

Site Plan

Tolko Industries Ltd.

Okanagan Woodlands

☒ Original:

☐ Amendment #

TENURE IDENTIFICATION

Region: RTO	District: DOS	TSA: 22	TSB: 0	License No.: TFL 49	Timbermark(s): 49/764	Cutting Permit: 764	Block: KA2111	Mapsheet/Opening No.: 082E093
Area Under Tenure (ha): 23.7	Location: Okanagan			UTM East: 318744	UTM North: 5541584	UTM Zone: 11	Licensee:	
	Latitude: 49.59.56			Longitude: 119.31.45			Tolko Industries Ltd.	

Weather Station
Brenda

Other Safety Comments:

- 1) KA2111 is accessed of Blue Grouse FSR. Two TAS roads will allow for the majority of the decking with adequate decking on Blue grouse. This is a high recreation use area. Trails exist within the block.
- 2) The location and presence of steep slopes, 30% or greater, is estimated on the block summary map. It is possible that not all steep slopes and/or short steep pitches have been identified. It is the responsibility of the logging and/or silviculture contractor(s) to ensure they are operating on steep slopes with proper safe work procedures.
- 3) Several standing snags exist within the cut-block, along timbered edges, and within WTR. These should be considered as a safety hazard. These stems may possess wildlife tree attributes and could be included in retention patches where practicable and safe to do so.
- 4) Recommend improved signage and /or increased road user awareness along road systems to identify road names and to notify other resource users.
- 5) This block is located in the Bear Creek recreational area and sees a high number of recreational users during the summer. Ensure harvesting is well marked and other users are notified of harvest activity around the harvest area.

OPERATIONAL COMMENTS

A portion of this block is located within the LAMBLY COMMUNITY WATERSHED

HARVEST SYSTEM BREAKDOWN:

- SU A: Roadside danglehead. No restriction on time of year for harvest.

BLOCK ROAD SUMMARY AND/OR CONCERNS

- All in block roads will be TAS- Perm Deact to meet requirements for Mule Deer Winter Range.
- Decking is highlighted on Block Summary Map.
- Steep rocky slopes exist within the block, use caution in these areas.

TOPICS FOR DISCUSSION AT PREWORK

- Retain Fdi >/=62.5cm DBH, Retain all deciduous, Yellow Pine and Wildlife trees
- Notify Ministry of Forest, Lands and Natural Resource Operations (Ian MeLelllan) prior to harvest
- High traffic area, located in the Bear Creek Recreation Area primarily used for Motorcycles. Post warning signage.
- Review block summary for any safety concerns
- Stumping required

NET AREA TO BE REFORESTED INCLUDING RESERVES WITH MODIFICATIONS (ha)		
SU	SU Area Description	Net Area To Be Reforested
A	SU A is comprised mostly of Fdi with lesser amounts of Py. The biogeoclimatic association of this SU is entirely within the middle elevations of the IDFdK2, having a predominately mesic hydrological association, classified as 01 site series.	21.5
	This SU is located on moderate sloped terrain, occurring on a South East aspect from 0-25% with moderately deep soils.	
	This block will be harvested using Roadside processing.	

ECOLOGICAL INFORMATION AND SITE CHARACTERISITCS

ECOLOGY AND CRITICAL SITE CONDITIONS												
SU	AREA	BEC	ELEVATION (m)			SLOPE (%)			SITE SERIES		ASPECT	SITE TYPE
			Low	High	Avg	Min	Max	Avg	Dominant (%)	Related (%)		
A	22.36	IDFdK2	1145	1256	1200	0	30	18	01		South East	

SU	Critical site conditions that affect the timing of operations, and how they affect the timing										
A	<ul style="list-style-type: none">A portion of this block is located within the Lambly Community Watershed therefore extreme caution is to be taken if block is harvested when conditions are not frozen or dry and should be closely monitored by the harvest supervisor.										

SOIL CONSERVATION

SITE DISTURBANCE		
HAZARD RATING (if logging methods other than cable or aerial are proposed)		SOIL CHARACTERISITICS (if temporary access structures are proposed)
		SOIL DISTURBANCE LIMITS

Soil				UNFAVOURABLE SUBSOIL		Max. allowable within the NAR (%)	Max. limits may be exceeded for Temp Access Structures (%)
SU(s)	Compaction	Displacement	Surface Erosion	Depth to (cm-cm)	Type		
A	Moderate	Moderate	Moderate	38	Fractured bedrock	10%	5%

ROADSIDE SOIL DISTURBANCE: 25.0 %

Max Proportion of Total Area Under the Prescription Allowed for Permanent Access:	7.0%
Actual Permanent Access Calculated:	3.8%

Permanent Access Comments:

- There are no new proposed permanent access structures within or associated with this block.

REHABILITATION TIME FOR TEMPORARY ACCESS STRUCTURES
Maximum Allowable Time to Complete Rehabilitation (measured from completion of harvest): 2.0 years

SLOPE INSTABILITY INDICATORS:	No	Measures required to address terrain instability:	No	Bladed trails restricted:	No
<ul style="list-style-type: none">Based on the Terrain Hazard Management Model (THMM), a Terrain Stability Assessment (TSA) was not required. THMM is on file.					

TEMPORARY ACCESS MANAGEMENT					
SU(s)	General Location (also refer to map)	Sediment Delivery Risk (in Community Watershed or above Domestic Intakes)	Max. Allowable Height of Cutbanks (m)	Average Height of Cutbanks (m)	Equipment to be Used (if other than Excavator)
A	Roads and trails designated as per map.	Very Low	1.5	0.6	Skidder or Dozer

Total Temp Access: 0.3ha
% of Net Area: 1.4%

Temp Access Strategies
<ul style="list-style-type: none">Road KA2111-01 and KA2111-02 is a planned temporary road that requires permanent deactivation (TAS-Deact). This road will require minimal construction, will not require extensive ditching and all but 4m width of this road will contribute to the NAR. Planting will be prescribed at a minimum to the edge of a 4m road prism and within the road prism where practicable.All TAS roads are to be constructed in a manner that maintains natural drainage (does not intercept, divert or concentrate drainage). If a structure other than a culvert is used for crossings, they must be removed following harvest completion and prior to freshet.All trails are to be constructed in a manner that maintains natural drainage (does not intercept, divert or concentrate drainage). These trails are to be rehabilitated within a year following harvesting completion. If this rehabilitation is not completed immediately after harvest completion, these structures are to be seasonally deactivated to ensure natural drainage is maintained, and that the deactivation does not create a condition of instability or sedimentation to riparian features.Short sections of bladed or excavated trails may be required in areas of isolated steep slopes, designated crossings, and/or repeated machine traffic to access roadside decking areas.Short sections of bladed or excavated trails may not be rehabilitated if they are less than 30m in length and cumulatively add up to less than 1% of a cutblock area and have not created a condition that is unstable or likely to cause sedimentation of a stream.

FOREST MANAGEMENT

LEAVE TREE CHARACTERISTICS					
SU(s)	Layer	Species	Total Stems	% of Stems	Description
A	Vets	Fd		95	<ul style="list-style-type: none">Retain Fdi ≥ 62.5cm at dbh where available, safe and practicable to do so. If these stems are to be removed for safety, access or silviculture, they are to be left on site as CWD.
A	All	Deciduous		95	<ul style="list-style-type: none">Retain deciduous where available, safe and practicable to do so. If these stems are to be removed for safety, access or silviculture, they are to be left on site as CWD.
A	All	Py		95	<ul style="list-style-type: none">Retain Py where available, safe and practicable to do so. If these stems are to be removed for safety, access or silviculture, they are to be left on site as CWD.

Leave Tree Comments:

- The distribution of the retention is not expected to be even throughout the block as there are > 1ha areas that may not have any of these species.
- The estimated ranges are only offered for guidance to operations and they attempt to consider field observations, statistical error in the cruise data, and the amount of NAR that is required to be clear-cut for required access (skidding, roads and processing), silviculture and safety. The final in-block retention is intended to meet the % retention stated by species but the actual amount may vary upward or downward from these estimated ranges.

COARSE WOODY DEBRIS MANAGEMENT STRATEGIES	Coarse Woody Debris Requirement
<div>1) Basic Coarse Woody Debris that is to be retained at the conclusion of harvesting is to include, to the extent practicable:<div>a) having preference for CWD >25cm;<div>i) Timber grade firmwood reject & poor quality Grade 4 or other grades if these stems have a higher value as wildlife trees or CWD; that is either; distributed over the cutblock or Riparian Management Area; or if piled, located near the edges of the cutblock or of a Riparian Management Area in or adjacent to the block, and focuses on all classified and non-classified riparian areas when cattle use is expected to be high.</div>AND (for the portion of the block harvested by Conventional Ground Based Harvesting Method)<div>b) a minimum average per hectare of :<div>i) two mature standing trees or two stubs (or combination of) preference is given to species other than Spruce or Douglas Fir);</div></div></div></div> <div>2) Where loose debris piles (not roadside or landing accumulations) have been created as a result of mechanical piling, 1-4 piles/ha adjacent to the timber edge, RMA or WTP will be left unburned.</div> <div>3) When practicable/available, mature deciduous trees used to meet section 1) b) i) above will be reserved from cutting in clumps. Deciduous that is harvested for safety, access or silviculture will be left on site for CWD. On Stumping Areas, do not use Birch or individual Aspen to meet section 1) b) i) above, however, Cottonwood and</div>	

- clumps of Aspen may be used.
- 4) Advanced conifer regeneration may be reserved, (*where it exists and it is reasonably expected that merchantable trees can be felled and skidded without damaging the residual stems that may contribute to reforestation requirements*).
- 5) Additional Strategies outlined in the section "LEAVE TREE CHARACTERISTICS" may also help to achieve the requirements for CWD.

MANAGEMENT STRATEGIES FOR ARCHAEOLOGICAL SITES

- An office Archaeological Overview Assessment was completed for this block by Diana French (PhD Archaeology) on Dec 16 2016. D. French commented that the block has “trails in block, no riparian, extensive disturbance”. A PFR is not required and no archaeological concerns remain.

Other Management Requirements

Other Wildlife Management & Species at Risk

- No occurrences of the following Species at Risk were noted during fieldwork; however elements of suitable habitat have been noted: These species are not covered under a Section 7 Notice or the “Wildlife in the Okanagan Shuswap” FSP Section 5.2.3. If any of these species are encountered during operations, it should be reported to the harvesting supervisor immediately.
 - Wolverine*: The early/late seral stages in the adjacent area may provide potential habitat in this area.
 - Badger*: The early/late seral stages in the adjacent area may provide potential habitat in this area.
 - Rough-legged Hawk, Barn Swallow, Olive Sided Flycatcher*: Post-harvest openings and adjacent structures may provide suitable perching and foraging habitat for this species.
 - White-headed Woodpecker, Lewis’s Woodpecker*: The retention of large diameter Douglas-fir and Ponderosa Pine within the established WTP's and un-prescribed areas outside the block may provide potential habitat in this area.
 - Columbian Sharp-tailed Grouse*: The openings and deciduous shrubs associated with this cutblock may provide the required early seral habitat for this spp.

See the block file for the remainder of the Species at Risk associated with this BEC zone, which have been determined to be not applicable.

Range:

- This block was referred to known range tenure holder Brian Casorso and Kenneth Regehr under Information Sharing Referral #15-FN-01. No comments were received as a result of this referral. No concerns remain.

Guide Outfitters & Trappers:

- This block was referred to guide Denver and April Kitzan and trap line holder TR0811T039 under Information Sharing Referral #15-FN-01. No comments were received.

Watershed:

- This block is located within the Lambly Community Watershed. Block is recommended for winter harvest and caution should be taken when ground conditions are not frozen or dry to prevent sediment displacement or erosion.

Other

- There are Bear Creek Recreation area motor cycle trails located within the block.
- The Ministry of Forests, Lands and Natural Resources Operations requested Tolko to Inform Ian McLellan, (Recreational officer) and any on site host or site operator before any operations commence on roads or cutblocks that overlap trails or recreation sites so trails and sites can be closed and websites can be updated. Once harvesting is complete, it is requested that Tolko re-establish any disturbed trails to ensure connectivity to maintain the recreational experience.
- Proposed cutblocks and roads will mainly impact summer recreationalists. Winter harvest is the preferred method to harvest these blocks. If that is not possible, then minimizing impacts to recreational users is requested by; Limiting harvesting activities to Monday to Friday and avoiding weekends and stat holidays.

Silviculture Considerations

Soils/Terrain:

- Soils are Sandy Loam with high coarse fragment (fractured bedrock) after 38cm. The soils are well drained in this block and several steep rocky pitches exist within this block.

Brush:

- No concerns, invasive plants present along road way.

Forest Health:

- Given the typical presence of root rot in the IDF, stumping is recommended where operationally feasible.
- This block is located in a high cattle use area, this will likely impact regeneration.

Other:

- Mule Deer Winter Range. (GAR Order #U-8-001)
GWM#10: Silviculture activities will result in at least 70% of the well-spaced stems at free growing being Douglas-fir within the portion of this block that overlaps the MDWR planning cell. Planting will be directed to target >70% Fd stems within this zone and Fd will be planted.

FOREST HEALTH MANAGEMENT STRATEGIES

Comments:
Pockets of root rot exist within this block, stumping recommended.

Pest Codes

SU(s)	Pest Code	% Percent	Management Strategies
A	Armilaria	10	<ul style="list-style-type: none">Where operationally feasible this block will be stumped to address root rot concerns in the stand

VEGETATION MANAGEMENT STRATEGIES

Livestock to be used for vegetation management:	No
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STOCKING REQUIREMENTS

FREE GROWING STOCKING REQUIREMENTS FOR SILVICULTURAL SYSTEMS

SU	Layer Name	Preferred Species/Free Growing Ht. (cm)	Acceptable Species/Free Growing Ht. (cm)	Post Spacing Density (sph)		Max Coniferous (sph)	Regen Date (years)	Free Growing (years)	
				Min	Max			Early	Late
A		Fdi 80 Pli 100	Lw 100 Py 60 Sx 60				7		20

SU	Standards ID	Layer Name	Target Stocking (TSS) (wsph)	Minimum Stocking (MSSpa) (wsph)	Minimum Preferred (MSSp) (wsph)	Minimum Horizontal Distance (m)	Minimum Pruning Height (m)	Residual Stand Structure		Height Relative to Comp.
								BA (m2/ha)	Density (sph)	
A	1005641		1000	500	400	2				

GENERAL STOCKING STANDARDS COMMENTS AND APPROVED VARIANCES

7.4 (b) the minimum inter-tree distance will be:
(A) to utilize preferred microsites, surveyors may utilize this MITD on no more than 20% of the survey plots in a block; and
(B) such use will be clearly recorded on the survey cards;
(ii) 2.0 metres on all other sites;

7.4 (c) where more than one site series is located within a standards unit, and the additional site series are less than one hectare in size, the stocking standard in Appendix C that applies is the Standard applicable to the dominant site series. Additional preferred species may be added to the preferred species of the Standard from Appendix C from the subdominant site series for those specific areas of the mosaic or complex. Additional acceptable species may be added to the acceptable species of the Standard from Appendix C from the subdominant site series for those specific areas of the mosaic or complex.

7.4 (f) Douglas-Fir (Fdi) is a preferred species within all Mule Deer Ungulate Winter Ranges;

7.4 (g) where patches of mature trees are retained, under the clearcut silvicultural system, for WTR or structural diversity purposes and such patches are included in the NAR, when plots land in such a patch, silviculture surveyors will record a Forest Cover Label for the patch but otherwise, for the purposes of determining stocking/free growing, may offset, in a predetermined and consistent manner, any plots that fall wholly or partially within these patches;

7.4 (h) where a layer 1 preferred or acceptable species comprises at least 10% of the pre-harvest stand but is excluded from planting due to the elevational restrictions of footnotes 13 or 14, of the applicable stocking standard in Appendix "C," that species may be planted to a maximum of 35% if it is a preferred species or to a maximum of 15% if it is an acceptable species.

SU	Standards ID	Standards ID Footnotes	Other Required Information
A	1005641	LwB; Preferred if planted in a mix with other preferred species up to 35%.	<p>This block is located within the IDFdK2 biogeoclimatic zone which has an elevational range of 750 m - 1400 m (median elevation 1110m)</p> <p>The block is located on a E facing aspect with an elevational range of 1145-1256m (median block elevation 1201 m) putting it in the Mid-elevational range of this BEC zone.</p> <p>LwB is applicable. Lw is a acceptable species.</p>

FSP RESULTS AND STRATEGIES MANAGEMENT

ID	Plan Name	Term Years	Commencement Date
FSP 034_2.1	Tolko-Stella-Jones-Selkirk-UNIB-WBFN-LSIB-NKIB FSP	5	2/2/2012

Applicable FDU (s)	TFL
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This Site Plan is consistent with the above noted FSP, section 10 of the FRPA and the prescribed requirements of section 34(1) of the FPPR. This Cutblock Site Plan also covers all applicable Cutting Permit Road Sections and Road Permit Sections associated with this block.

The term “Drilldown” when used in this site plan means the procedure used by Tolko Industries Ltd. to compare the spatial location of this cutblock/road with the spatial location attributes associated with the objectives set by the government. A current Drilldown report and maps are attached to this SP file.

Watersheds

Fisheries Sensitive Watersheds, Community Watersheds and water Quality (includes Domestic Intakes outside of CWS’s)

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.4.1	Water in Community Watersheds	Yes ☒ No ☐	<ul style="list-style-type: none">This block is located within the lambly Community Watershed and is located within a 5km radius of a domestic point of diversion. There is not a direct connection between streams and NCDs within the block and the domestic point of diversion.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">This block is located within the Lambly Community Watershed below the H40 line of the Residual above intake sub-basin. Drilldown indicates this block has a moderate sediment delivery risk. Field work has confirmed the sediment delivery risk to be low.The Forsite ECA analysis approved report dated September 7, 2016 indicates that the Lambly Creek: Residual above intake Sub basin will have an ECA of 15% if all the approved blocks were to be harvested. This report does not interpret the results nor does it give recommendations, therefore the CWS Watershed Assessment completed by Don Dobson (Urban Systems Inc.) in April 2014 has been used as a base line. Based on the Dobson report, the approved scenario with an ECA of 15% carries a Low Hazard for increased peak flows with a Low Channel Sensitivity rating. Based on this, the Hydrological Hazard is Low. <p>FPPR 59:</p> <ul style="list-style-type: none">Material that is harmful to human health will not be deposited in, or transported to, water that is diverted for human consumption due to:All roads and trails along the Western portion of the block that have the potential to divert drainage towards the stream connecting to the POD will be rehabilitated or deactivated post-harvest, maintaining natural drainage.To reduce the sediment delivery risk, in-block roads will either be rehabilitated or deactivated once harvesting and silviculture activities are completed in a way that restores natural surface and subsurface drainage patterns.To reduce the sediment delivery risk, harvest is recommended to occur during the summer when soil is dry or winter when soil is frozen. Operations will not occur during snowmelt or the spring freshet as there is an increased risk of sedimentation at this time.The block is within 1000m to 5000m of a domestic water intake. There will be no pesticides use within 30m of any water course.Pesticides will not be used in the CWS. <p>FPPR 60 (1) and (2):</p> <ul style="list-style-type: none">The harvest of this block will not damage any known licensed waterworks.The proposed harvest of this block and associated roads are greater than 100m upslope of a licensed waterworks (where water is diverted for human consumption). <p>FPPR 61:</p> <ul style="list-style-type: none">An assessment of the risk of sediment delivery from excavated trails has been completed and was determined to be low for the harvest area.	

Biodiversity

Green up and Adjacency, Wildlife Tree Retention, Old Growth Management Areas, Biodiversity Emphasis Option and Coarse Woody Debris
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R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.5.1	Biodiversity – Landscape Level	Yes ☒	<ul style="list-style-type: none">The maximum allowable cutblock size is 40 hectares within the Okanagan FDU. The green up requirement is 2m.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">The adjacent previously harvested openings labeled 804-2 have reached a green-up height of at least 2.0m. This block will not form part of an aggregate >40ha.	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.5.2	Biodiversity Emphasis Option	Yes ☒	<ul style="list-style-type: none">This block is located in the Trepanier Landscape Unit on TFL49 which has a BEO of Low.
How is this SP consistent with the Results, Strategies, or Measures?		Coarse woody debris will be addressed as detailed in the sections titled 5.6.4 “Basic CWD” and/or 5.6.5 “Enhanced CWD”. Draft Old Growth Management Areas have been designated within this Landscape Unit in congruence with the provincial OGMA order. WTRA’s have been established consistent with section 5.6.2.	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
<u>5.6.2</u>	Wildlife Tree Retention (WTR)	Yes ☒	<ul style="list-style-type: none">This block is located within the IDFdk1 (BEC V.3) in the Trepanier Landscape Unit which has a minimum Wildlife Tree Retention Level of 3.5% at the cutblock level and 5% retention at the cutting permit level.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">Wildlife Tree Patches have been specified for this block, totaling representation of 6% (1.34ha), which meets the requirement for wildlife tree retention at the cutblock and cutting permit level.	

Coarse Woody Debris - Okanagan

In the Okanagan Shuswap Forest District FDU’s CWD is based on the LUO Order and is either Basic or Enhanced or a combination of these two levels depending on the drilldown report triggered requirements.
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R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
<u>5.6.4</u>	Basic CWD	Yes ☒ No ☐	<ul style="list-style-type: none">Basic levels of CWD apply to this block. Ground based harvest systems will be utilized and the retention requirements for blocks >20ha applies.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">N/A	

Cultural Heritage Resources

Cultural Heritage Resources Information Sharing Referral Results with First Nations

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
<u>5.8.1</u>	Cultural Heritage Resources	Yes ☒	<ul style="list-style-type: none">This block was referred under Information Sharing Referral #15-FN-01 to the applicable First Nations.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">As a result of this referral, OKIB and WBFN indicated that a field assessment was required to determine the presence of cultural heritage resources. OKIB conducted a field review on May 9, 2016 and indicated “No further archaeological review required, provided external block boundaries and road locations are not altered from current locations.” WBFN completed a field review on May 23, 2016 and reported no findings stating that “There are no findings in this block” however, If archaeological artifacts, features, or especially, ancestral remains are located during any forestry related activities, then all work in the immediate vicinity must stop. Tolko will notify WBNF and the archaeological branch, within 24 hours, and provide the location and the nature of the findings. Tolko and WBFN will then work together to develop a work plan to address the finding. No other block specific responses from First Nations were received. No concerns remain.	

Soils

Soil Disturbance Limits and Permanent Access Structures

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
<u>5.1.1</u>	Soils	Yes ☒	<ul style="list-style-type: none">This cutblock has been assessed as not having sensitive soils as defined by regulation. The maximum amount of Permanent Access Structures is 7% and maximum amount of additional soil disturbance is 10%. The allowable soil disturbance for roadside work areas is 25%.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">Soil Disturbance and Permanent Access Structures are within limits. Refer to the Soil Conservation section and C.1 Ecology and Critical Site Conditions.	

Access Management

Management of access in areas subject to special habitat values

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
<u>5.12.2</u>	Road Construction/Habitat Values	Yes ☒ No ☐	<ul style="list-style-type: none">This block falls within Mule Deer Winter Range. This block is located within NDT 4.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">This block is located within a NDT 4 area, all roads will be constructed as a Deactivate temporary roads, including a barricade to prevent access by motor vehicles other than all-terrain vehicles, as soon as practicable following regen delay.Harvesting will be scheduled to occur in conjunction with or as soon as practicable following initial road construction activity.	

Visual Quality

Scenic Areas with established Visual Quality Objectives			
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.7.1	Visual Quality – Scenic Areas	Yes ☒ No ☐	<ul style="list-style-type: none">This block is mapped as having 23.70 ha within a known scenic area with a visual quality objective of VQO: Partial Retention.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">The characteristics of alteration for a VQO of Partial Retention will be achieved to the extent practicable having regard for the above noted factors as described below.This block will achieve the characteristics of alteration of the visual quality objective of Partial Retention by being:<ul style="list-style-type: none">i. Easy to see;ii. Small to medium in scale; andiii. Natural and not rectilinear or geometric in shapeA visibility analysis was conducted by Tolko. Both a line of sight analysis and a Google Earth Visual Impact Assessment were completed and indicate that this block may be visible from several viewpoints along Kelowna and Lake Country. The following attributes have been considered and incorporated to help achieve the Visual Quality Objective of Partial Retention<ul style="list-style-type: none">i. It has been designed to resemble the structural characteristics and spatial distribution of an opening that would result from a natural disturbance with irregular cutblock boundariesii. Placement of Wildlife Tree Patches along the most visible leading edge of the cutblock.iii. Retention of Fdi >/= 62.5 cm and all deciduous and Py will soften edgesiv. Adjacent unprescribed areas serve to leave representation of mature stands (including adjacent previously harvested openings)v. The adjacent previously harvested openings have reached a green up height of 2m.	

Recreation

Management associated with Recreation Sites, Trails, Zones, or Tourism Areas			
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.9.2	Recreation Sites, Trails, and Walk in Lakes	Yes ☒ No ☐	<ul style="list-style-type: none">Portion of the block overlaps a recreation trail, The Highland trail.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">A portion of this block over laps the Highland Trail. There were no findings of the trail during field work. If there is a portion of the trail that field does exist in the block, re-establish any disturbed trails to ensure connectivity.	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.9.4	Recreation – Land Act Objectives	Yes ☒ No ☐	<ul style="list-style-type: none">This block falls within the Bear Creek (Cat: Motorcycle) recreation area. This block was referred under Information Sharing Referral #15-FN-01 to all applicable interest holders.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">As a result of this referral The Ministry of Forests, Lands and Natural Resources Operations requested Tolko to Inform Ian McLellan, (Recreational officer) and any on site host or site operator before any operations commence on roads or cutblocks that overlap trails or recreation sites so trails and sites can be closed and websites can be updated. Once harvesting is complete, Tolko will re-establish any disturbed trails to ensure connectivity to maintain the recreational experience. Stubbing trees along trails is required.Proposed cutblocks and roads will mainly impact summer recreationalists. Winter harvest is the preferred method to harvest these blocks. If that is not possible, then minimizing impacts to recreational users is requested by; Limiting harvesting activities to Monday to Friday and avoiding weekends and stat holidays.This block is within a Tourism Area in Visual Zone 1. Refer to section 5.7.1 of this Site Plan for the visual quality objective associated with this block and characteristics or alteration that will be achieved.	

Invasive Plants

Invasive Plant Identification and Management			
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
6.1.2	Invasive Plants	Yes ☒ No ☐	<ul style="list-style-type: none">This area is not known as a high hazard site, however high risk species (Marsh Plume Thistle) were noted within or adjacent to the proposed roads; therefore the high hazard measures apply.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">Areas of mineral soil >0.1ha exposed by forest operations outside the NAR and bladed or excavated skid trails comprised of at least 50% exposed mineral soil over a minimum of 100m established by forest operations will be seeded within 1 year of completion of operations with a mixture of seed that meets or exceeds the Canada Commons #1 Specification in the Seeds Act R.S.C 1985. If by conclusion of the first full growing season after seeding that seeding has not successfully established over 50% or more of the seeded area, it will be re seeded by the conclusion of the following growing season. Instruct contractors and crews that before moving from a high hazard site any harvesting, road construction, or site preparation equipment, they must remove to the extent practicable any seed of a High Risk Species that is readily visible on an ordinary site inspection of the equipment.	

Community Crown Interface

Management of forest health operations within the settled valley corridors known as the Community Crown Interface Area

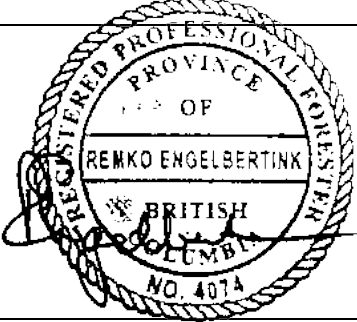
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.11.2	Community Crown Interface Area	Yes ☒ No ☐	<ul style="list-style-type: none">This block is located within a Community Crown Interface Area and is not a forest health block.This block is also within Visual Zone 1.
How is this SP consistent with the Results, Strategies, or Measures?		<ul style="list-style-type: none">This block was referred to local government under Information Sharing Referral # 15-FN-01. No referral comments were received from local government.Harvesting and road construction for this block is planned consistent with the requirements for Visual Zone 1 which addresses the requirements for the Community Crown Interface Area.Ensure that within 90 days post-harvest a fire hazard assessment is completed.	

GENERAL WILDLIFE MEASURES UNDER GAR

GAR ID	GAR Title	Applicable	How General Wildlife Measures Apply to the Site (Include Rationale if No)
U-8-001	Mule Deer Winter Range – OKTSA	Yes ☒ No ☐	<ul style="list-style-type: none">This block falls within the identified Mule Deer Winter Range Area #U-8-001 by the GAR order for this species.
How the SP is consistent with this GAR order and GWM’s		<p>This block is situated within Mule Deer Winter Range planning cell #643. The planning cell was assigned a shallow snowpack designation. The minimum Snow Interception Cover is 86 hectares. The Maximum Early Seral Area is 145 hectares.</p> <p>General Wildlife Measures (GWM) for Ungulate Winter Range # U-8-001 in the Okanagan:</p> <p>1&2. A landscape analysis conducted by Forsite Forest Management Specialists (September 7 2016) concludes that, for the approved scenario (given all current and proposed harvest), this planning cell will have 85 ha of stands meeting the attributes for Snow Interception Cover within the Moderate Snowpack Zone. This amount meets the minimum Snow Interception Cover requirement of 1 hectares. One ha of surplus snow interception was acquired by the recruitment of 85 ha with the planned 5-5 blocks (RA2147, RA2154, RA2156, RA2157 and RA2112) without these recruitment blocks this cell would have 84 ha deficit.</p> <p>3. N/A - The Snow Interception Cover is distributed in numerous patches throughout the planning cell.</p> <p>4. Wildlife Tree Patches (WTPs) for this block are Douglas-fir leading of at least 140 years of age.</p> <p>5. The Snow Interception Cover is retained in a variety of sizes throughout the planning cell.</p> <p>6. This block is in the Moderate Snowpack Zone outside the IDFmw and this GWM was used to meet the minimum Snow Interception Cover requirement.</p> <p>7. N/A – This block is not located in the IDFmw.</p> <p>8. N/A – While this block is in the Moderate Snowpack Zone, harvest is not proposed within the minimum Snow Interception Cover area of this planning cell.</p> <p>9. This block is in the Moderate Snowpack Zone and the Snow Interception Cover is not located on slopes above 80%.</p> <p>10. This block is in the Moderate Snowpack Zone. Silviculture activities will results in at least 70% of the well-spaced stems at Free Growing being Douglas-fir. Planting will be directed to target >70% Fd stems within this block and Fd will be planted. 4.74 ha of the block falls within the MDWR.</p> <p>11. N/A – The MoE Regional Manager has not approved a landscape level plan to address Douglas-fir composition in areas of root rot.</p> <p>12. This block is in the Moderate Snowpack Zone. A landscape analysis conducted by Forsite Forest Management Specialists (September 7 2016) concludes that, for the approved scenario (given all current and proposed harvest), 68% of this planning cell will be in stands of less than 20 years of age. This amount meets the maximum requirement of 30%.</p> <p>This block is situated within Mule Deer Winter Range planning cell #644. The planning cell was assigned a moderate snowpack designation. The minimum Snow Interception Cover is 36 hectares. The Maximum Early Seral Area is 51 hectares.</p> <p>General Wildlife Measures (GWM) for Ungulate Winter Range # U-8-001 in the Okanagan:</p> <p>1&2. A landscape analysis conducted by Forsite Forest Management Specialists (September 6, 2016) concludes that, for the approved scenario (given all current and proposed harvest), this planning cell will have 36 ha of stands meeting the attributes for Snow Interception Cover within the Moderate Snowpack Zone. This amount meets the minimum Snow Interception Cover requirement of 0 hectares. With the planned recruitment of the 5-5 block, 0 ha of surplus are within this planning cell.</p> <p>3. N/A - The Snow Interception Cover is distributed in numerous patches throughout the planning cell.</p> <p>4. Wildlife Tree Patches (WTPs) for this block are Douglas-fir leading of at least 140 years of age.</p> <p>5. The Snow Interception Cover is retained in a variety of sizes throughout the planning cell.</p> <p>6. N/A – While the block is in the Moderate Snowpack Zone outside of the IDFmw, Non-Timber Harvest Landbase (NTHLB) was not required to meet the minimum Snow Interception Cover requirement.</p> <p>7. N/A – This block is not located in the IDFmw.</p> <p>8. N/A – While this block is in the Moderate Snowpack Zone, harvest is not proposed within the minimum Snow Interception Cover area of this planning cell.</p> <p>9. This block is in the Moderate Snowpack Zone and the Snow Interception Cover is not located on slopes above 80%.</p> <p>10. This block is in the Moderate Snowpack Zone. Silviculture activities will results in at least 70% of the well-spaced stems at Free Growing being Douglas-fir. Planting will be directed to target >70% Fd stems within this block and Fd will be planted. 8.45 ha of the block falls within the MDWR.</p> <p>11. N/A – The MoE Regional Manager has not approved a landscape level plan to address Douglas-fir composition in areas of root rot.</p> <p>12. This block is in the Moderate Snowpack Zone. A landscape analysis conducted by Forsite Forest Management Specialists (September 7, 2016) concludes that, for the approved scenario (given all current and proposed harvest), 90% of this planning cell will be in stands of less than 20 years of age. This amount meets the maximum requirement of 30%.</p> <p>This block is situated within Mule Deer Winter Range planning cell #652. The planning cell was assigned a moderate snowpack designation. The minimum Snow Interception Cover is 81 hectares. The Maximum Early Seral Area is 99 hectares.</p> <p>General Wildlife Measures (GWM) for Ungulate Winter Range # U-8-001 in the Okanagan:</p> <p>1&2. A landscape analysis conducted by Forsite Forest Management Specialists (September 7, 2016) concludes that, for the current scenario (given all current and none of the proposed harvest), this planning cell will have a 49 ha deficit of stands meeting the attributes for Snow Interception Cover within the Moderate Snowpack Zone. Harvesting of this block will not further contribute to the deficit of stands meeting the attributes for Snow Interception Cover for the planning cell due to:</p> <p>- The stands within this block do not meet the Snow Interception Cover attributes for this Snowpack Zone based on the Forsite analysis mapping.</p> <p>- This block contains high amounts of Pl and Lw.</p> <p>3. N/A - The Snow Interception Cover is distributed in numerous patches throughout the planning cell.</p>	

	<div>4. Wildlife Tree Patches (WTPs) for this block are Douglas-fir leading of at least 140 years of age.</div> <div>5. The Snow Interception Cover is retained in a variety of sizes throughout the planning cell.</div> <div>6. N/A – While the block is in the Moderate Snowpack Zone outside of the IDFmw, Non-Timber Harvest Landbase (NTHLB) was not required to meet the minimum Snow Interception Cover requirement.</div> <div>7. N/A – This block is not located in the IDFmw.</div> <div>8. N/A – While this block is in the Moderate Snowpack Zone, harvest is not proposed within the minimum Snow Interception Cover area of this planning cell.</div> <div>9. This block is in the Moderate Snowpack Zone and the Snow Interception Cover is not located on slopes above 80%.</div> <div>10. This block is in the Moderate Snowpack Zone. Silviculture activities will results in at least 70% of the well-spaced stems at Free Growing being Douglas-fir. Planting will be directed to target >70% Fd stems within this block and Fd will be planted.</div> <div>10.51ha of the block falls within the MDWR.</div> <div>11. N/A – The MoE Regional Manager has not approved a landscape level plan to address Douglas-fir composition in areas ot root rot.</div> <div>12. This block is in the Moderate Snowpack Zone. A landscape analysis conducted by Forsite Forest Management Specialists (September 7, 2016) concludes that, for the approved scenario (given all current and proposed harvest), 81% of this planning cell will be in stands of less than 20 years of age. This amount meets the maximum requirement of 30%.</div>

ADMINISTRATION

PREPARED BY (RPF SIGNATURE AND SEAL):	
<div>Prepared by:</div> <div>Allie Affleck</div> <div>Name (Printed)</div> <div>R.P.F.'s Approval</div> <div>Remko Engelbertink</div> <div>R.P.F Name (Printed)</div> <div>2017/01/034074</div> <div>Date Signed (YMD)R.P.F. Number</div>	
<div></div> <div>R.P.F. SIGNATURE AND SEAL</div>	

RPF LEGAL STATEMENTS AND COMMENTS
<div>RPF Reviewed this Site Plan:</div> <div>Legal Statements and Comments:</div> <div>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 the standards expected of a member of the Association of British Columbia Forest Professionals.</div>