

Harvest Plan, Silviculture Plan, Site Plan

Tolko Industries Ltd.

Thompson Woodlands

☒ Original:	☐ Amendment #
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TENURE IDENTIFICATION

Region: 58	District: Thompson Rivers	TSA: Kamloops	TSB: 11C	License No.: A18686	Timbermark(s): ES4404	Cutting Permit: 404	Block(s): HN1110	Mapsheet/Opening No.: 82M.032
Area Under Tenure (ha): 17.4	Location: Swale			UTM East: 316527	UTM North: 5693836	UTM Zone: 11U	Licensee: Tolko Industries Ltd.	
	Latitude: 51° 21' 59"			Longitude: 119° 38' 09"				

SAFETY

Weather Station
-

Other Safety Comments:

Steep Slopes:

This block contains slopes over 35%. Consistent with WorkSafeBC regulations, no rubber tired skidders may operate on slopes exceeding 35% and tracked machines must not operate on slopes exceeding 40% unless maximum slope limits are specified otherwise by the equipment manufacturer. If safe work practices acceptable to WorkSafeBC have not been provided, a harvest strategy will be developed by Tolko, with the contractor, to eliminate or control the steep slope hazard (i.e. bladed trails, hand fall, line skid).

The Logging Plan Map identifies slopes exceeding 35%, however there may be other areas not identified that exceed the limitations of the equipment. At any time the contractor or equipment operator feels that the logging activity is unsafe, harvesting of the area of concern must cease until a revised harvest strategy is developed with Tolko.

Hazard Trees:

Dead standing timber to be expected. The block has a lodgepole pine component which cruised out at 5.0% red / grey attack.

Identified Pre Harvest Hazards:

- Expect dead standing timber scattered throughout the block.
- Steep slopes in the east of the block with large boulders which may become unstable if disturbed during block harvesting and pose a threat to down-hill operations.
- Cliff to the east of the block with potential for falling rock safety concerns.

Access:

Road 3420.13 can be used to access the block. This road was in good drivable condition at the time of layout (Spring 2018).

HARVESTING COMMENTS

HARVEST SYSTEM BREAKDOWN: Conventional – Clearcut with Reserves

Harvesting systems: Skidder Clearcut

Decking: Decking is available along road 3420.13 as well as 2 temporary spur roads (3420.27 and 3420.29). Both spur roads have proposed landings associated with them.

AREAS OF CONCERN

Terrain Stability Concerns: There is a steep rocky cliff area to the east of the block, with potential safety concerns with respect to falling rock. The eastern portion of the block contains large boulders, some of which may become dislodged and roll downhill during block development operations.

Sensitive soil concerns: Expect saturated soil conditions in the western portion of the block on flat terrain. Harvest under dry or frozen soil conditions.

Harvesting issues: The eastern portion of the block is steep and very rocky, the bladed trail in the location shown on the Logging Plan Map may assist with harvesting this area via access to a shallow bench below the steep section. Hand-falling may be required, however, to reach some of the upper reaches of this area

Access Issues: Eastern-most portion of the block will likely require a skid trail as described above to access.

TOPICS FOR DISCUSSION AT PREWORK

Block specific considerations:

- Leave trees within this block are intended for retention of wildlife habitat biodiversity, as per the Leave Tree Characteristics table below on Page 2. Leave trees are not ribboned in the field.
- Create one debris pile/ 2 ha post-harvest as per the Leave Tree Characteristics table below.
- Migratory Birds – block is to be harvested outside of the MAR 31 - AUG 11 nesting period unless critical to Spring – Summer inventories, if harvesting within this window take note of strategies detailed in the Migratory Bird Responsibilities section below.

Results and Strategies measures to be implemented by Operations:

CHR/Archaeological restrictions or measures to be implemented by Operations:

None identified in the assessment.

If a previously unidentified (unmarked) affected Cultural Heritage Resource is encountered during harvesting, road construction, or mechanical site preparation that is carried out or authorized by the Licensee, the Licensee will require operations to cease to the extent necessary to protect the affected cultural heritage resource until a Cultural Heritage Resource Evaluation can be carried out.

Species at Risk measures to be implemented by Operations: NA

Wildlife measures to be implemented by Operations:NA

CWS, FSW or POD related measures to be implemented by Operations: The block is within the Fennell Creek Watershed basin of the Barriere Fish Sensitive Watershed and has a specified ECA limit of 25%. The block was declared under FSP 458 Amendment #9 consistent with Section 14(4) of the Forest Planning and Practices Regulation on April 11, 2018. As such the GAR Objectives do not apply.

Invasive plant strategy: There are recorded incidences of Hoary Alyssum on the road accessing the block greater than 500m from the block. Harvesting and reforestation traffic therefore has the potential to spread this invasive plant into the cutblock. Conduct forestry practices so as to prevent the introduction or spread of invasive plants as below:

- Exposed soils created by road construction or deactivation, timber harvesting, and silviculture treatments (excluding permanent road running surfaces) will be seeded with Canada Common #1 grass seed if it exceeds 0.1 contiguous hectares,
- At least 90% of the total area exposed in a calendar year will be seeded by July 1st of the following calendar year, with the remainder seeded by December 31st,
- If the need to reseed is identified upon inspection within 24 months of the initial seed application and the reseeding is expected to be successful, then the reseeding will occur at least once,
- Ensure equipment is clean of invasive plant material when entering and leaving the site,
- Notify Tolko if additional areas with invasive plants are found.

Range requirements: N/A, no range tenure overlap.

Migratory Bird Responsibilities: This block overlaps with a High (Rank 4) and Very High (Rank 5) Nest Density Risk. Due to overlap with the Rank 5 area (>25% of the block), harvest outside of the nesting period from MAR 31 - AUG 11 unless critical to Spring – Summer inventories. Ensure a contractor pre-harvest review of migratory bird risk and operational awareness of migratory bird risk for all individuals operating on the block regardless of harvest timing.

If harvesting must be carried out within this window, ensure that the following measures are taken:

- The Logging Supervisor must participate in a pre-work review for nest awareness and licensee expectations.
- Supervisor and / or Contractor are to walk the block prior to harvest for signs of bird nests.
- Avoid site specific bird nest locations, and ensure they are marked adequately for all those operating on the block.
- All individuals operating on the block must be aware of the migratory bird risk, along with potential shut-down and reporting expectations if a bird nest is sighted.
- Nest identification education material must be on-site.
- Adhere to stop work procedures as follows: if a previously unidentified migratory bird species or its nest is encountered during harvesting, road construction, or a silviculture activity associated with this Site Plan, Tolko will require that the operations cease to the extent necessary to protect the affected migratory bird species or nest until alternative BMP's can be implemented to minimize or prevent the risk of incidental take.

Fire Risk Rating: Extreme (High / Moderate)

Ribbon Standards: Post-Nov 2016 standards

Other topics for discussion:

This block is within an area covered by an active trapline tenure (Brian Dack - TR0338T002). There were no known trap locations in this block at the time of fieldwork (Winter/Summer 2017) but any traps and associated structures encountered at the time of harvesting must remain undisturbed. If any traps are identified at the time of harvest they must be protected with a 25m buffer.

Notification requirements (private land owner, range tenure holder, recreation organizations, RUA holder, etc) N/A

Timing restriction: Harvest outside of the MAR 31 - AUG 11 migratory bird nesting period due to overlap with Very High (Rank 5) Nest Density Ranking unless critical to Spring – Summer inventories.

LEAVE TREE CHARACTERISTICS	
SU(s)/TUs/Type	Description
A	<p>The leave tree objective is biodiversity. The goal is to retain all live large Fd, Cw, and Hw, and all deciduous. To achieve this target approximately 95% of live Fd, Cw, and Hw in the ≥ 65cm DBH class and all live deciduous will be reserved. There were 4.3 sph of Fd of this size noted in the cruise. No live Hw or Cw >65cm or deciduous were noted, but may be present in limited densities, retain if encountered.</p> <p>The expectation is that there will be a range of 0-5 sph of live Fd potentially unevenly distributed throughout the block.</p>

A	To provide habitat for small mammals leave piles of LARGE woody debris unburned mounds approximately 2 m (L) x 2 m (W) x 2 m (H) preferably within 200 m of the block boundary, wildlife tree patch edges or water. Target should be 1 mound per every 2 hectares.
A	To help protect and locate drainages post-harvest, trees should be stubbed along all NCDs where operationally feasible. Target non-merchantable trees to be stubbed.

Additional Leave Tree Comments: These leave trees are not marked in the field.

FOREST MANAGEMENT

RIPARIAN MANAGEMENT

Riparian ID	Riparian Class	Width	Fish/No Fish	RRZ Width (m)	RMZ Width (m)	Description and strategy for the Riparian Zone including purpose and extent of removal or modification of trees and residual basal area or density.
HN1110 NCD-1 – NCD-3	NC	N/A	No	0	0	NCD-1, 2, and 3 are located near the center and south-west of the block. They have been marked in the field as per ribboning SOP at the time of layout (no associated machine-free zone (MFZ)). i. one road crossing is required for Road 3420.37. The NCD is short and no skid crossings are expected to be necessary. ii. do not skid down the identified NCDs iii. retain stubs along the NCDs for future reference iv. fall away / yard away from the identified NCDs where safe to do so v. do not pile slash or site prep over the identified NCDs vi. crossing rehabilitation to include: scattering large CWD to minimize potential for off-road vehicle damage
HN1110 S6-1	S6	<1.5m	No	0	20	S6-1 identified on the Site Plan Map is in the south of the block, on the edge of WTP area. There is one existing road crossing on Road 3420.13 (bridge THWC0011). i. BA REQUIREMENTS: There is no basal area retention requirement for this stream. ii. DEBRIS MANAGEMENT: Stream channel will be cleaned of debris or slash introduced as a result of harvesting activities if it negatively impacts natural drainage. iii. STREAM BANK PROTECTION: Directional falling and skidding away will mitigate detrimental impact on the stream bank. If a tree is felled across the stream it will be removed concurrent with harvesting activities if removal will not damage the integrity of the stream bank or existing large organic debris. Stems will be bucked at the stream banks and skidded away where stream bank damage is a concern. iv. 5m MACHINE FREE ZONE: Within the RMA of stream S6-1 a 5m Machine Free Zone is established in the field on the northern side. The objective is to minimize disturbance and reserve all non-merchantable trees, deciduous species, shrubs and herbs as practicable during operations within this zone. v. RMA: No significantly different practices are proposed for the remainder of the 20m RMZ than for the rest of the block; it is not flagged in the field.
HN1110 S6-2	S6	<1.5m	No	0	20	S6-2 identified on the Site Plan Map flows through the center of the block. There is one existing road crossing on Road 3420.13. i. BA REQUIREMENTS: There is no basal area retention requirement for this stream. ii. DEBRIS MANAGEMENT: Stream channel will be cleaned of debris or slash introduced as a result of harvesting activities if it negatively impacts natural drainage. iii. STREAM BANK PROTECTION: Directional falling and skidding away will mitigate detrimental impact on the stream bank. If a tree is felled across the stream it will be removed concurrent with harvesting activities if removal will not damage the integrity of the stream bank or existing large organic debris. Stems will be bucked at the stream banks and skidded away where stream bank damage is a concern. iv. 5m MACHINE FREE ZONE: Within the RMA of stream S6-1 a 5m Machine Free Zone is established in the field. The objective is to minimize disturbance and reserve all non-merchantable trees, deciduous species, shrubs and herbs as practicable during operations within this zone. v. RMA: No significantly different practices are proposed for the remainder of the 20m RMZ than for the rest of the block; it is not flagged in the field.
HN1110 S6-3	S6	<1.5m	No	0	20	S6-3 identified on the Site Plan Map is near the center of the block, draining into NCD-3. There is one existing road crossing on Road 3420.13.

						<p>i. BA REQUIREMENTS: There is no basal area retention requirement for this stream.</p> <p>ii. DEBRIS MANAGEMENT: Stream channel will be cleaned of debris or slash introduced as a result of harvesting activities if it negatively impacts natural drainage.</p> <p>iii. STREAM BANK PROTECTION: Directional falling and skidding away will mitigate detrimental impact on the stream bank. If a tree is felled across the stream it will be removed concurrent with harvesting activities if removal will not damage the integrity of the stream bank or existing large organic debris. Stems will be bucked at the stream banks and skidded away where stream bank damage is a concern.</p> <p>iv. 5m MACHINE FREE ZONE: Within the RMA of stream S6-1 a 5m Machine Free Zone is established in the field. The objective is to minimize disturbance and reserve all non-merchantable trees, deciduous species, shrubs and herbs as practicable during operations within this zone. No significantly different practices are proposed for the remainder of the 20m RMZ than for the rest of the block; it is not flagged in the field.</p>
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COARSE WOODY DEBRIS MANAGEMENT STRATEGIES**Coarse Woody Debris Requirement**

Retention of CWD will be consistent with the legislation which requires leaving on the block at least 4 logs/ha that are a minimum of 2m long and at least 7.5cm diameter at one end.

Create one debris pile/ 2 ha post-harvest as per the Leave Tree Characteristics table above.

MANAGEMENT STRATEGIES FOR ARCHAEOLOGICAL SITES

Refer to the Harvest Constraints section.

GULLY MANAGEMENT STRATEGIES

N/A

FOREST HEALTH MANAGEMENT STRATEGIES

Comments:

Windthrow hazard was assessed as moderate. No significant forest health concerns noted during block development. No root rot observed.

Pest Codes

SU(s)	Pest Code	% Percent	Management Strategies
A	IBS	100	Spruce beetle kill was observed at a low level throughout this block. Harvest as soon as possible prior to further deterioration.

VEGETATION MANAGEMENT STRATEGIES

Livestock to be used for vegetation management: No

Critical Site Conditions																						
Critical Site Condition	Applicable Yes/No/NA	Comments																				
Ungulate Winter Range (CSA Target 6)	No	This block is not located within an ungulate winter Range. The FSP requirements have been met. Refer to the Results and Strategies section of the SP.																				
Critical Habitat Features (CSA Target 6)	No	There is not a documented, mapped (GPS/UTM) and field verified occurrence of a critical habitat feature (e.g. den, lick, nest) for a Red-listed or Blue-listed species.																				
Mountain Caribou (CSA Target 7)	No	This block is not located within a Mountain Caribou habitat area.																				
Section 7 (Focal) Species (CSA Target 9)	No	Kamloops TSA Species: <table><tr><th>Species</th><th>Identified</th><th>Managed</th></tr><tr><td>Flam. Owl</td><td>No</td><td>NA</td></tr><tr><td>Screech Owl</td><td>No</td><td>NA</td></tr><tr><td>Lewis's Woodpecker</td><td>No</td><td>NA</td></tr><tr><td>Spotted Bat</td><td>No</td><td>NA</td></tr><tr><td>Badger</td><td>No</td><td>NA</td></tr></table>			Species	Identified	Managed	Flam. Owl	No	NA	Screech Owl	No	NA	Lewis's Woodpecker	No	NA	Spotted Bat	No	NA	Badger	No	NA
Species	Identified	Managed																				
Flam. Owl	No	NA																				
Screech Owl	No	NA																				
Lewis's Woodpecker	No	NA																				
Spotted Bat	No	NA																				
Badger	No	NA																				
Red-listed Eco Community (CSA Target 12)	No	This block is not located within an ecosystem identified as "prioritized Red Listed ecological communities"																				
Archaeological Sites (CSA Target 14)	No	This block and associated roads do not contain any culturally important, sacred and spiritual sites.																				
Geological Features (CSA Target 15)	No	This block and associated roads do not contain special geological features.																				

ECA Exceeds 35% (CSA Target 24)	No	The block is not located in one of the highest risk rated watersheds in the Kamloops TSA. The block is located in this watershed: Fennell Creek The watershed has an ECA of: 23.5% A hydrological assessment was completed: No
VQO of P, R, or PR (CSA Target 29)	No	The block is not located in a visually sensitive polygon.
Recreation Trails (CSA Target 30)	No	A recreation trail does not overlap this block or its associated roads.
Rancher Referral Completed (CSA Target 36)	No	A range tenure does not overlap this block and associated roads.
Trapper Referral Completed (CSA Target 37)	Yes	A Trapping tenure does overlap this block and associated roads. Referral has been made to the trapping tenure holder (Brian Dack - TR0338T002). There has been no feedback specific to this block, to date. No traps were located by field crews within this block during development, but as per previous communications with Brian Dack, any traps located within the harvest area will be buffered by a 25m No Harvest Zone.

Silviculture Treatment Regime

****Note Migratory Bird Nest Density Ranking of High** – mechanized silviculture activities are to take place outside of the MAR 31 - AUG 11 nesting period due to overlap with Very High (Rank 5) Nest Density Ranking unless critical to Spring – Summer inventories..

SITE PREPARATION – Preferred Treatment

Site preparation is expected to be necessary and can be further assessed post-harvest. False azalea and rhododendron cover exceeds 70% cover in some areas and may require treatment for successful regeneration.

Stumping has been prescribed due to potential for root rot in this area. Site prep will be restricted over approximately 30% of this block due to steep slopes and boulders.

SITE PREPARATION – Alternative Treatment

N/A

RATIONALE (if Required)

Reduce vegetation competition and create plantable spots and natural regeneration opportunities.

REGENERATION – Preferred Treatment

The regeneration treatment will be assessed post-harvest. It is expected that planting will be the regeneration method.

An approved variance, consistent with Tolko's approved FSP section 7.6.2(a)(i), has been applied, MITD reduced to 0.8m due to possible high water table.

RATIONALE (If required) Re-establish a healthy, resilient stand of site-specific tree species. Natural regeneration is not expected to be effective in this block.

BRUSHING – Preferred Treatment

The need for and timing of brushing treatments will be assessed post-harvest through surveys after stand establishment.

RATIONALE (If Required)

STAND TENDING/PRUNING/FERTILIZATION – Preferred Treatment

The need for and timing of stand tending treatments will be determined through surveys after stand establishment.

Site Plan

Tolko Industries Ltd.

Thompson Woodlands

☒ Original: ☐ Amendment #

TENURE IDENTIFICATION

Region: RTO	District: Thompson Rivers	TSA: Kamloo ps	TSB: 11C	License No.: A18686	Timbermark(s) : ES4404	Cutting Permit: 404	Block(s): HN1110	Mapsheet/Opening No.: 82M033
Area Under Tenure (ha): 17.4	Location: Swale			UTM East: 316527	UTM North: 5693836	UTM Zone: 11U	Licensee: Tolko Industries Ltd.	
	Latitude: 51° 21’ 59”			Longitude: 119° 38’ 09”				

AREA SUMMARY

SU Area Worksheet											
Block/SU	Gross Area	Perm Access	Rock	Water	Swamp	Other NP	NC > 4ha	Imm	Total Reserves	Other	NAR
HN1110 A	17.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	15.7

NET AREA TO BE REFORESTED INCLUDING RESERVES WITH MODIFICATIONS (ha)		
SU	SU Area Description	Net Area To Be Reforested
A	Slopes within this block range from 0% to 40% with an average of 20%. The terrain consists of north-western facing and flat slopes on the eastern side of Fennell Creek. The ICHmw3 01 dominates approximately 70% of this block, with approximately 30% in the wetter 07 site series. Soils are silty-loams and sandy-loams. Expect saturated soils on the flatter terrain in the west of the block. Soil CF% is moderate, but the block eastern half of the block is generally quite rocky, with scattered exposed boulders. The current stand is 51% Sx, 14% Fd, 12% Pw, 8% Cw, 6% Pl, 4% Hw, and 4% Bl before reductions according to the cruise. Stumping has been prescribed for this block due to root rot but may be restricted in some areas due to rock and steep slopes.	15.7ha

ECOLOGICAL INFORMATION AND SITE CHARACTERISTICS

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	15.7 ha	ICHmw3	830	900	865	0	40	20	01 – 70%	07 – 30%	NW	1

SU	Critical site conditions that affect the timing of operations, and how they affect the timing
A	Saturated soils are to be expected in the flat terrain in the west of the block, especially near the S6 streams and NCDs. This block is to be harvested outside of the MAR 31 - AUG 11 migratory bird nesting period due to overlap with Very High Nest Density Ranking unless critical to Spring – Summer inventories. Soils must also be dry or frozen at time of harvesting (winter harvest recommended). Seasonal considerations for this area also include restricted hauling season.

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	H	M	H	5cm+	Thinly buried surface rock (broken) throughout eastern portion of the block	10%	5%
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ROADSIDE SOIL DISTURBANCE: 25.0 %

Max Proportion of Total Area Under the Prescription Allowed for Permanent Access:	7.0%
Actual Permanent Access Calculated:	3.4%

Permanent Access Strategies

Comments:

Existing Road 3420.13 is a permanent access structure within in this block. It will be maintained upon harvest completion.

All access structures will be managed to ensure natural drainage patterns are maintained and erosion measures are installed prior to the spring freshet.

TEMPORARY ACCESS MANAGEMENT

SU(s)	Landings	Roads	Trails	Other	Total Temp Access (HA)	% of NAR	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	0.0	0.4	0.1	0.0	0.5	3.2	Roads and trails designated as per map.	NA	2.0	0.5	Skidder or Dozer

Total Temp Access: 0.5ha

% of Net Area: 3.2%

Temp Access Strategies

Roads 3420.27, 3420.29, and any associated landings are planned as temporary access structures within this block. They will be fully rehabilitated upon harvest completion.

As shown on the Logging Plan Map at least one bladed trail will likely be necessary as well. All bladed skid trails utilized in the process of harvesting will be fully rehabilitated upon harvest completion as well.

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
<p>Comments: No noted terrain instability on site. There are steep slopes above the block, which have historically deposited material (smaller, broken boulders) within the block although none appeared to have been deposited recently at the time of layout (Spring 2018). Tolko Industries Ltd. determined that further terrain stability assessment was not necessary for this block.</p> <p>Possible safety concerns. Use caution during operations on the block due to the potential for upslope hazard, particularly in early spring when thawing frost may increase the risk for falling rock.</p>					

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		Fd/140 Sx/100	Pw/200 Cw/100		Pl/200 Bl/100	Hw/100 Lw/200				10000	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	1041033	1200	700	600	0.8	125%
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GENERAL STOCKING STANDARDS COMMENTS AND APPROVED VARIANCES

An approved variance, consistent with Tolko's approved FSP section 7.6.2(a)(i), has been applied, MITD reduced to 0.8m due to possible high water table.

SU	Standards ID	Standards ID Footnotes	Other Required Information
A	1041033	Approved	

FSP RESULTS AND STRATEGIES MANAGEMENT

ID	Plan Name	Term Years	Commencement Date
FSP 438	Tolko Thompson Nicola FSP	5	April 1, 2012
Applicable FDU (s)	1		

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.

5.1 - Soils

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.1.2	General Soil Conservation	Yes ☒ No ☐	This site plan is consistent with FPPR sections 35(1), 35(3), 35(5) and 36.
How is this SP consistent with the Results, Strategies, or Measures?		Maximum allowable soil disturbance within the NAR in this block does not exceed 10%, with roadside disturbance not exceeding 25%. The maximum proportion of area under permanent access (PAS) is less than 7%. Any bladed trails utilized during harvest will be fully rehabilitated.	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.1.3	Exceeding Soil Disturbance Limits	Yes ☐ No ☒	Soil disturbance limits are not exceeded within this cutblock. Any bladed trails utilized during harvest will be fully rehabilitated.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.1.4	Work Related to Rehabilitation	Yes ☐ No ☒	NA
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.2 - Wildlife

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.2.1.1	Application of Other Results and Strategies	Yes ☒ No ☐	The results or strategies specified in Paragraphs: 5.3 – Wildlife – Individual Species 5.4 – Water, fish, Wildlife and Biodiversity within riparian Areas; 5.8 – Wildlife and Biodiversity – Landscape Level; 5.9 – Ecosystem Management; and 5.10 - Wildlife and Biodiversity – Stand Level Of the FSP, as they relate to FDU #1, are the result or strategy for the identified objectives for general wildlife.
How is this SP consistent with the Results, Strategies, or Measures?		Refer to the applicable results and strategies below.	

5.3 – Wildlife – Individual Species

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.1	Lewis's Woodpecker		
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.1.2	Limitations on Harvesting and Road Construction	Yes ☐ No ☒	NA
How is this SP consistent with the Results, Strategies, or Measures?		NA	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.2	Flammulated Owl		
How is this SP consistent with the Results, Strategies, or Measures?			
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.2.1	Application of Other Results and Strategies	Yes ☐ No ☒	The results or strategies specified in section 5.9 – Ecosystem Management of the FSP are the result or strategy for the Flammulated Owl.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

R/S/M ID	R/S/M Title
5.3.3	Spotted Bat

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.3.2	Limitations on Harvesting and Road Construction	Yes ☐ No ☒	There are no Spotted Bat occurrences or habitat within 100m of this block.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

R/S/M ID	R/S/M Title		
5.3.4	Mountain Goat		
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.4.2	Limitations on Harvesting in Mountain Goat Winter Range	Yes ☐ No ☒	This block does not overlap with Mountain Goat Winter Range.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

R/S/M ID	R/S/M Title		
5.3.5	Deer		
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.5.2	Retaining Suitable Snow Interception Cover	Yes ☐ No ☒	This block does not overlap with Mule Deer Winter Range
How is this SP consistent with the Results, Strategies, or Measures?		NA	

R/S/M ID	R/S/M Title		
5.3.6	Moose		
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.6.2	Use of Patches	Yes ☐ No ☒	This cut block is not located within an identified Moose Habitat Area.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.6.3	Maintenance of Visual Screening	Yes ☐ No ☒	No visible W1, W2 or W5 from the road development of this cutblock, within a Moose Habitat Area.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.6.4	Maintenance of Forage	Yes ☐ No ☒	This cut block is not located within an identified Moose Habitat Area.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.6.5	Access Management	Yes ☐ No ☒	This cutblock has no road development within 200 m of a W1, W2 or W5 wetland, within a Moose Habitat Area.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

R/S/M ID	R/S/M Title		
5.3.7	Grizzly Bear		
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.7.1	Limitations on Harvesting and Road Construction	Yes ☐ No ☒	This result or strategy does not apply to FDU 1.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

R/S/M ID	R/S/M Title		
5.3.8	Coastal Tailed Frog		
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.3.8.2	Limitations on Harvesting and Road Construction	Yes ☐ No ☒	This result or strategy does not apply to FDU 1.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.4 - Water Fish Wildlife and Biodiversity within Riparian Areas

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.4.2	General Conservation of Values within Riparian Areas	Yes ☒ No ☐	This site plan is consistent with FPPR sections 47(4) to (6), 48(3) to (5), 49(2) and (3), 51(3), 52(2) and 53.
How is this SP consistent with the Results, Strategies, or Measures?		There are three S6 streams within this block.	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)

5.4.3	Limitations on Road Construction in a Riparian Management Area	Yes ☐ No ☒	No road construction planned within RMAs.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.4.4	Limitations on Harvesting and Road Construction in a Riparian Reserve Zone	Yes ☐ No ☒	This block does not overlap with any RRZs.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.4.5	Retention in a Riparian Management Zone	Yes ☐ No ☒	There is no special management proposed for any RMA overlap.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.5 – Fish Habitat in Fisheries Sensitive Watersheds

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.5	Fish Habitat in Fisheries Sensitive Watersheds	Yes ☐ No ☒	There are no fisheries sensitive watersheds within FDU 1.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.6 – Water in Community Watersheds

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.6.1	Limitations on Harvesting and Road Construction	Yes ☐ No ☒	This block does not overlap with a Community Watershed.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.7 – Water Management

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.7.2	Notification of Water Licences	Yes ☐ No ☒	The proposed cutblock is greater than 100 m from the nearest water intake.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.8 - Wildlife and Biodiversity – Landscape Level

Green up and Adjacency, Wildlife Tree Retention, Old Growth Management Areas, Biodiversity Emphasis Option and Coarse Woody Debris			
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.8.2	Cutblock Size Restriction	Yes ☐ No ☒	The net area to be reforested (NAR) for this cutblock is less than 40ha. It is adjacent to non-greened up openings, with a composite opening size of 72.8ha NAR.
How is this SP consistent with the Results, Strategies, or Measures?		This opening is designed to be consistent with the structural characteristics and the temporal and spatial distribution of an opening that would result from a natural disturbance within NDT 2. A large block rationale accompanies this Site Plan.	

5.9 – Ecosystem Management

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	No Harvesting in Old Polygons	Yes ☐ No ☒	This result or strategy does not apply to FDU 1.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.10 – Wildlife and Biodiversity – Stand Level

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.10.1.2	Wildlife Tree Retention over a Cutting Permit	Yes ☒ No ☐	WTP requirement for CP is consistent with FSP section 5.10.1.2.
How is this SP consistent with the Results, Strategies, or Measures?		The wildlife tree patch requirement for this CP is 3.5% * 142.1ha = 5.0ha. The actual WTP area for this CP is 10.0ha, or 7.0%.	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)

5.10.1.3	Wildlife Tree Retention for a Single Cutblock	Yes ☒ No ☐	This cutblock is consistent with FSP section 5.10.1.3.
How is this SP consistent with the Results, Strategies, or Measures?		The wildlife tree patch requirement for this cutblock is 2.0% * 17.4ha = 0.35ha. The actual WTP area for this cutblock is 1.1ha or 6.3%.	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.10.1.4	Restriction on Harvesting Wildlife Tree Retention	Yes ☐ No ☒	This block does not overlap with a WTP.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.11 – Visual Quality

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.11.2.1	Limitations on Harvesting – FDU 1 in a Recreation and Tourism Area.	Yes ☐ No ☒	This block is not within a recreation and tourism viewscape area.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.11.2.2	Limitations on Harvesting – FDU 1 and 2	Yes ☐ No ☒	This block is not located within a Visual Landscape Unit.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.12 – Cultural Heritage Resources

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.12.1	Conservation or Protection of Cultural Heritage Resources	Yes ☒ No ☐	This block was referred to all applicable First Nations groups. No further work is required.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.13 – Cultural and Heritage Sites

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.13.2	Result or Strategy	Yes ☐ No ☒	This cutblock overlaps with medium potential areas shown on the Archaeological Overview Assessment model.
How is this SP consistent with the Results, Strategies, or Measures?		This block was referred to all applicable First Nations groups. No further work is required.	

5.14 – Settlement Resource Management Zones

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.14	Result or Strategy	Yes ☐ No ☒	This cutblock is not located within a community growth boundary.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.15 – Range

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.14.2	Integration of Cattle Management	Yes ☐ No ☒	This cutblock does not overlap with a range tenure.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.14.3	Stocking in Cattle Areas	Yes ☐ No ☒	This cutblock does not overlap with a range tenure.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.16 – Recreation and Tourism

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.16.2	Local Level Planning	Yes ☐ No ☒	There are no access management plans initiated by the government in a Recreation and Tourism RMZ where Tolko operates currently.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.17 – Interpretive Forest Sites, Recreation Sites or Recreation Trails

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
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5.17.2	Limitations on Primary Forest Activities	Yes ☐ No ☒	There are no recreational features within or immediately adjacent to this block.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.18 – Inland Fisheries

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.18.2	Activities Adjacent to a Known Lake Class	Yes ☐ No ☒	This cutblock is not located within 200 m of a known lake class.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

5.19 – Land Act – Old Growth Management Ministerial Order

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.19.2	Harvesting Activities Permitted with OGMA's	Yes ☐ No ☒	There is OGMA immediately to the south of the block. No overlap.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
5.19.3	Limitations of Harvesting Activities within OGMA's	Yes ☐ No ☒	No OGMA incursion proposed.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

6.1 – Invasive Plants

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	Seeding	Yes ☐ No ☒	This cutblock is not within 500m of a mapped site of identified invasive species although there are Hoary Alyssum occurrences on the road accessing the block. See Invasive Plant Strategy section under Harvesting Comments in this Site Plan for management recommendations.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
6.1.3	Timing and Seed Quality	Yes ☐ No ☒	This cutblock is not within 500m of a mapped site of identified invasive species although there are Hoary Alyssum occurrences on the road accessing the block. See Invasive Plant Strategy section under Harvesting Comments in this Site Plan for management recommendations.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
6.1.4	Timing When Area to be Reused	Yes ☐ No ☒	This cutblock is not within 500m of a mapped site of identified invasive species although there are Hoary Alyssum occurrences on the road accessing the block. See Invasive Plant Strategy section under Harvesting Comments in this Site Plan for management recommendations.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
6.1.5	Inspection of Equipment	Yes ☐ No ☒	This cutblock is not within 500m of a mapped site of identified invasive species although there are Hoary Alyssum occurrences on the road accessing the block. See Invasive Plant Strategy section under Harvesting Comments in this Site Plan for management recommendations.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

6.2 – Natural Range Barriers

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
6.2.1	Measures	Yes ☐ No ☒	This block does not overlap with a Range Tenure.
How is this SP consistent with the Results, Strategies, or Measures?		NA	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or measures apply to the Site (Include Rationale if No)
6.2.2	Timing	Yes ☐ No ☒	This block does not overlap with a Range Tenure.
How is this SP consistent with the Results, Strategies, or Measures?		NA	

ADMINISTRATION**PREPARED BY (RPF SIGNATURE AND SEAL):****Prepared by:**

Hona Healey, FIT# 5655

Name (Printed)

R.P.F.'s Approval

Murray Ward, RPF

R.P.F Name (Printed)

#3924

2019.02.04

Date Signed (YMD)

R.P.F. Number



R.P.F. SIGNATURE AND SEAL

RPF LEGAL STATEMENTS AND COMMENTS

RPF Reviewed this Site Plan:

Legal Statements and Comments:

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.