SITE PLAN
KAMLOOPS
BC TIMBER SALES

Report Date 2023/02/14

TENURE IDENTIFICATION

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA2093	-	MSALD	BEALD		100 Mile FDU	Flat Lake Fire - Gustafsen Lake FSR	51 37 49 / 121 37 53

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
38.4	0.0	2.3	6.7	0.0	0.0	29.3

ADDITIONAL COMMENTS

DEFINITIONS (ADD DEFINITIONS AS REQUIRED)
This Site Plan is prepared for block MSALD and roads MH R23942.05, MH MSALD.01, and MH MSALD.02, and is consistent with the BCTS Kamloops Business Area, 100 Mile House TSA Forest Stewardship Plan dated October 1, 2019 and effective February 26, 2020. This Site Plan is prepared for this block and its associated roads in accordance with FRPA Section 10 (1), (2) & (3).

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	0.0

SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS, AND HOW THEY AFFECT THE TIMING
1	Soils within the block are loamy; however, due to the hydrophobicity of the burned top soil layer, it can become greasy and slick during break-up conditions. Use caution with machinery at this time and while walking through the area. Avoid concentrated forwarding/skidding routes in wet soil conditions.

RESULTS AND STRATEGIES

FSP:	**FDU:**
BCTS 100 Mile House FSP	100 Mile FDU
Biodiversity Objectives	
Result or Strategy Description	5.2.2 Landscape Unit (LU) Boundaries
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is located entirely within the Bridge Creek landscape unit, which has a BEO of Low, and is within the IDFdk3 biogeo zone; NDT 4.
Result or Strategy Description	5.3.1 Wildlife Tree Retention
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is within the IDFdk3 biogeo unit of the Bridge Creek LU, which has a wildlife tree retention target of 9%. There are 6 proposed wildlife tree retention areas (WTRA) within this block accounting for 17.4% of the gross area.
Result or Strategy Description	5.3.2 Riparian Areas
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There is one classified riparian feature associated with this block. MSALD-1-W5-HVMW: Located adjacent to the northern and eastern boundaries. This classified W5 is comprised of several High Value Moose Wetlands (CCLUP) generally located >/=10m away from the harvest boundary. All timber within the RMZ overlap has been severely burnt from wildfire. Any RMZ overlap within the harvest area will be treated the same as the remainder of the HU/SU. No additional management is required. Refer to the ¿Riparian Assessments¿ under the Support Document for non-classified features.
Result or Strategy Description	5.2.1 Spatial / Temporal Distribution of Cutblocks and Species Composition
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Wildfire has severely impacted the timber within this development, and greater than 50% of the basal area of the stand is dead; therefore, patch size targets are not applicable to this opening.

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Result or Strategy Description	5.2.3 Old Seral Landscape Biodiversity
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not overlap any OGMA or OGDA.
Result or Strategy Description	5.2.4 Mature + Old Seral Landscape Biodiversity
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The proposed harvest for this block is moderate to high burn severity with greater than 50% mortality. After salvage harvesting it is unlikely that the LU will have opportunity in M+O and O.
Cultural Heritage Objectives	
Result or Strategy Description	5.6 Cultural Heritage Resources
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development has been referred to all potentially affected First Nations , as was determined through a search of the Consultative Area Database (CAD). If a previously unidentified potentially affected Cultural Heritage Resource (CHR) is encountered during harvesting, road construction or mechanical site preparation, operations must cease to the extent necessary to protect the affected CHR.
Lakes Management Objectives	
Result or Strategy Description	5.9.1 Tourism – General
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development overlaps a guide outfitter operation. This development was referred and no comments were received.
Result or Strategy Description	5.9.2 Lakeshore Management Zones
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not within a Lakeshore Management Zone (LMZ).
Measures	
Result or Strategy Description	5.11 Invasive Plants
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	As per a search of the Alien Invasive Plant Program database , there are 2 known invasive plants within 500m of the development: hoary alyssum and spotted knapweed. Bull thistle, meadow goats-beard, mullein, oxeye daisy, sulphur cinquefoil, and shepherds purse, are also known invasive plants along the 1100 Road that provides access to this block. Preventative measures for controlling the introduction of invasive species will be implemented as follows: Within one year of activity completion, all contiguous areas of disturbed soil >/=0.1ha, including areas occupied by ditch-lines, cut or fill slopes, bladed skid trails, and deactivated roads which are not reforested, are revegetated with seed or forage mixture that meets or exceeds Canada Common Number 1 Forage Mixtures as defined by the Canada Seeds Act and Regulation or native shrubs : a) At least 90% of the total area exposed in a calendar year requires seeding, by July 1 of the immediately following calendar year; and b) The remainder of such exposed area prior to December 31 of the same immediately following calendar year; and The Certificate of Seed Analysis must be made available to FLNRORD staff , for review upon request, for a one year period following the application of the seed to ensure that the batch does not contain High Priority Invasive Species. If within an Invasive Plant Zone, where within 12 months of the grass seeding identified above, it is identified during road inspections that the area is insufficiently revegetated (less than 10% cover), then the exposed area will be re-seeded at least once.
Range Objectives	
Result or Strategy Description	5.10.1 Natural Range Barriers
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Harvesting this block will not remove or render ineffective any natural range barriers.

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Result or Strategy Description	5.10.2 Animal Unit Months
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The authorized level of AUMs for the Gustafsen FDU is 37,538; it is unknown if this level is being maintained.
Recreation Objectives	
Result or Strategy Description	5.7.1 Backcountry
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not overlap any CCLUP designated backcountry polygons ; however, there is a registered trapper operating within the area. This development was referred and no comments were received.
Result or Strategy Description	5.7.3 Recreation Sites, Trails and Interpretive Forests
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development overlaps the Moose Valley Park Recreation Site Polygon (Moose Valley Canoe Route REC2529); all timber within this conflict is high severity burn. There are no other known rec sites, trails or interpretive forests associated with this development.
Result or Strategy Description	5.7.2 Wildcraft
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no existing extended use roads requiring access control associated with this development.
Result or Strategy Description	5.7.4 Buffered Trails
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are no buffered trails within or adjacent to the proposed development.
Soil Management and Conservation Objective	
Result or Strategy Description	5.1 Soils
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Soils within this block are primarily non-sensitive; therefore, the maximum soil disturbance limit is set at 10% of the NAR. There are no PAS proposed for this development. TAS accounts for 2.7% of the NAR. This block is consistent with sections 35 & 36 of the FPPR.
Visual Objectives	
Result or Strategy Description	5.8 Visual Quality
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Not within a scenic area with established VQOs, nor is it within a High Elevation Viewshed.
Water Objectives	
Result or Strategy Description	5.4.1 Water in Community Watersheds
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not located within a community watershed.
Result or Strategy Description	5.4.2 Hydrology
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not within the Bonaparte, Clinton, Loon, Boss/Deception, Flat Lake, Interlakes, Lang Lake/Schoolhouse, or Marble Range FDU applicable areas for Key Watersheds.

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Result or Strategy Description	5.4.3.1 Horsefly River Fisheries Sensitive Watershed (GAR F-5-001)
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not within the Horsefly Watershed as identified in GAR F-5-001.
Result or Strategy Description	5.4.3.2 Fisheries Sensitive Watershed - Deadman Watersheds (GAR F-3-013)
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not within the Deadman Watershed as identified in GAR F-3-013.
Wildlife Objectives	
Result or Strategy Description	5.5.1.1 Species at Risk – General
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	A search of the BC Species and Ecosystems Explorer listed 64 wildlife species at risk in the IDFdk3 biogeo zone for forest/riparian/subterranean/wetland habitat types in the 100 Mile House Forest District. Of the species at risk listed, the following are listed within the FSP (tables 11 & 12): Western Toad, Great Blue Heron, Short-eared Owl, Burrowing Owl, Northern Rubber Boa, Common Nighthawk, Northern Painted Turtle - Intermountain - Rocky Mountain Population, North American Racer, Olive-sided Flycatcher, Spotted Bat, Peregrine Falcon, Wolverine, Yellow-breasted Chat, Western Screech-Owl, Lewiss Woodpecker, Little Brown Myotis, Fringed Myotis, Bighorn Sheep, Band-tailed Pigeon, whitebark pine, Gopher Snake, Flammulated Owl, Great Basin Spadefoot, American Badger, Sharp-tailed Grouse and Grizzly Bear. Western Grebe, American Bittern, Rough-legged Hawk, Swainsons Hawk, Green Heron, River Jewelwing, Canyon Wren, Northern Painted Turtle, Evening Grosbeak, Townsends Big-eared Bat, Western Rattlesnake, Black Swift, Familiar Bluet, Gyrfalcon, Pale Jumping-slug, Nevada Skipper, Barn Swallow, Caspian Tern, California Gull, Short-billed Dowitcher, Hudsonian Godwit, Magnum Mantleslug, Surf Scoter, Western Small-footed Myotis, Double-crested Cormorant, pebbled paw, Jutta Arctic, Mountain Goat, American White Pelican, Columbia Plateau Pocket Mouse, Red-necked Phalarope, American Golden-Plover, Eared Grebe, American Avocet, Williamsons Sapsucker, Williamsons Sapsucker thyroideus subspecies, Barn Owl and Callused Vertigo were also included in the list of species at risk, but are not listed within the FSP. A Western Toad was found within an adjacent block during fieldwork . Additional buffers were established where necessary, and winter harvest is recommended to prevent any adverse impacts to the toad populations. No further management is required. Refer to the Harvest Plan for Harvesting Constraints.
Result or Strategy Description	5.5.2.7 Furbearers – Fisher
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is within a Dry Forest Fisher Habitat Zone. There are no established WHAs within the vicinity. The following CWD retention is prescribed across the block to provide resting habitat, connectivity and cover: 1 piece of CWD of hard or hollow logs >/=35 cm in diameter and >/=7m in length, elevated 25-50cm above ground, and 1 debris pile per hectare, each being >3m wide by >5m long by >2m high, with >30% of the pieces being >20cm in diameter and >3m long. Debris piles should be located >/=20m from the timber edge, but within 200m of riparian management areas and block edges to maintain connectivity. Pile locations should aim to maintain a 50m dash distance between cover (standing timber, WTRAs, and debris piles). Actual pile locations may vary but should adhere to the above connectivity conditions. If encountered, any spruce trees with broom rust >27cm diameter (resting habitat) are to be retained. General furbearer management is also addressed by Obj 5.3.2 (Riparian Areas), Obj 5.2 (Biodiversity-Landscape Level), Obj 5.3 (Biodiversity – Stand level), Obj 5.8 (Visual Quality), Obj 5.7.1 (Backcountry), and Obj 5.9.2 (LMZs).
Result or Strategy Description	5.5.2.9 Furbearers – General
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block overlaps a trapline tenure - TR0502T076. BCTS has referred this development to the trapline tenure holder. Refer to Results and Strategies sections 5.7.1 (Backcountry) and 5.3.2 (Riparian Management), and Coarse Woody Debris Management Strategy Information under the Harvest Plan section of this Site Plan.
Result or Strategy Description	5.5.4.1 Moose
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	There are High Value Moose Wetlands (HVMW) (CCLUP) within proximity of the development. The harvest boundary has been established >10m from the edge. Due to the severity of the burn, all vegetation has been scorched; therefore, there is no security or thermal cover (SC/TC) within the MMU. All new proposed roads are temporary and will be rehabilitated post-harvest. For the portions of the cutblock within 500m (slope distance) of the HVMWs, the free growing dwarf mistletoe damage criteria for even-aged coniferous trees as specified in the FS660 field card, will not apply to retained Lodgepole pine and subsequent Lodgepole pine regeneration. See objective 5.5.5.
Result or Strategy Description	5.5.5 Access Management for Wildlife
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block does not overlap any critical habitat. All proposed roads within 1km will be deactivated or rehabilitated immediately following harvest activities. No further management is required.

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Result or Strategy Description	5.5.1.2 Species at Risk Listed under Government Action Regulation (GAR)
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not overlap any Sensitive Habitats related to Species at Risk for which there are WHAs established under GAR.
Result or Strategy Description	5.5.1.3 Mountain Caribou – Eastern Herds
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This block is not located within an identified Caribou Matrix Habitat.
Result or Strategy Description	5.5.1.4 American Badger and Spadefoot Toad
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not overlap any sensitive habitats related to the American Badger or Spadefoot Toad , nor were there any habitat sites identified within 200m of this development.
Result or Strategy Description	5.5.1.5 Great Blue Heron
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not overlap any sensitive habitats related to the Great Blue Heron, nor were there any FSP defined colonies identified within 500m of this development.
Result or Strategy Description	5.5.2.1 Grizzly Bear
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not within a Grizzly Bear Habitat Capability polygon (CCLUP).
Result or Strategy Description	5.5.2.2 Bighorn Sheep
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not fall within the Marble Range FDU.
Result or Strategy Description	5.5.2.3 White Pelicans
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	At the time of submission of this FSP, no White Pelican WHAs have been established in the 100 Mile House Natural Resource District. No evidence of White Pelican was noted during development (nests, sightings).
Result or Strategy Description	5.5.2.4 Bull Trout (Dolly Varden)
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not associated with any spawning or critical fish habitat.
Result or Strategy Description	5.5.2.5 Sandhill Crane
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	At the time of submission of this FPS, no Sandhill Crane WHAs have been established in the 100 Mile House Natural Resource District. No evidence of Sandhill Crane was noted during development (nests, sightings).
Result or Strategy Description	5.5.2.6 Prairie Falcon
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not overlap any sensitive habitats related to the Prairie Falcon, nor were there any FSP defined occurrences identified within 300m of this development.
Result or Strategy Description	5.5.2.8 Furbearers – Wolverine
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development does not overlap any established WHAs related to the Wolverine , nor were there any FSP defined occurrences identified within 500m of this development.
Result or Strategy Description	5.5.3.1 Critical Fish Habitat
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The development is not associated with any known critical fish habitat.

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Result or Strategy Description	5.5.3.2 Grasslands
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The development is not associated with any known critical grasslands.
Result or Strategy Description	5.5.4.2 Mule Deer
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not within UWR U-5-003 (mule deer winter range).
Result or Strategy Description	5.5.4.3 Salmon
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This development is not within the Bonaparte River or Horsefly River watersheds.

STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	29.3	1060387	
COMMENTS	There are areas within the block that have a moderate to high cover of surfical rock. A plantability survey is recommended in these areas to determine if the MITD should be reduced.		

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 02 14	YES

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RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
SARAH REMPEL	
DATE SIGNED	
2023/02/14	
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.

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

SUPPORT DOCUMENT

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA2093	-	MSALD	BEALD		100 Mile FDU	Gustafsen FSR (1100rd)	51 37 49 / 121 37 53

ASSESSMENTS

VISUAL IMPACT ASSESSMENT INFORMATION

This block is not within a visually sensitive area.

PEST INCIDENCE SURVEY INFORMATION

Pest Specific Comments

None noted during field layout, primarily due to the severity of the burn.

Forest Health Comments

The majority of the timber within the block has been destroyed due to severe wildfire activity in 2021. This block is proposed to salvage the fire impacted timber.

ARCHAEOLOGICAL IMPACT ASSESSMENT INFORMATION

BCTS has referred this development to all potentially impacted First Nations.
Refer to the Results and Strategies section.

TERRAIN STABILITY FIELD AND GULLY ASSESSMENTS INFORMATION

Terrain Stability Comments

No instability indicators were noted.

Gully Comments

Not Applicable.

VEGETATION

No significant competition during regeneration establishment is anticipated.

RIPARIAN ASSESSMENTS

Management Strategies

There are several riparian features associated with this development.

Maintain natural drainage patterns.

RRZ = Riparian Reserve Zone
RMZ = Riparian Management Zone
MSZ = Machine Sensitive Zone
MFZ = Machine Free Zone
HVMW = High Value Moose Wetland

See Results and Strategies section - Riparian Management.

Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
MSALD-ALL-NCW UC	MSZ		5.0		All non-classified wetlands associated with this block have been excluded from the harvest area. Where the boundary location doesn't provide a sufficient buffer , a 5-8m MFZ has been established. Stub the MFZ boundary every 5-10m at 3-5m in height, and retain all existing CWD within the MFZ.
MSALD-1-W5-HVMW W5	RMZ		40.0		This classified W5 is comprised of several High Value Moose Wetlands (CCLUP) generally located >/=10m away from the harvest boundary. All timber within the RMZ overlap has been severely burnt from wildfire. Any RMZ overlap within the harvest area will be treated the same as the remainder of the HU/SU. No additional management is required.
	RRZ		10.0		Located adjacent to the northern and eastern boundaries.
MSALD-1-NCD NCD	MFZ		5.0		This feature occurs in the northern portion of the block. Where the NCD flows within the harvest boundary a 5-8m MFZ has been established. Stub the MFZ boundary every 5-10m at 3-5m in height, and retain all existing CWD within the MFZ.

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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	L	L			NNTD	

COMMENTS

Soils within this block are medium textured with moderate amounts of coarse fragments, and are predominantly non-sensitive (loamy), therefore the soil disturbance limit is set at 10% of the NAR.

There are no PAS proposed for this development.
TAS accounts for 2.7% of the NAR.

The licensee is responsible for ensuring the maximum soil disturbance limits are not exceeded.
All access structures will be managed to ensure natural drainage patterns are maintained and erosion measures are installed prior to spring freshet.
Recommend using a random skidding pattern and avoid skidding across depressional areas when wet.
This block is consistent with sections 35 and 36 of the FPPR.

RESERVE / RETENTION INFORMATION

WTRA / WTP (INSIDE OR ATTRIBUTED TO THE BLOCK)		
I.D.#	Area	Description
WTRA	6.7	The WTRAs encompass wet areas, and/or green timber associated with riparian features. PlSx(FdAt) 724-12

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	%
MS92N	64.7	8.1	12.5	IDF/dk/3	0.1	0.1
MSAL3	52.2	6.9	13.2	IDF/dk/3	0.6	1.2
MSALD	38.4	6.7	17.4	IDF/dk/3	0.0	0.0
MSAM3	23.7	2.6	11.1	IDF/dk/3	0.0	0.0
MSAMW	24.5	4.2	17.2	IDF/dk/3	0.0	0.0
MSAN0	21.9	3.8	17.2	IDF/dk/3	0.5	2.2
MSAN3	3.2	0.0	0.0	IDF/dk/3	0.0	0.0
MSAN4	1.1	0.0	0.0	IDF/dk/3	0.0	0.0
MSAN7	1.0	0.0	0.0	IDF/dk/3	0.0	0.0
MSANB	12.8	0.0	0.0	IDF/dk/3	0.0	0.0
MSAPM	5.1	0.2	4.7	IDF/dk/3	0.2	4.8
Total # of Blocks: 11	**248.5**	**32.5**	**13.1**		**1.4**	**0.6**

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SUPPORTING INFORMATION

HLP/FSP CONSIDERATIONS
Wildlife/Endangered Species Comments
The design of this block considered Migratory Bird Habitat polygons and the Beneficial Management Practices (BMPs), as outlined in the 2016 BCTS Migratory Bird Strategy. The proposed harvest area is mapped within Rank 1 (Very Low Risk), Rank 2 (Low Risk), Rank 3 (Moderate Risk) and Rank 4 (Moderately High Risk) polygon. The majority of the stand has been destroyed due to wildfires in 2021. No BMPs are required and no specific management has been planned. If a previously unidentified migratory bird nest is encountered during harvesting, road construction, or a silviculture activity associated with this Site Plan, operations are to cease to the extent necessary to protect the affected migratory bird nest until appropriate BMPs can be implemented to minimize or prevent the risk of incidental take. --- --- --- --- --- --- --- --- --- --- Western Toads were noted within/adjacent to blocks associated with this development. If a previously unidentified hibernacula is encountered, or in the case of discovery of amphibians or reptiles, during harvesting, road construction, or a silviculture activity associated with this Site Plan, operations are the cease to the extent necessary to protect the affected feature /species until appropriate BMPs can be implemented or it is determined whether mitigation measures are required."
Range Comments
This development overlaps two active range tenures: RAN074259 and RAN177771. No fences were noted during layout operations. However, if a fence has been constructed by the time harvesting activities commence, log up to any fences present (don't leave standing dead trees along fence), maintain a 6m RoW around fence free of debris, no site prep or planting of RoW. Refer to the Results and Strategies section.
Fisheries Comments
There are no fish sensitive features or fish bearing streams or tributaries associated with this development.
Watersheds/Hydro Assessments Comments
This block is within the San Jose River watershed. This block is not located within any community watersheds. Refer to the Results and Strategies section.
Sensitive Areas Comments
There are 17 known red or blue listed ecological communities within the IDFdk3 biogeo zone within the 100 Mile House Forest District, as per a review of the BC Species and Ecosystems Explorer. The development is not associated with any known sensitive areas (i.e. critical fish habitat, grasslands). Refer to the Results and Strategies section.
Recreation Comments
This development overlaps the Moose Valley Park Recreation Site Polygon (Moose Valley Canoe Route REC2529); all timber within this conflict is high severity burn.
Cultural Heritage Comments
This development overlaps a Moderate to High Arch potential polygon . Refer to the Results and Strategies section.
Biodiversity Emphasis/L.U. Comments
Landscape Unit: Bridge Creek; Biodiversity Emphasis Option = Low; WTRA target: IDFdk3 = 9% Refer to the Results and Strategies section.
Other Resources Comments
Trapper: TR0502T076 Guide Outfitter: None Mineral: None Refer to the Results and Strategies Section.

ADDITIONAL COMMENTS:

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 02 14	YES

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HARVEST PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA2093	-	MSALD	BEALD		100 Mile FDU	Gustafsen FSR (1100rd)	51 37 49 / 121 37 53

SILVICULTURE SYSTEMS

SU	SYSTEM	VARIANT	PHASE	RESERVE	Min BA (m2/ha)	Min Residual Density (sph)
1	CCRES		SALVF	G		

Current Stand Structure/Site Conditions	The current stand consists of 84% Fd, 9% Pl, 7% Sx and 1% At in the overstory, all heavily impacted by wildfire in 2021. Net merchantable volume of the stand prior to reductions is 124m3/ha, with an average stand height of 22.9m. Due to the severity of the burn, all regen was destroyed within the stand.
Silviculture Systems SU Comments	SU-1: Clearcut with Reserves; SU is proposed to salvage timber killed in the 2021 wildfires.
Min. Characteristics of Leave Trees (Form, Health, Vigour)	All live, green trees (all species), and a small component of large diameter dead Fd is to be retained; 5% removal has been allotted for the live, green retention to allow for incidental removal due to operation or safety constraints. The stems per hectare (sph) listed below are an approximation of the leave trees post-harvest based on the cruise compilation, using an estimated percentage of what may be actually available for retention at time of harvest, actual numbers may vary. Douglas-fir (dead) – Retain 90% of all dead stems >/=67.5cm dbh; which equates to 1 sph. Douglas-fir (live) – Retain 95% of all live merch stems; which equates to 3 sph. Spruce – Retain 95% of all live merch stems; which equates to 1 sph Lodgepole pine – Retain 95% of all live merch stems; which equates to <1 sph. Aspen – Retain 95% of all live merch stems; none were tallied. If encountered, retain any live unburned conifer regen, saplings and poles (with green, healthy-looking crowns) where they occur in patches. STUBBING - Retain 3 to 4 stub groups per hectare (5 or more stubs per group, 3-5m high). These stub groups should be created near and/or connecting riparian areas, green leave trees and/or regen, adjacent green stands/plantations, large CWD logs left after burn, large rocks and/or outcrops, and knolls. - Stub MFZ boundary every 5-10m at 3-5m in height to identify its location post-harvest.

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Additional Comments

Harvesting Constraints	HARVEST INFORMATION This block is appropriate for conventional roadside harvest (i.e. rubber tired skidder, mechanical falling). If safe work practices acceptable to WorkSafeBC have not been provided , a harvest strategy will be developed by the licensee to eliminate or control the steep slope hazard (ie bladed trails, hand fall, line skid). There is a moderate to high cover of surficial rock (typically round boulders up to 1m in diameter) within areas of the block. It is recommended that harvesting be done on sufficient snowpack . Winter harvest is also recommended to avoid any potential adverse impacts to the Western Toad populations . SAFETY Extensive wildfire disturbance during summer 2021 has created large areas of dead standing timber, which can be overhead hazards (brittle tops, unstable roots). Areas of unstable ground occur where root masses have been burned away below the top soil layer and can pose as tripping, twisting or falling hazards. SOILS Soils may be hydrophobic due to being burned in the 2021 wildfires, and could become greasy and slick during precipitation events. Minimize machine traffic to the extent practicable to reduce further soil damage . SLOPES Slopes within the block are <35%. ++ ARCHAEOLOGICAL / CULTURAL HERITAGE If a previously unidentified affected Cultural Heritage Resource is encountered during harvesting , road construction or mechanical site preparation, operations must cease to the extent necessary to protect the affected cultural heritage resource until a Cultural Heritage Resource Evaluation can be completed . MIGRATORY BIRDS If a previously unidentified migratory bird nest is encountered during harvesting, road construction, or a silviculture activity associated with this Site Plan, operations are required to cease to the extent necessary to protect the affected migratory bird nest until alternative BMPs can be implemented to minimize or prevent the risk of incidental take. AMERICAN BADGER HABITAT If a previously unidentified badger den or signs of badger activity is encountered during harvesting, road construction, or a silviculture activity associated with this Site Plan, operations are required to cease to the extent necessary to protect the affected den /habitat until a management plan can be developed. As road-kill is the primary threat to badgers, machines and trucks are to be alert and cautious while harvesting and hauling. WESTERN TOAD If a previously unidentified hibernacula is encountered, or in the case of discovery of amphibians or reptiles, during harvesting, road construction, or a silviculture activity associated with this Site Plan, operations are the cease to the extent necessary to protect the affected feature /species until appropriate BMPs can be implemented or it is determined whether mitigation measures are required. MINERAL CLAIMS This block is not located within a known Mineral Claim; however, if any identified claim posts, monuments, drill sites and core boxes are encountered, they are to be retained. None of these features were identified during field work.

SOIL ASSESSMENT

	HAZARD RATINGS			SOIL DISTURBANCE				SOIL CHARACTERISTICS			
								Depth to Unfavorable Subsoil			
SU	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 %	Min (cm)	Max (cm)	Type of Unfavorable Subsoil	Sediment Delivery Risk (Comm. Watershed)
1	H	L	L	10.0	5.0	0.0	25.0			None Noted	

SU	Critical site conditions that affect the timing of operations and how they affect the timing
1	Soils within the block are loamy; however, due to the hydrophobicity of the burned top soil layer, it can become greasy and slick during break-up conditions. Use caution with machinery at this time and while walking through the area. Avoid concentrated forwarding/skidding routes in wet soil conditions.

SU MANAGEMENT COMMENTS

SU	SU Description
1	This SU is comprised primarily of Fdi with minor components of Pli, Sx and At, heavily impacted by the Flat Lakes Fire in 2021. Slope average 17%. The understory regen layers have been removed from the stand or severely damaged due to wildfire. Windthrow was minimal throughout the SU at the time of layout.

SOIL MANAGEMENT COMMENTS

Soil Conservation

Soils within this block are medium textured with moderate amounts of coarse fragments, and are predominantly non-sensitive (loamy), therefore the soil disturbance limit is set at 10% of the NAR.

There are no PAS proposed for this development.
TAS accounts for 2.7% of the NAR.

The licensee is responsible for ensuring the maximum soil disturbance limits are not exceeded.
All access structures will be managed to ensure natural drainage patterns are maintained and erosion measures are installed prior to spring freshet.
Recommend using a random skidding pattern and avoid skidding across depressional areas when wet.
This block is consistent with sections 35 and 36 of the FPPR.

Temporary Access

All temporary structures must be rehabilitated upon harvest completion, or at least prior to the spring freshet.
Rehabilitation will be as follows: decompact soils, and return displaced surface soils, retrievable side-cast and berm material to the extent practicable and necessary to establish and grow trees consistent with the stocking standards.

Slope Instability

No instability indicators were noted.

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RIPARIAN ASSESSMENTS

Management Strategies

There are several riparian features associated with this development.

Maintain natural drainage patterns.

RRZ = Riparian Reserve Zone
RMZ = Riparian Management Zone
MSZ = Machine Sensitive Zone
MFZ = Machine Free Zone
HVMW = High Value Moose Wetland

See Results and Strategies section - Riparian Management.

Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
MSALD-ALL-NCW UC	MSZ		5.0		All non-classified wetlands associated with this block have been excluded from the harvest area. Where the boundary location doesn't provide a sufficient buffer , a 5-8m MFZ has been established. Stub the MFZ boundary every 5-10m at 3-5m in height, and retain all existing CWD within the MFZ.
MSALD-1-W5-HVMW W5	RMZ		40.0		This classified W5 is comprised of several High Value Moose Wetlands (CCLUP) generally located >/=10m away from the harvest boundary. All timber within the RMZ overlap has been severely burnt from wildfire. Any RMZ overlap within the harvest area will be treated the same as the remainder of the HU/SU. No additional management is required.
	RRZ		10.0		Located adjacent to the northern and eastern boundaries.
MSALD-1-NCD NCD	MFZ		5.0		This feature occurs in the northern portion of the block. Where the NCD flows within the harvest boundary a 5-8m MFZ has been established. Stub the MFZ boundary every 5-10m at 3-5m in height, and retain all existing CWD within the MFZ.

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION

The stands in this block have been severely impacted by the 2021 wildfires and there is heavy mortality throughout. Avoid disturbance of pre-existing CWD where practicable. Post harvest CWD target is 4m3/ha.

General CWD management is prescribed as follows:
- Retain >/=4 logs per hectare, each being a minimum of 2m in length and 7.5cm at one end.
- Efforts will be made to ensure these logs are not broken at time of harvesting . Logs may consist of a variety of species and shall be evenly distributed across the cutblock.
- Non-merchantable logs and pieces will be left on site as CWD.
- Reserved stems will contribute to future CWD and any non-insect infested reserve trees that blow down will be left for coarse woody debris.
- All deciduous stems felled for safety, road construction, or other operational purposes are to be left on site as CWD.
- Retain 3 to 4 Stub Groups (5 or more stubs per group, 3-5m high) per hectare. These stub groups should be created near and/or connecting riparian areas, green leave trees and/or regen, adjacent green stands/plantations, large CWD logs left after burn, large rocks and/or outcrops, and knolls.

The following CWD retention is prescribed as general furbearer management to provide resting habitat, connectivity and cover:
- Retain >/=1 single hard log per hectare, each being >35cm in diameter and >7 m in length,and elevated 25-50 cm above ground. If trees >35 cm do not occur in the harvest area, 2 or more smaller trees totalling >35 cm diameter may be placed alongside each other and elevated 25-50 cm above ground.
- Create >/=1 debris pile per hectare, each being >/=3m wide by >/=5m long and piled >/=2m high, using the largest woody debris available on site.
- Debris piles should be located >/=20m from the timber edge, but within 200m of riparian management areas and block edges to maintain connectivity. Pile locations should aim to maintain a 50m dash distance between cover (standing timber, WTRAs, and debris piles).
- Actual pile locations may vary but should adhere to the above connectivity conditions.

Performance Std. (%) :	100.0	Block Target (%):	100.0	Coarse Woody Debris (m3/ha):	4.0

DEFINITIONS

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 02 14	YES

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

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RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
SARAH REMPEL	
DATE SIGNED	
2023/02/14	
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.	

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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
TA2093	-	MSALD	BEALD		100 Mile FDU	Gustafsen FSR (1100rd)	51 37 49 / 121 37 53

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	A	29.35	IDF	dk	3	01-100	1,180	17	V	Rolling	35	SL

STOCKING REQUIREMENTS

ASSESSMENT DATES

Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1060387	7	0	20

Min/Max Elevation Regime: 1170 / 1190

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	10000
Pli Lodgepole Pine - Interior	1.4		Lw Western Larch	2.0		WELL SPACED TREES (sph)		
Fdi Douglas Fir - Interior	1.0		Sx Hybrid Spruce (SE x SW)	0.8		Target Pref/Acc	Minimum Pref/Acc	Minimum Pref	Min Horizontal Dist. Pref/Acc (m)
			Py Yellow Pine	1.0		1200	700	600	2.0
								Height Relative to Competition (%)	

OTHER REQUIRED STOCKING INFORMATION

There are areas within the block that have a moderate to high cover of surfical rock. A plantability survey is recommended in these areas to determine if the MITD should be reduced.

ACTIVITIES

PLANTING

Planting(Container) 2025/08/15 SEASON:

AREA	PLANTING UNIT	UNIT AREA	SPECIES	COMMENTS	STEMS / HA	TOTAL STEMS
38.7	**0**	0.0			0	0
	LIMITING FACTORS / COMMENTS					

SILVICULTURE ACTIVITY COMMENTS

ACTIVITY	COMMENT
Surveys	This development is within proximity of high value moose wetlands (HVMW). For the portions of the cutblock within 500m (slope distance) of the HVMWs, the free growing dwarf mistletoe damage criteria for even-aged coniferous trees as specified in the FS660 field card, will not apply to retained Lodgepole pine and subsequent Lodgepole pine regeneration.

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MANAGEMENT STRATEGY

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION
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Performance Std. (%):	100.0	Block Target (%):	100.0	Coarse Woody Debris (m3/ha):	4.0

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2023 02 14	YES

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
SARAH REMPEL	
DATE SIGNED	
2023/02/14	
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.	

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