICAL IMPACT ASSESSMENT INFORMATION
<p>BCTS has referred this development to all potentially affected First Nations , as was determined through a search of the Consultative Area Database (CAD). All referral communication and management decisions have been documented in a BCTS Due Diligence Report signed off for approval by the Timber Sale Manager. This Site Plan is consistent with the management decisions and measures approved by the TSM .</p> <p>A “Modify/Stop Work Procedure” has been included in the harvest plan in the event that previously unidentified Affected Archaeological Resource is discovered during operations.</p>
TERRAIN STABILITY FIELD AND GULLY ASSESSMENTS INFORMATION
<p>Terrain Stability Comments</p>
<p>There are no slopes over 60%. No TSFA is required.</p>
<p>Gully Comments</p>
VEGETATION

RIPARIAN ASSESSMENTS
Management Strategies
<p>RIPARIAN ASSESSMENT, RIPARIAN MANAGEMENT STRATEGY</p> <p>Riparian areas and non-classified drainage features have been identified in the vicinity of and within the harvest area. Where they are within the cutblock, these features have been managed with a machine free zone.</p> <p>Within machine free zone (MFZ) areas, minimize disturbance of herbaceous vegetation, shrubs and understory trees by directional falling and skidding away from the riparian areas. The best practice is to reach in with a feller buncher, cut individual trees, and place the cut tree outside the MFZ to minimize drag damage from skidding. When harvesting within machine free zones and/or riparian management areas, leave/retain trees that contribute to stream bank/channel stability. If these trees are at risk of windthrow, then stub them to minimize the windthrow risk.</p> <p>On seasonally wet ground, measures must be taken to prevent sediment transport to a stream, wetland or lake consistent with BCTS’s Environmental Management System.</p> <p>During industrial activities, impacts to the environment due to erosion & sediment must be considered within and external to the site where downslope/downstream areas may be affected by erosion & sediment caused by industrial activities.</p> <p>EROSION & SEDIMENT RISK: The risk of sediment delivery to a stream, wetland, or lake must be assessed and managed on the Site. If there is a greater than low risk of sediment delivery, erosion and sediment control measures must be outlined in a plan that includes a list of materials that must be on Site in the event that erosion and sediment control measures are required to be deployed.</p> <p>EROSION & SEDIMENT CONTROL: If sediment transportation occurs on the Site, appropriate erosion and sediment control measures must be undertaken to the extent necessary to:</p> <div><div>1) prevent sediment from entering a stream, wetland, or lake;</div><div>2) mitigate against damage to the environment (including but not limited to protection requirements in the Water Sustainability Act for water quality and aquatic habitat); and</div><div>3) prevent a material adverse effect from occurring to an objective set by government (see Site Plan-Results and Strategies).</div></div>

Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
Lake #1376 L1-B	SMZ		200.0		This lake is a Class 'C' lake as per the Clearwater Forest District LRUP Lakeshore Management Guidelines (August 1, 2001).
	RRZ		10.0		This lake is over 180m from the harvest boundary.
S5-1 S5	RRZ		10.0		The stream is more than 15m outside of the south harvest boundary.
	RMZ		20.0		Riparian Management Zone (RMZ) is marked with orange "Riparian Management Zone" ribbon inside the southern block boundary. Reserve nonmerchantable trees and brush species within the RMZ to the fullest extent practicable. Within the S5 RMZ, reserve: <ul style="list-style-type: none"> • 95% of the live aspen stems in all diameter classes (30-33 stems/ha or 2.3-2.5 m2/ha) • 65% of the live Douglas-fir and balsam stems in all diameter classes (137-140 stems/ha or 5.4-5.6m2/ha)
NCW-1 UC	MSZ		5.0		This NCW is more than 20m outside the eastern harvest boundary. A MFZ is not required. There is Labrador tea growing north of the NCW.

SOIL ASSESSMENT							
HAZARD RATINGS				SOIL CHARACTERISTICS			
SU	Soil Comp	Soil Erosion	Soil Disp	Depth To Unfavourable Subsoil		Type of Unfavourable Subsoil	Sediment Delivery Risk (Community Watersheds)
				Min(cm)	Max(cm)		
1	H	H	L				
COMMENTS							
SU-1: PAS Road CL R24163.03: 0.24ha Total PAS: 0.24ha, rounded to 0.2 in LRM Total PAS% = 0.2ha/13.0ha = 1.5% SU-1 meets FPPR Section 36(1). Harvesting should be conducted on a snowpack, frozen ground or during dry soil conditions to reduce the risk of soil compaction.							

RESERVE / RETENTION INFORMATION

WTRA / WTP (INSIDE OR ATTRIBUTED TO THE BLOCK)		
I.D.#	Area	Description
WTRA	0.5	Stand Composition in WTRA-1: WTRA-1: Reserve Type: Group Reserve Objective: BIO WTRA-1 is near NCW-1

GROUP WTRA / WTP AND SITE DEG. CALCULATION (to be retained on the first block of the Permit only)						
Block	Gross Cutblock Area	WTRA / WTP	%	BEC	Perm Access	%
MZ9L9	16.5	1.4	8.5	SBS/mm/	0.1	0.6
MZA02	13.0	0.5	3.8	SBS/mm/	0.2	1.9
MZA0C	24.8	0.9	3.7	SBS/mm/	1.0	3.9
MZA0E	11.9	0.5	4.1	ICH/mw/3	0.3	2.9
Total # of Blocks: 4	66.3	3.3	5.0		1.7	2.5

SUPPORTING INFORMATION

HLP/FSP CONSIDERATIONS
Wildlife/Endangered Species Comments
<p>MIGRATORY BIRD STRATEGY:</p> <p>Canada Nesting Zone: A2. Mapped Rank: 4 (Moderately High)</p> <p>BEC Zone: SBS</p> <p>As per the Full Cruise this block has been designated as the following:</p> <p>Nest Density Matrix: Mixed Coniferous stand of species composition Sx,BI,PI(At,Fd)), VRI Age Class 5 (81-100yrs) and 7(121-140yrs), Cruise Height Range 19.5-28.4m.</p> <p>Nest Density Matrix Ranking: 4.</p> <p>To reduce Incidental Take for Migratory Birds , the following Beneficial Management Practices (BMPs) are to be implemented:</p> <p>PL2 (Planning): Patch/edge retention around biodiversity anchors. Refer to the Stand Level Biodiversity and Leave Tree Sections in the Site Plan for reserve trees in the block (DoP 2).</p> <p>LO4 (Layout): Retention of WTRAs and Deciduous WTs for cavity nesting birds . Refer to the Stand Level Biodiversity and Leave Tree Sections in the Site Plan for reserve trees in the block (DoP 2).</p> <p>LO2 (riparian protection): Increasing riparian retention where possible i.e. to match ecosite where riparian-centric species may nest or feed. (DoP 2).</p> <p>A "Stop Work" procedure has been incorporated in the harvest plan.</p> <p>FISHER REPORT:</p> <p>This block is within Fisher Habitat Type II. Based on field and cruise data, the forest cover attributes required for Fisher Habitat Type II site conditions are not present in this block.</p>
Range Comments
<p>The range licence RAN077142 is held by Mamit Lake Ventures Ltd. A referral was sent to the range holder with no response.</p>
Fisheries Comments
<p>There are no fish streams in or adjacent to the block.</p>
Watersheds/Hydro Assessments Comments
<p>This block is located in the Wylie Creek Watershed. This block is not within a Community Watershed.</p>
Sensitive Areas Comments
<p>The majority of the block has soils with High Compaction Hazard. Soil Displacement Hazard is Low. Soil Erosion Hazard is High. Forest Floor Displacement Hazard is High. Mass Wasting Hazard is Moderate.</p> <p>Harvesting should be conducted on a snowpack, frozen ground or during dry soil conditions to reduce the risk of soil compaction.</p> <p>The block has a surface rocks in the east section and seasonal wet area in the northwest section.</p>
Recreation Comments
<p>Clearwater Sno-Drifters Notification: The Sno-Drifters have a cabin located a few kilometers past the Mackenzie FSR turn- off on Road R14756.1. They have requested that the Licensee notifies the Clearwater Sno-Drifters: (Contact Kurt Dodd: 1-250-674-0249 or Cell 1-250-674-8556 or email: kurt@kdcforestry.com) three months or sooner prior to the commencement of operations (during the snowmobile season December to April).</p>
Cultural Heritage Comments
<p>BCTS has referred this development to all potentially affected First Nations , as was determined through a search of the Consultative Area Database (CAD). All referral communication and management decisions have been documented in a BCTS Due Diligence Report signed off for approval by the Timber Sale Manager. This Site Plan is consistent with the management decisions and measures approved by the TSM .</p> <p>A "Stop Work Procedure" has been included in the Harvest Plan in the event that a previously unidentified CHR is discovered during operations.</p>
Biodiversity Emphasis/L.U. Comments
<p>This block meets the stand level biodiversity results and strategies in the FSP. For all areas of the block, the distance from a Wildlife Tree Retention Area (WTRA) or mature forest is <500 meters from another WTRA or mature forest. There is one WTRA and WTs that contribute to stand level biodiversity.</p>
Other Resources Comments
<p>This block has been referred to the Trapline Licence Holder (Trapper: TR0339T001).</p> <p>There are no guides in the area.</p>
ADDITIONAL COMMENTS:

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 07 06	YES

HARVEST PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1444	-	MZA02	BEA02		Kamloops TSA FDU	MacKenzie	51 49 13 / 120 07 14

SILVICULTURE SYSTEMS

SU	SYSTEM	VARIANT	PHASE	RESERVE	Min BA (m2/ha)	Min Residual Density (sph)
1	CCRES		REMOV	G		
Current Stand Structure/Site Conditions			SBSmm 01(70) 05(10) 04(10) 06(10) Forest Cover: Preharvest stand composition is SxFdiBI(Cw)744-16/0 and SxFdi(PlIBI)533-17/0. This estimate is based on forest cover information and field work. SU - 1 comprises some Spruce, balsam, lodgepole pine, and some aspen and Douglas-fir. Diameters range from 14-54cm (average 24cm) and heights range from 15-30m (average 24m). Conifer understory layers are suppressed BI in layers 3 and 4. Topography is variable with slopes ranging from 7-27% (average 15%).			
Silviculture Systems SU Comments			SU-1: Clearcut with reserves.			
Min. Characteristics of Leave Trees (Form, Health, Vigour)			Dispersed Retention: HU 'A': Within the block, reserve: • 95% of aspen and Douglas-fir stems in all diameter classes (31-35 stems/ha or 2.8-3.1 m2/ha) HU 'B': Within the S5 RMZ, reserve: • 95% of the live aspen stems in all diameter classes (30-33 stems/ha or 2.3-2.5 m2/ha) • 65% of the live Douglas-fir and balsam stems in all diameter classes (137-140 stems/ha or 5.4-5.6m2/ha)			

Additional Comments

Avalanche Assessments	MZA02 is mapped in the High Avalanche Activity Zone (along with all areas north of Barriere). Based on the terrain features (rolling and broken terrain) and moderate slopes within and immediately surrounding the block, the avalanche risk should be considered Low. WorkSafeBC regulations regarding an avalanche risk assessment may not be required .
Harvesting Constraints	STOP WORK PROCEDURE If a previously unidentified Affected Feature is encountered during harvesting , road construction, or mechanical site preparation that is authorized or carried out by the Timber Sales Manager (TSM), the TSM will require that the operations cease to the extent necessary to protect the Affected Feature until an evaluation can be carried out. Affected Features: Cultural Heritage Resource, Archaeological Resource, active migratory bird nests, stick nests, active wildlife den. There are locations within the block where there are short pitches up to 27%. Average slope is 15%. Approved safe work procedures must be followed on steep slopes. See Harvest Plan map for locations. This block has been designed for ground skid harvesting. The block has a surface rocks in the east section and seasonal wet area in the northwest section.

SOIL ASSESSMENT											
SU	HAZARD RATINGS			SOIL DISTURBANCE				SOIL CHARACTERISTICS			
	Soil Comp.	Soil Erosion	Soil Disp.	Max Allow Soil Dist %	Max Allow Max Amount TAS may exceed MASD prior	Max Allow Perm Access Structures %	MASD for Roadside work areas %	Depth to Unfavorable Subsoil		Type of Unfavorable Subsoil	Sediment Delivery Risk (Comm. Watershed)
								Min (cm)	Max (cm)		
1	H	H	L	10.0	5.0	7.0	25.0				
SU	Critical site conditions that affect the timing of operations and how they affect the timing										
1	The majority of the block has soils with High Compaction Hazard. Soil Displacement Hazard is Low. Soil Erosion Hazard is High. Forest Floor Displacement Hazard is High. Mass Wasting Hazard is Moderate. The block has a surface rocks in the east section and seasonal wet area in the northwest section.										

SU MANAGEMENT COMMENTS	
SU	SU Description
1	A Windthrow risk assessment was completed for this block and the windthrow risk was estimated to be moderate . SBSmm 01(70) 05(10) 04(10) 06(10) Forest Cover: Preharvest stand composition is SxFdiBI(Cw)744-16/0 and SxFdi(PlIBI)533-17/0. This estimate is based on forest cover information and field work. SU - 1 comprises some Spruce, balsam, lodgepole pine, and some aspen and Douglas-fir. Diameters range from 14-54cm (average 24cm) and heights range from 15-30m (average 24m). Conifer understory layers are suppressed BI in layers 3 and 4. Topography is variable with slopes ranging from 7-27% (average 15%).

SOIL MANAGEMENT COMMENTS					
Soil Conservation					
<p>SU-1: PAS Road CL R24163.03: 0.24ha</p> <p>Total PAS: 0.24ha, rounded to 0.2 in LRM Total PAS% = 0.2ha/13.0ha = 1.5%</p> <p>SU-1 meets FPPR Section 36(1).</p> <p>Harvesting should be conducted on a snowpack, frozen ground or during dry soil conditions to reduce the risk of soil compaction.</p>					
Temporary Access					
<p>SU-1: TAS Landing: 1 landing x 0.2ha/landing = 0.2ha Total TAS: 0.2ha TAS% = 0.2ha/12.3ha = 1.6%</p> <p>The Temporary Access Structure Calculations for SU - 1 is 1.6% satisfies FPPR Section 35 (4)(b)(i) and (ii).</p> <p>All Temporary Access Structures will be rehabilitated immediately upon completion of harvesting operations .</p>					
Slope Instability					
<p>There are no slopes over 60%. No TSFA is required.</p>					
RIPARIAN ASSESSMENTS					
Management Strategies					
<p>RIPARIAN ASSESSMENT, RIPARIAN MANAGEMENT STRATEGY</p> <p>Riparian areas and non-classified drainage features have been identified in the vicinity of and within the harvest area. Where they are within the cutblock, these features have been managed with a machine free zone.</p> <p>Within machine free zone (MFZ) areas, minimize disturbance of herbaceous vegetation, shrubs and understory trees by directional falling and skidding away from the riparian areas. The best practice is to reach in with a feller buncher, cut individual trees, and place the cut tree outside the MFZ to minimize drag damage from skidding. When harvesting within machine free zones and/or riparian management areas, leave/retain trees that contribute to stream bank/channel stability. If these trees are at risk of windthrow, then stub them to minimize the windthrow risk.</p> <p>On seasonally wet ground, measures must be taken to prevent sediment transport to a stream, wetland or lake consistent with BCTS's Environmental Management System.</p> <p>During industrial activities, impacts to the environment due to erosion & sediment must be considered within and external to the site where downslope/downstream areas may be affected by erosion & sediment caused by industrial activities.</p> <p>EROSION & SEDIMENT RISK: The risk of sediment delivery to a stream, wetland, or lake must be assessed and managed on the Site. If there is a greater than low risk of sediment delivery, erosion and sediment control measures must be outlined in a plan that includes a list of materials that must be on Site in the event that erosion and sediment control measures are required to be deployed.</p> <p>EROSION & SEDIMENT CONTROL: If sediment transportation occurs on the Site, appropriate erosion and sediment control measures must be undertaken to the extent necessary to:</p> <p>1) prevent sediment from entering a stream, wetland, or lake;</p> <p>2) mitigate against damage to the environment (including but not limited to protection requirements in the Water Sustainability Act for water quality and aquatic habitat); and</p> <p>3) prevent a material adverse effect from occurring to an objective set by government (see Site Plan-Results and Strategies).</p>					
Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
Lake #1376 L1-B	SMZ		200.0		This lake is a Class 'C' lake as per the Clearwater Forest District LRUP Lakeshore Management Guidelines (August 1, 2001).
	RRZ		10.0		This lake is over 180m from the harvest boundary.
S5-1 S5	RRZ		10.0		The stream is more than 15m outside of the south harvest boundary.
	RMZ		20.0		Riparian Management Zone (RMZ) is marked with orange "Riparian Management Zone" ribbon inside the southern block boundary. Reserve nonmerchantable trees and brush species within the RMZ to the fullest extent practicable. Within the S5 RMZ, reserve: • 95% of the live aspen stems in all diameter classes (30-33 stems/ha or 2.3-2.5 m2/ha) • 65% of the live Douglas-fir and balsam stems in all diameter classes (137-140 stems/ha or 5.4-5.6m2/ha)
NCW-1 UC	MSZ		5.0		This NCW is more than 20m outside the eastern harvest boundary. A MFZ is not required. There is Labrador tea growing north of the NCW.

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION					
The Nicola Thompson Fraser Sustainable Forest Management Plan (2011) requires consideration of coarse woody debris (CWD) to be reserved on site post harvest.					
Current Coarse Woody Debris levels are estimated to be 10-50 m3/ha.					
CWD Targets: Total - where feasible, aim to retain 20m3/ha or less as CWD evenly distributed across the cutblock. Small CWD - at a minimum, retain 4 logs/ha each being no less than 2m in length and at least 7.5 cm in diameter at one end. Large CWD - at a minimum, retain 19 logs per hectare each being a minimum of 10m in length and at least 20cm in diameter at one end.					
CWD Strategies: Efforts will be made to ensure these logs are not broken at time of harvesting . CWD pieces may consist of any available species provided they are not expected to contribute to a forest health risk (ie bark beetle). The preference is for CWD to be sourced from non-merchantable log grades (firmwood rejects and some dry grade 4) where available. Target leave trees are expected to contribute to future CWD when they fall to the ground but may be removed if they contribute to a forest health risk (ie bark beetle).					
Small Mammal Habitat Small mammal piles will be created and will be at least 3m wide, at least 5m long, and mechanically piled at least 2m high using the largest woody debris available on the Site. Debris piles will be located more than 20m from standing timber, but within 200 meters of Riparian Management Areas and block edges and oriented to connect WTRA and/or riparian features with the block edge. At minimum, 7 small mammal piles are required; create additional piles as needed to achieve WTRA and/or riparian feature connection.					
Performance Std. (%) :	100.0	Block Target (%) :	80.0	Coarse Woody Debris (m3/ha):	20.0

DEFINITIONS

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 07 06	YES

Print off the PAS/TAS table located as an attachment on the Block Details Screen and attach to this prescription.

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
BRENT FUKUMOTO	
DATE SIGNED	
2023/07/06	
I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to standards acceptable of a Registered Professional Forester.	

SILVICULTURE PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1444	-	MZA02	BEA02		Kamloops TSA FDU	MacKenzie	51 49 13 / 120 07 14

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	13.01	SBS	mm		01-70 05-10 04-10 06-10	1,240	15	SE	Middle Slope	25	SIL

STOCKING REQUIREMENTS				
ASSESSMENT DATES				
Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1065674	4	0	20
Min/Max Elevation Regime: 1220 / 1260				

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	Max
Fdi	Douglas Fir - Interior	1.4		BI	Subalpine Fir	1.0		WELL SPACED TREES (sph)	
Sx	Hybrid Spruce (SE x SW)	1.0						Target Pref/Acc	Minimum Pref/Acc
Pli	Lodgepole Pine - Interior	2.0						1200	700
								Minimum Pref	
								Min Horizontal Dist. Pref/Acc (m)	
								2.0	
								Height Relative to Competition (%)	
								150	

OTHER REQUIRED STOCKING INFORMATION
LRM BEC Mapping (Source: BCGW, Mapping BGC, v.12 (2021)) locates MZA02 in the SBSmm biogeoclimatic subzone and the stocking standards for SBSmm 01(70) 05(10) 04(10) 06(10) BEC site series will be used.

ACTIVITIES

SILVICULTURE ACTIVITY COMMENTS	
ACTIVITY	COMMENT

MANAGEMENT STRATEGY

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION
The Nicola Thompson Fraser Sustainable Forest Management Plan (2011) requires consideration of coarse woody debris (CWD) to be reserved on site post harvest.
Current Coarse Woody Debris levels are estimated to be 10-50 m3/ha.
CWD Targets: Total - where feasible, aim to retain 20m3/ha or less as CWD evenly distributed across the cutblock. Small CWD - at a minimum, retain 4 logs/ha each being no less than 2m in length and at least 7.5 cm in diameter at one end. Large CWD - at a minimum, retain 19 logs per hectare each being a minimum of 10m in length and at least 20cm in diameter at one end.
CWD Strategies: Efforts will be made to ensure these logs are not broken at time of harvesting . CWD pieces may consist of any available species provided they are not expected to contribute to a forest health risk (ie bark beetle). The preference is for CWD to be sourced from non-merchantable log grades (firmwood rejects and some dry grade 4) where available. Target leave trees are expected to contribute to future CWD when they fall to the ground but may be removed if they contribute to a forest health risk (ie bark beetle).
Small Mammal Habitat Small mammal piles will be created and will be at least 3m wide, at least 5m long, and mechanically piled at least 2m high using the largest woody debris available on the Site. Debris piles will be located more than 20m from standing timber, but within 200 meters of Riparian Management Areas and block edges and oriented to connect WTRA and/or riparian features with the block edge. At minimum, 7 small mammal piles are required; create additional piles as needed to achieve WTRA and/or riparian feature connection.
Performance Std. (%): 100.0 Block Target (%): 80.0 Coarse Woody Debris (m3/ha): 20.0

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 07 06	YES

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
BRENT FUKUMOTO	
DATE SIGNED	
2023/07/06	
I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to standards acceptable of a Registered Professional Forester.	