# SITE PLAN
# KAMLOOPS
# BC TIMBER SALES

Report Date 2023/05/08

## TENURE IDENTIFICATION

**ORIGINAL**

| LICENCE # | CP | BLOCK | UBI | OPENING NUMBER | FDU | LOCATION | LATITUDE / LONGITUDE |
|---|---|---|---|---|---|---|---|
| TA2127 | - | WAAL0 | BEAL0 | | Kamloops TSA FDU | Gottan Lake | 50 33 09 / 120 48 57 |

## AREA UNDER THE PLAN

| GROSS AREA (TAUP) | PAS | NP | WTRA / WTP | RESERVES | OTHER | NAR |
|---|---|---|---|---|---|---|
| 27.5 | 0.7 | 0.0 | 1.3 | 0.0 | 0.0 | 25.5 |

## ADDITIONAL COMMENTS

| DEFINITIONS (ADD DEFINITIONS AS REQUIRED) |
|---|
| This SP was prepared in accordance with FRPA S.10(1), 10(2), and 10(3) and is consistent with FSP#671 as approved and in effect at the time of signing this document.<br>For the purposes of FRPA S.10(2), the "Site" (refer to the associated SP map) includes the block (Area Under the Plan) and the following external roads: KA R23793.04 |

## 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 | A soil hazard assessment identified high compaction hazards. Industrial activities must be completed during a time that does not cause harm to soil productivity/function. (eg when soils are dry, frozen and/or under sufficient snowpack). | | | |

## 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.<br><br>A “Modify/Stop Work Procedure” has been included in the harvest plan in the event that previously unidentified archaeological features are encountered during industrial activities on the Site. |
| **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 oulined in Section 5.5.1 of the FSP. |
| **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)** | The cutblock is greater than 5 hectares and greater than 3.5% of the cutblock area has been identified as wildlife tree area.<br><br>The amount of WTRA that relates to the cutblock is at least 7% and will positively contribute to the annual aggregate WTRA requirement.<br><br>The harvest area does not include areas previously identified for WTRA. |





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| | |
|---|---|
| **Result or Strategy Description** | 5.5.2 Landscape Level Biodiversity |
| **Applies:** | NO |
| **How Result or Strategy Applies to the Site (or Rationale if it does not apply)** | There are adjacent cutblocks and the combined NAR for the harvest area exceeds 40ha However, the maximum cutblock size does not apply because timber harvesting is being carried out on the cutblock to recover timber damaged by [fire, insect infestation, wind or other similar events] consistent with FPPR Sec.64(2). |
| **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)** | The Site is not within an Old Growth Management Area. |
| **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.<br><br>A “Modify/Stop Work Procedure” has been included in the harvest plan in the event that previously unidentified CHR’s are encountered during industrial activities on the Site. |
| **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)** | Clearcut harvesting is planned within the LMZ to salvage timber damaged by [insects, disease, fire, other natural occurrence]. The clearcut areas do exceed 25% of the total LMZ area, but are less than 10ha individually and not exceed 400m in length (using the “radius method”). These areas are far enough away from the RRZ that they have been determined to not impact the LMZ.<br><br>Temporary access structures are located at least 20m away from the lakes RRZ/RMZ and no new roads are planned to be built. |
| **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)** | The Site is not within or adjacent to the management zone surrounding a walk in lake. |
| **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 has been checked for the presence of invasive plants in the area proposed for development. Spotted knapweed and Diffuse knapweed were noted along the main haul route. Additionally, Yellow Toadflax was noted during the soil data collection phase.<br><br>The Harvest Plan includes a requirement to apply grass seed consistent with this strategy.<br><br>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)** | No natural range barriers were identified through the range referrals or during field development activities. |


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| 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)** | BCTS has referred this development to all potentially affected Range Tenure Holders, as was determined through a search of the Government range tenure spatial data. All referral communication and commitments to potentially affected Range Tenure Holders have been documented in a planning summary. Strategies to address the timber and range conflicts were evaluated and considered in the design and management of the Site.<br><br>No natural range barriers were identified to be associated with the site. |
| **Recreation Objectives** | |
| **Result or Strategy Description** | 5.6.1 Recreation Sites and Trails |
| **Applies:** | YES |
| **How Result or Strategy Applies to the Site (or Rationale if it does not apply)** | Recreation trails overlap the haul routes for this cutblock. Industrial activities must be conducted consistent with the associated Section 16 Recreation Authorization. |
| **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 site does not overlap with any Special Resource Management Recreation and Tourism Zones |
| **Riparian Management Objectives** | |
| **Result or Strategy Description** | 5.4.3 Lake Riparian Classes |
| **Applies:** | YES |
| **How Result or Strategy Applies to the Site (or Rationale if it does not apply)** | There are classified lakes associated with the Site and areas of RMA are located within the harvest area:<br><br>1) The Site was designed to be consistent with FPPR49(1) and (3).<br><br>2) The RMA widths (including RRZ and RMZ) were determined in accordance with FSP Table 5 and established consistent with FSP5.4.3(3), (4), and (5).<br><br>Refer to the Site Plan map for locations and the Riparian Assessments table in the Harvest Plan for site specific management. |
| **Result or Strategy Description** | 5.4.1 Stream Riparian Classes |
| **Applies:** | NO |
| **How Result or Strategy Applies to the Site (or Rationale if it does not apply)** | There are no classified streams within the harvest area for the Site. |
| **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 the harvest area for the Site. |
| **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 riparian management areas within the harvest area for the Site. |
| **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 within the harvest area for the Site. |
| **Result or Strategy Description** | 5.4.6 Restrictions in a Riparian Management Zone |
| **Applies:** | NO |
| **How Result or Strategy Applies to the Site (or Rationale if it does not apply)** | There are no riparian management zones within the harvest area for the Site. |



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|---|---|
| **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)** | There are no riparian management areas within the harvest area for the Site. |
| **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 riparian management areas within the harvest area for the Site. |
| **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)** | The Site 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)** | The result of the soil hazard assessment was that sensitive soils are not present within the cutblock. The Harvest Plan contains a requirement to prevent soil damage and degradation.<br><br>The Site has been designed so the area occupied by proposed temporary access structures and roadside work areas will not exceed the limits outlined in the Soil Disturbance table above.<br><br>The Site has been designed so the area occupied by proposed permanent access structures will not exceed 7% of the cutblock |
| **Visual Objectives** | |
| **Result or Strategy Description** | 5.8.2 Visuals "Kamloops Visual Zone" |
| **Applies:** | YES |
| **How Result or Strategy Applies to the Site (or Rationale if it does not apply)** | The Site is within the Kamloops VSA and has an established VQO of Partial Retention from Lake of the Woods. A VIA was completed that included the Site and other new cutblocks associated with the Site (ie same TSL). The result of the VIA was that the altered forest landscape resulting from the Site, when considered alongside existing alterations, meets the Partial Retention category of altered forest landscape when considered from all identified Significant Public Viewpoints. See the Visual Impact Assessment for additional information. |
| **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)** | The Site is not located within the Headwaters 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)** | The Site is not located 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)** | No active water licences are in the vicinity of the Site. It is not expected that any active water licence will be affected by industrial activities. |
| **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)** | The Site is not within a Fisheries Sensitive Watershed. This result/strategy does not apply to the Site. |



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|---|---|
| **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)** | The Site is not within a Fisheries Sensitive Watershed. This result/strategy does not apply to the Site. |
| **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)** | The Site is not within a Fisheries Sensitive Watershed. This result/strategy does not apply to the Site. |
| **Wildlife Objectives** | |
| **Result or Strategy Description** | 5.7.1 General Wildlife Objectives |
| **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** | 5.7.2 Mule Deer Winter Range |
| **Applies:** | NO |
| **How Result or Strategy Applies to the Site (or Rationale if it does not apply)** | The Site is not within a Mule Deer Winter Range polygon. The result/strategy does not apply to the Site. |
| **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)** | The Site 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)** | The Site is 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)** | The Site is consistent with the strategies outlined in Section 5.7.5 of the FSP. |
| **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)** | The Site is not within a Lewis's Woodpecker Occurrence Site or its associated Management Area. |
| **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)** | The Site is not within a Spotted Bat Core Area or its associated Management Area. |

## STOCKING REQUIREMENTS

| SU | NAR | STANDARDS ID # | OTHER PERFORMANCE STANDARDS |
|---|---|---|---|
| 1 | 25.5 | 1005327 | (PY9) ; PY-restricted to southerly aspects; (PY14) ; PY-restricted to lower elevations of biogeoclimatic unit; (SX10) ; SX-restricted to northerly aspects; (SX13) ; SX-restricted to upper elevations of biogeoclimatic unitMITD 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 | The current 2016 biogeoclimatic mapping (BEC) was used to identify the initial BEC for the block. Through the establishment of field SP plots, the block has been ecologically classified using Land Management Handbook 23: A Guide to Site Identification and Interpretation for the Kamloops Forest Region (1990 BEC). The crosswalk tables associated with the 2016 BEC mapping were used to correlate to the 1990 BEC for selecting stocking standards. Details of the stocking standards are contained in the associated Silviculture Plan.<br><br>If site preparation is required to establish crop trees, or if stocking density targets are at risk from cattle congregation, the MITD can be reduced to 1.5m. | | |


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## ADMINISTRATION

| Amendment number | Date Typed (Yr Mo Dy) | Map Required? |
|---|---|---|
| ORIGINAL | 2023 03 20 | YES |



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| RPF PRINTED NAME | RPF'S SIGNATURE and SEAL |
|---|---|
| ROB CLARK | |
| DATE SIGNED | |
| 2023/03/20 | |
| 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 |
|---|---|---|---|---|---|---|---|
| TA2127 | - | WAAL0 | BEAL0 | | Kamloops TSA FDU | Gottan Lake | 50 33 09 / 120 48 57 |

## ASSESSMENTS

### VISUAL IMPACT ASSESSMENT INFORMATION

No additional management applies to the development beyond the Results and Strategies contained in the Site Plan for this block.

### PEST INCIDENCE SURVEY INFORMATION

#### Pest Specific Comments

IBM: None observed
IBS: None observed
IBD: None observed

No insects of management concern were observed during development of the Site.

#### Forest Health Comments

DRA: None observed
DRL: None observed
DML/DMP: None observed

No diseases of management concern were observed during development of the Site.

### ARCHAEOLOGICAL IMPACT ASSESSMENT INFORMATION

Potential archaeological resources were assessed by:

-Querying the RAAD system,

-Evaluating the Site against AOA/known information,

-Conducting a field review of areas with high likelihood of potential archaeological value.

An AIA was not required because no areas of potential archaeological value are known to be associated with the Site.

### TERRAIN STABILITY FIELD AND GULLY ASSESSMENTS INFORMATION

#### Terrain Stability Comments

The development is not adjacent to any mapped terrain stability inventory polygons and no indicators of instability were observed in the field. It was determined that a Terrain Stability Assessment was not required.

#### Gully Comments

N/A in Interior BC

### VEGETATION

Competing vegetation is not anticipated to be a concern. A post-harvest assessment is recommended to determine if competing vegetation becomes a concern.



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RIPARIAN ASSESSMENTS

**Management Strategies**

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.

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.

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.

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.

EROSION & SEDIMENT CONTROL: If sediment transportation occurs on the Site, appropriate erosion and sediment control measures must be undertaken to the extent necessary to: 1) prevent sediment from entering a stream, wetland, or lake; 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 3) prevent a material adverse effect from occurring to an objective set by government (see Site Plan-Results and Strategies).

| Riparian I.D. and Class | RMA | SU | WIDTH (m) | BA or SPH Retained | Comments (Indicate if in a Community Watershed) |
|---|---|---|---|---|---|
| WAAL0-1-NCW UC | RRZ | 1 | 5.0 | | The wetland lies no closer than 45m from the nearest harvest boundary. No additional management is required |
| WAAL0-1-S3 S3 | RRZ | 1 | 20.0 | | S3 stream lies greater than 35 meters outside the northern block boundary. Any portion of the block that overlaps the riparian management area will be managed per SU1. |
| Lake of the Woods C | RMZ | A | 200.0 | | The site is within the 200m LMZ of the C class Lake and is to be managed as per SU1. |
| | RRZ | | 10.0 | | The site is greater than 10 meters from the L3 lake. |

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 | M | L | | | NNTD | |

COMMENTS

Soils within WAAL0 are primarily Silty Loams with a High compaction hazard, a Moderate erosion hazard, along with a Low soil displacement hazard rating.

## RESERVE / RETENTION INFORMATION

WTRA / WTP (INSIDE OR ATTRIBUTED TO THE BLOCK)

| I.D.# | Area | Description |
|---|---|---|
| WTRA | 1.3 | WTRA #1 - AtPliFdi(Sx) 210 (1.14ha) - Consists primarily of fire damaged Douglas Fir and has been designated to contribute to biodiversity and provide additional protection to Lake of the Woods<br><br>WTRA #2 - FdiPliSx(At) 420 (0.19ha) Consists primarily of fire damaged Douglas Fir and has been designated to contribute to biodiversity and provide additional protection to Lake of the Woods |

**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 | % |
|---|---|---|---|---|---|---|
| WAAKU | 94.6 | 7.8 | 8.3 | IDF/dk/1 | 2.5 | 2.6 |
| WAAKW | 75.1 | 5.0 | 6.6 | IDF/dk/1 | 1.4 | 1.8 |
| WAAKY | 23.6 | 2.3 | 10.0 | IDF/dk/1 | 0.3 | 1.1 |
| WAAL0 | 27.5 | 1.3 | 4.8 | IDF/dk/1 | 0.7 | 2.5 |
| **Total # of Blocks: 4** | **220.8** | **16.5** | **7.5** | | **4.8** | **2.2** |



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## SUPPORTING INFORMATION

HLP/FSP CONSIDERATIONS

Wildlife/Endangered Species Comments

MIGRATORY BIRD STRATEGY
Canada Nesting Zone: A2
BEC: IDF
Nest Density Matrix: Interior Douglas Fir, Age Class 4, 19.5 - 28.4 m, Fd leading (82%)
Nest Density Matrix Ranking: 2
Forest Health: Unranked (Wildfire)

Unburned patches of trees, partially burned patches, single live windfirm trees, and, where safe to do so, some patches of snags should be retained, including snags >30 cm dbh.

A stop work procedure has been included in the Harvest Plan in the event that a previously unidentified migratory nest is encountered during industrial activities.

SPECIES/ECOSYSTEMS AT RISK (SAR/EAR)
A BC Species and Ecosystems Explorer blue and red list search was completed for this area. The search result contained 175 species and 14 ecosystems as having potential to exist on the Site. During field development, no SAR/EAR were noted or identified on the Site.

The Conservation Data Centre's spatial SAR database was reviewed and no SAR polygons were found to be within or adjacent the Site.
The Conservation Data Centre's spatial SAR database was reviewed and SAR polygons were found to be within or adjacent to the Site and a wildlife assessment was completed.

Range Comments

The Site is within the following range tenures:

RAN077358 (Indian Gardens Ranch LTD)
RAN077354 (Derek Anderson)
RAN077357 (Gardens Creek Ranch LTD)

Range improvements exist within the cutblock: Fenceline, cattleguard.

Any fence breach is required to be consistent with the District Manager's "Authorization to Damage and Repair a Range Development on Crown Range" letter.

Fisheries Comments

No fish habitat is within or adjacent to the Site. The riparian management measures in the Harvest Plan are expected to prevent and/or mitigate any potential impacts to fish habitat downslope/downstream to the Site.

Watersheds/Hydro Assessments Comments

FSW GAR

The harvest area is not within a watershed identified under the Thompson Rivers Forest District Fisheries Sensitive Watershed GAR Order.

During field layout and development, no active fluvial units were identified within the Site.

Sensitive Areas Comments

N/A

Recreation Comments

Designated recreation trails or sites are within or adjacent to the Site. A recreation authorization is required.

Cultural Heritage Comments

Potential cultural heritage resources were assessed by:

-Referring the Site to potentially affected First Nations,

-Work with the lead First Nation groups to evaluate known information,

-Provide opportunity for lead First Nations to conduct a field review of areas with high likelihood of potential cultural heritage value.

The record of how recommendations were considered in the design and management of the Site has been documented in BCTS's Due Diligence Report signed off for approval by the Timber Sale Manager.

Biodiversity Emphasis/L.U. Comments

The proposed block is located within the Southern kamloops Landscape Unit (LU) area. According to the Kamloops LRMP (July, 1995), this Landscape Unit has a Biodiversity emphasis of Intermediate.

Other Resources Comments

One trapline is current for block WAAL0:
TR0318T002

Referrals have been sent with response asking for a map showing his trapline boundary to determine his sets and no further work is necessary.

Coarse woody debris piles (as detailed in the Coarse Woody Debris Section) will be created to augment small mammal habitat and to enhance trapline values.

There are no active mineral tenures associated with the proposed harvest area.

There are no guide outfitters that operate within the proposed harvest area.

ADDITIONAL COMMENTS:

Surveys

A windthrow assessment was conducted by IPAC during Spring, 2022. Overall, the windthrow risk for the proposed block was assessed as Low to Moderate, with higher levels expected along retained edges and WTRA's. Cutblock design has been manipulated to mitigate potential windthrow in retained areas and along the cutblock edge, however some windthrow is still anticipated.

Any windthrow occurring along retained edges or from prescribed leave trees will be left on-site to contribute to stand CWD recruitment.

## ADMINISTRATION

| Amendment number | Date Typed (Yr Mo Dy) | Map Required? |
|---|---|---|
| ORIGINAL | 2023 03 20 | YES |



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# HARVEST PLAN

**ORIGINAL**

| LICENCE # | CP | BLOCK | UBI | OPENING NUMBER | FDU | LOCATION | LATITUDE / LONGITUDE |
|---|---|---|---|---|---|---|---|
| TA2127 | - | WAAL0 | BEAL0 | | Kamloops TSA FDU | Gottan Lake | 50 33 09 / 120 48 57 |

## 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 cruise compilation (full volume) indicates that the current stand composition is 84% Douglas fir, 16% Spruce, and 1% Aspen comprising of a net merchantable coniferous volume of 151m3/ha.<br><br>Bark beetle attack by species:<br>No insect damage noted |
| Silviculture Systems SU Comments | SU-1: Clearcut with reserves silviculture system.<br>The majority of the leave stems will be dispersed throughout the block.<br>The purpose of these stems is to provide biodiversity, nesting sites, burrows, shade, and future CWD and stand structure. |
| Min. Characteristics of Leave Trees (Form, Health, Vigour) | RESERVE TREES TO LEAVE<br><br>Reserve trees are expected to be unevenly distributed across the net area to reforest.<br><br>Deciduous greater than/equal to 17.5cm dbh. the cruise targets 95% leave and allows for 5% take for exceptional circumstances. The cruise indicates approximately 8.4 stems/ha or 214 total stems can be expected to be retained.<br><br>Douglas fir greater than/equal to 52.5cm dbh - the cruise targets 95% leave. The cruise indicates approximately 0.8 stems/ha or 20 total stems can be expected to be retained.<br><br>Reserve all live trees within the stand. Although none were tallied in the cruise, leave these trees if they are encountered. It is anticipated that less than 5% of the stand will be green at the time of harvest. |

## Additional Comments

| | |
|---|---|
| Harvesting Constraints | STOP WORK PROCEDURE<br>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.<br><br>Affected Features: Cultural Heritage Resource, Archaeological Resource, active migratory bird nests, stick nests, active wildlife den.<br><br>DANGER TREES<br>Individual trees may be felled for safety reasons if doing so will not compromise the leave tree objectives. If an individual tree is felled for safety, the TSL holder must provide rationale through a danger tree assessment as to why the target tree was removed.<br><br>SLOPES<br>Slopes range from 0 to 34% (avg. 11.6%) and approx. 4.5% of the block contains slopes >25%. There are no slopes >35% within the block. |

## 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 | M | L | 10.0 | 5.0 | 7.0 | 25.0 | | | None Noted | |

| SU | Critical site conditions that affect the timing of operations and how they affect the timing |
|---|---|
| 1 | A soil hazard assessment identified high compaction hazards. Industrial activities must be completed during a time that does not cause harm to soil productivity/function. (eg when soils are dry, frozen and/or under sufficient snowpack). |

## SU MANAGEMENT COMMENTS

| SU | SU Description |
|---|---|
| 1 | WINDTHROW ASSESSMENT, FOREST HEALTH TREATMENTS, RANGE,<br><br>WINDTHROW: A windthrow risk assessment was completed for this block and the windthrow risk was estimated to be moderate.<br><br>REVEGETATION: Exposed soils associated with roads, trails, and block disturbance must be grass seeded to the extent necessary to prevent sediment from entering a stream, wetland, or lake. To prevent the spread of invasive plants, all disturbed areas greater than or equal to 0.01ha must be revegetated using seed that is free from weeds (ie Canada Common Number 1). Disturbed areas to be revegetated include but are not limited to: ditch lines, road cut slopes, road fill slopes, bladed trails. |



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## SOIL MANAGEMENT COMMENTS

### Soil Conservation

Soils within WAAL0 are primarily Silty Loams with a High compaction hazard, a Moderate erosion hazard, along with a Low soil displacement hazard rating.

### Temporary Access

WAAL0 contains 0.29 ha or 1.15% temporary access structures:

Harvesting is to be conducted in a manner that will ensure the maximum soil disturbance limits (10%) are not exceeded and that natural drainage patterns are maintained.

The Licensee will monitor site conditions to ensure soil disturbance remains within the limits prescribed above.

### Slope Instability

The development is not adjacent to any mapped terrain stability inventory polygons and no indicators of instability were observed in the field. It was determined that a Terrain Stability Assessment was not required.

## RIPARIAN ASSESSMENTS

### Management Strategies

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.

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.

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.

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.

EROSION & SEDIMENT CONTROL: If sediment transportation occurs on the Site, appropriate erosion and sediment control measures must be undertaken to the extent necessary to: 1) prevent sediment from entering a stream, wetland, or lake; 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 3) prevent a material adverse effect from occurring to an objective set by government (see Site Plan-Results and Strategies).

| Riparian I.D. and Class | RMA | SU | WIDTH (m) | BA or SPH Retained | Comments (Indicate if in a Community Watershed) |
|---|---|---|---|---|---|
| WAAL0-1-NCW UC | RRZ | 1 | 5.0 | | The wetland lies no closer than 45m from the nearest harvest boundary. No additional management is required |
| WAAL0-1-S3 S3 | RRZ | 1 | 20.0 | | S3 stream lies greater than 35 meters outside the northern block boundary. Any portion of the block that overlaps the riparian management area will be managed per SU1. |
| Lake of the Woods C | RMZ | A | 200.0 | | The site is within the 200m LMZ of the C class Lake and is to be managed as per SU1. |
| | RRZ | | 10.0 | | The site is greater than 10 meters from the L3 lake. |

## COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION

Current coarse woody debris (CWD) levels are estimated at 10-20m3/ha.

CWD Targets:
Total - where feasible, aim to retain 5m3/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 7.5cm in diameter at one end.
Large CWD - at a minimum, retain 4 logs/ha each being a minimum of 10m in length and at least 20cm diameter at one end.

CWD Strategies:
Effort will be made to ensure these logs are not broken at time of harvesting. CWD pieces may consist of any available species provided that 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.

CWD management is consistent with Section 68 of the FPPR.

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

**DEFINITIONS**



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## ADMINISTRATION

| Amendment number | Date Typed (Yr Mo Dy) | Map Required? |
|---|---|---|
| ORIGINAL | 2023 03 20 | 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 |
|---|---|
| ROB CLARK | |
| DATE SIGNED | |
| 2023/03/20 | |
| 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 |
|---|---|---|---|---|---|---|---|
| TA2127 | - | WAAL0 | BEAL0 | | Kamloops TSA FDU | Gottan Lake | 50 33 09 / 120 48 57 |

## 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 | 25.51 | IDF | dk | 1 | 04-100 | 1,230 | 11 | NW | Middle Slope | 22 | SIL |

## STOCKING REQUIREMENTS

ASSESSMENT DATES

| Standard Unit | Standards ID | Regen Delay (yrs) | Freegrow Early (yrs) | Freegrow Late (yrs) |
|---|---|---|---|---|
| 1 | 1005327 | 4 | 0 | 20 |

**Min/Max Elevation Regime:** 1220 / 1240

## 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 | | |
| | | | | | | WELL SPACED TREES (sph) | | | |
| Pli Lodgepole Pine - Interior | 1.0 | | Sx Hybrid Spruce (SE x SW) | 0.6 | | Target Pref/Acc | Minimum Pref/Acc | Minimum Pref | Min Horizontal Dist. Pref/Acc (m) |
| Fdi Douglas Fir - Interior | 0.8 | | Py Yellow Pine | 0.6 | | 1000 | 500 | 400 | 2.0 |
| | | | | | | | | Height Relative to Competition (%) | |
| | | | | | | | | 125 | |

## OTHER REQUIRED STOCKING INFORMATION

The current 2016 biogeoclimatic mapping (BEC) was used to identify the initial BEC for the block. Through the establishment of field SP plots, the block has been ecologically classified using Land Management Handbook 23: A Guide to Site Identification and Interpretation for the Kamloops Forest Region (1990 BEC). The crosswalk tables associated with the 2016 BEC mapping were used to correlate to the 1990 BEC for selecting stocking standards. Details of the stocking standards are contained in the associated Silviculture Plan.

If site preparation is required to establish crop trees, or if stocking density targets are at risk from cattle congregation, the MITD can be reduced to 1.5m.

## ACTIVITIES

### SITE PREPARATION

25.51

Disc Trenching-PL 2025/05/16

| AREA | TECHNIQUE(S) / LIMITING FACTOR |
|---|---|

### PLANTING

Planting(Container) 2026/05/14 SEASON:

| AREA | PLANTING UNIT | UNIT AREA | SPECIES | COMMENTS | STEMS / HA | TOTAL STEMS |
|---|---|---|---|---|---|---|
| 25.5 | **1** | 25.5 | Douglas Fir - Interior | | 900 | 22954 |
| | | | Lodgepole Pine - Interior | | 720 | 18363 |
| | | | Yellow Pine | | 180 | 4591 |
| | LIMITING FACTORS / COMMENTS | | | | | |

### SILVICULTURE ACTIVITY COMMENTS

| ACTIVITY | COMMENT |
|---|---|
| | |





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## MANAGEMENT STRATEGY

| COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION |
|---|
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|---|---|---|

## ADMINISTRATION

| Amendment number | Date Typed (Yr Mo Dy) | Map Required? |
|---|---|---|
| ORIGINAL | 2023 03 20 | YES |

| RPF PRINTED NAME | RPF'S SIGNATURE and SEAL |
|---|---|
| ROB CLARK | |
| DATE SIGNED | |
| 2023/03/20 | |
| 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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