

Tolko Industries Ltd.
Okanagan Woodlands

<u>X</u> Original	25-Feb-2015	<u> </u> Amendment #
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TENURE IDENTIFICATION

Region	District	TSA	TSB	Licence No.	Timbermark (s)	Cutting Permit	Block	Mapsheet/Opening No.
RSI	DOS	22	5	A74912	BJ6921	921	LV2310	082E097 /
Area Under Tenure	Location				UTM East	UTM North	UTM Zone	Licensee
					Kettle	376752	5537013	
	13.9 (ha)	Latitude: 49.58.21				Longitude: 118.43.07		

SAFETY

Weather Station

CHR review outstanding - ensure it is complete before harvesting this block

Other Safety Comments

- 1) Kettle Main to 66.5km, then turn right onto Gunnar main. Follow Gunnar road to 67km turn right on Bruer Creek Road to 69km, cross over the Gunnar Creek bridge and take the immediate left spur. This road goes to LV2311. Turn right on the second block road and continue to the switchback where the spur into LV2310 starts.
- 2) The area above the road is steep, 35-65% up towards the back boundary between stations B6-B7. The area is planned for downhill yarding with a grapple, both buncher and hand falling will be required. There is significant rock or shallow soils up near the boundary, track machine need to use caution to avoid sliding on the rock.
- 3) The area from station B5 to B7 has rock both large talus (boulders) and some solid sections. A back spar trail is planned and construction may become difficult as well as dangerous when operating track machine there. Stump rigging may be required.
- 4) Rocks along the top boundary may become dislodged and roll or fall down the slope to the road below, causing a hazard.
- 5) Some forwarding to work areas is required on the road. This will cause congestion, access will need to be co-ordinated.
- 6) LV2311 is on the same road system. Hauling and crew traffic will need to be co-ordinated.

OPERATIONAL COMMENTS

HARVEST SYSTEM BREAKDOWN:

SU A:

Cable: Feller buncher 75% - Hand fall 25% / Swing yarder - Grapple 90% and chokers 10%- Danglehead - Summer, Fall, Winter harvest.

Conventional: Feller buncher / Skidder - Roadside 90% / landing 10% - Danglehead - Summer, Fall, Winter harvest.

AREAS OF CONCERN, SEDIMENT DELIVERY, NON-CONFORMANCE TO SOP's

1. The area below the road from station B1 into the block will require some minor adverse skidding and some hoe chucking.
2. The back spar trail crosses NCD-B and C at station B3. These drainages are dry and quite incised, requiring some excavation to cross them. The crossings will need to be cleaned-out prior to the next freshet or major precipitation event. The trail is partially ribboned in red flagging.
3. There are good decking areas on the road at stations R4-01, R6-01 and R11-01. The rest of the road has limited area for decking, forwarding is required. This will create congestion on the road.
4. The back spar trail at the top of the block follows the north boundary. The area between stations B6 to B7 has significant rock, if a trail cannot be constructed stumps will need to be rigged. The trail is flagged in red ribbon.

BLOCK ROAD SUMMARY AND/OR CONCERNS

LV2310-1 - Moderately steep side slopes 25-40-%. Soils have a sandy texture, rock is not anticipated. Grades are favourable to 17% most is 9%. The road crosses an old cut block with immature timber and intersect several old skid trails. Most of the right of way trees are undersized, but some have short merchantable butt logs to 6 meters.

DESCRIPTION OF WOOD QUALITY/POTENTIAL FOR VALUE ADDED (species, locations)

The stand consists of Fdi 55 Pli 32 (38% red, 41% grey attack) BI 8 Sx 5 from 2014 cruise data. Approx. 5% of the stand is blown down.

Fd-30cm dbh, 50% peelers 50% sawlogs Some over size in north portion between B6-B7 and close to NCD-B,C

PI-25 cm dbh 20% peeler,50%saw logs,30% pulp

Sx- 40 cm dbh, 60% peelers 40% sawlogs.

BI-28 cm dbh 20% peelers, 60% sawlogs, 20% pulp.

TOPICS FOR PREWORK DISCUSSION

1. A terrain assessment was done by Westrek Geotechnical Services Ltd. A report is on file.
2. The area from station B6 to B7 has rock both large talus (boulders) and some solid sections. A back spar trail is planned and construction may become difficult as well as dangerous when operating track machines on rock. Stump rigging may be required.
3. Some forwarding to work areas is required on the road. This will cause congestion.
4. The North Gunnar road continues onto proposed LV2072 and passes under or down slope of LV2310. Run-off and drainage from LV2310 will affect this road. Four culvert locations have been marked at stations P11,P12,P20 and P14 that are associated with the drainage of LV2310. These culverts need to be installed or at a minimum, cross drains put in prior to logging or road construction inside of LV2310.
5. Fieldwork completed by Pat Maxnuk, RFT.

AREA SUMMARY

AREA OF NO PLANNED REFORESTATION (ha) (NPR)									
Perm. Access	Rock	Water	Swamp	Other NP	NC > 4 HA.	IMM	Total Reserves	Other	Total NPR Area
0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.00	1.60

TOTAL NET AREA TO BE REFORESTED : 12.3

Wildlife Tree Retention Target: 8.00 %

TOTAL AREA UNDER PRESCRIPTION : 13.9

NET AREA TO BE REFORESTED INCLUDING RESERVES WITH MODIFICATIONS (ha)		
SU	SU Area Description	Net Area To Be Reforested
A	<div>SU A is the ICHmk1 - 01 ys, (BEC ver. 7). Terrain is even with a concave shape above the main road and straight below the road. Slopes range15-60% with a south east aspect. Soils are SL with 25 - 80% coarse fragments. The stand consists of Fdi 55 Pli 32 (38% red, 41% grey) Ba 8 and Sx 5 from 2014 cruise data. The block has 2 harvesting systems: 1) Cable 90%: - using a swing yarder recommended (or regular hi-lead machines) with both grapple and chokers, 75% of the wood can be bunched, 25% hand falling 2) Conventional 10%: ground skidder, feller buncher to landing. There are few good roadside work areas, trees will need to be forwarded for processing. Harvesting can be done in summer, fall or winter.</div>	12.3

ECOLOGICAL INFORMATION AND SITE CHARACTERISTICS

ECOLOGY AND CRITICAL SITE CONDITIONS													
SU	AREA	BEC			ELEVATION (m)			SLOPE (%)			SITE SERIES Dominant ----- Related	ASPECT	SITE TYPE
					Low	High	Avg	Min	Max	Avg			
A	12.3	ICH	mk	1	1351	1515	1433	10	65	37	01-ys	SE	

SU	Critical site conditions that affect the timing of operations, and how they affect the timing
A	Harvesting activities should be restricted to periods when the soils are sufficiently dry or frozen, or sufficient snowpack, so that the stated soil disturbance objectives are attained.

SOIL CONSERVATION

SITE DISTURBANCE									
HAZARD RATING (if logging methods other than cable or aerial are proposed)					SOIL CHARACTERISTICS (if temporary access structures are proposed)			SOIL DISTURBANCE LIMITS	
Soil					UNFAVORABLE SUBSOIL			Max. allowable within the NAR (%)	Max. limits may be temporarily exceeded for Temp Access Structures (%)
SU(s)	Compaction	Displacement	Surface Erosion		Depth to (cm - cm)	Type			
A	M	M	H					10.0	0.0

Roadside Soil Disturbance25.0 %

Max Proportion of total area under the prescription allowed for perm access	7.0 %
Actual Permanent Access Calculated	5.0 %

Permanent Access Comments

New PAS structures should be constructed in a manner that maintains natural drainage (does not intercept, divert or concentrate drainage). These structures should be reviewed post harvest to determine if seasonal deactivation is required to ensure natural drainage is maintained. If needed, these roads should be deactivated in a manner that maintains natural drainage (does not intercept, divert or concentrate drainage). This deactivation can include, but is not limited to, installation of cross-drains, water bars, decompaction (ripping), and sloping as required. This deactivation must not create a condition of instability or sedimentation to riparian features.
PAS permanent deactivation: R14669 - 68001 - maintain silviculture access.

SLOPE INSTABILITY INDICATORS:Measures required to address terrain instability: YesBladed trails restricted: No

Note: Westrek notes work on the North Gunnar Road below the block should be completed prior to harvest of LV2310. Westrek has 4 recommendations and OnSite Engineering spent a lot of time on the existing North Gunnar Road (No report yet).

Slopes range from 10-65% within the block, averaging 38%. The block is located on and upslope of TC IV and V polygons and landslides. A TSA was completed by Melissa Dinsdale, A. Ag., G.I.T. (Westrek) with Pat Maxnuk representing Tolko on Oct. 30, 2014. As a result of this review, the likelihood of a landslide attributable to the proposed harvesting is considered low and the likelihood of a drainage diversion related landslide is considered moderate. As a result of the field review:

BLOCK and R14669-68001 ROAD:

- 1) No changes to the road layout or falling boundaries are anticipated in the final report.
However, the following recommendations are intended to reduce a drainage diversion related landslide:
- a - Drainage structures on roads should be installed on all natural drainage paths, which are defined as gullies, draws (whether there is evidence of flow or not), streams, springs that emerge at ditches, or any zones of significant seepage in cut slopes that are capable of sustaining ditch flow.
- b - Temporary segments of these roads, and any adjacent trails, that are not rehabilitated at the completion of harvesting should be deactivated prior to the following freshet. This could include, but not be limited to, the restoration of stream channels and installation of back-up cross ditches at all culvert locations.
- c - The drainage structures on permanent sections of these roads should be maintained, or deactivated, to ensure functionality.

NORTH GUNNAR ROAD:

Several of the downslope segments of the North Gunnar Road are unstable and/or potentially unstable. The increased runoff following the proposed harvesting in LV2310 could exacerbate these problems.

Westrek understands that Tolko has engaged Onsite Engineering Ltd. to assess the stability of the North Gunnar Road adjacent to the proposed harvest area and to prepare a design to upgrade this road for future harvesting to the west and northwest. This work should be completed prior to the proposed harvesting activities in LV2310.

Culverts on the North Gunnar Road were flagged by Tolko and appear to be placed at natural drainages. Several additional drainage paths were noted along the built road, and Westrek has recommended that appropriately sized culverts be installed (see Table 1 of the report) be installed in the following locations:

- Waypoint # 11:377131 E 5536900 N
Waypoint # 12:376994 E 5536858 N
Waypoint # 14:376788 E 5536780 N
Waypoint # 20:376926 E 5536815 N

ENSURE TO CONSULT ONSITE ENGINEERING FINAL REPORT RECOMMENDATIONS FOR THE NORTH GUNNAR ROAD.

These are specific detailed recommendations relating to the block - REFER TO FINAL REPORT - for best management practices with an emphasis on effective drainage control, and following all recommendations for harvesting, construction, drainage control, maintenance, and seasonal deactivation.

TEMPORARY ACCESS MANAGEMENT					
SU(s)	General Location (also refer to map)	Sediment Delivery Risk (in community watershed and above Domestic Intakes)	Max Allowable Height of Cutbanks (m)	Average Height of Cutbanks (m)	Equipment To Be Used (if other than Excavator)
A	localized areas within SU A.		1.5	0.6	dozer or skidder

Total Temp Access: 0.70 % of Net Area 5.69

Temp Access Strategies
TAS trails are to be constructed in a manner that maintains natural drainage (does not intercept, divert or concentrate drainage). The trails will be rehabilitated within 2 years of harvest completion. If this rehabilitation is not completed immediately after harvest completion, these trails 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.

FOREST MANAGEMENT

RIPARIAN MANAGEMENT				
Riparian I.D.	Riparian Class	RRZ Width (m)	RMZ Width (m)	Description and strategy for Riparian Zone including purpose and extent of removal or modification of trees and res. basal area or density.
NCDs- A, B and C				<p>There are 3 NCD's within the block - NCD - A, B and C.</p> <p>1) All NCD 's are marked with pink/black polka dot ribbon.</p> <p>2) All NCD's are crossed by roads or trails - ensure adequate drainage structures are utilized to maintain natural drainage.</p> <p>3) NCD A, B and C - ensure any logging residue that impedes natural drainage is removed post harvest.</p> <p>The following recommendations should be followed:</p> <ul style="list-style-type: none">- limit the number of crossings and maintain natural drainage post-harvest / site prep- do not skid down the identified NCD- retain stubs and advanced BI(Sx) understory along the NCD for future reference- fall away from the identified NCD where safe to do so- do not pile slash over the identified NCD- crossing rehabilitation to include - clearing the crossing of debris, re-establishing natural drainage, grass seeding and scattering large CWD.

LEAVE TREE CHARACTERISTICS					
SU(s)	Layer	Species	Total Stems	% of Stems	Description
A		Deciduous	0-5	100	Retain deciduous except as required for safety and access. No deciduous showed up on the cruise.

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Leave Tree Comments

Retain approximately 20 trees within the conventional area to break up the visuals due to Recreation / VQO Zone overlap.

COARSE WOODY DEBRIS MANAGEMENT STRATEGIES	Coarse Woody Debris Requirement
<p>Basic CWD applies to this block. Ground based harvest systems will be utilized and the retention requirements for blocks <20ha applies.</p> <p>1) Basic Coarse Woody Debris that is to be retained at the conclusion of harvesting is to include, to the extent practicable:</p> <p>a) having preference for CWD >25cm;</p> <p>i) Timber grade firmwood reject & poor quality Grade 4 or other grades if these stems have a higher value as wildlife trees or CWD;</p> <p>THAT IS EITHER; distributed over the cutblock, piled near the cutblock edges or riparian features, and focuses on all classified and non-classified riparian areas when cattle use is expected to be high.</p> <p>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.</p> <p>3) When practicable/available, mature deciduous trees will be reserved from cutting in clumps. Deciduous that is harvested for safety, access or silviculture will be left on site for CWD.</p> <p>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).</p>	

MANAGEMENT STRATEGIES FOR ARCHAEOLOGICAL SITES
<p>This block and roads were office reviewed (Archaeological Overview Assessment) by D.E. French, PhD Archaeology on Oct. 24, 2013. Based upon this review Dr. French has determined that this block, and roads, have low archaeological potential, relative to First Nations interests, and no further action is required.</p>

Other Management Requirements

ACTIONS/OBLIGATIONS RELATED TO GAR ORDERS

Grizzly:
Road restrictions apply:
As per 5.12.2 (b) (i) (B) of the FSP:
a) approximately the first 100 m of R14669 - 68001 road will be permanently deactivated in such a way that pick up access is restricted, or barricaded, as soon as practicable following the confirmation that regen delay has been achieved on the cut block accessed by this road.

GUIDE OUTFITTERS & TRAPPERS

There is one trapline associated with this cutblock TR0823T044. The Guide Outfitter for the area is Melvin Kilback. This block was included in the 13-FN-01 referral. No comments were received relative to the proposed block.

OTHER WILDLIFE MANAGEMENT & SPECIES AT RISK

No occurrences of the following non Section 7 Species at Risk or the above mentioned species covered under Land Use Orders were noted during fieldwork, however, potential habitat was noted. If any of these species are encountered during operations, it should be reported to the harvesting supervisor immediately.
Badger and Wolverine - Harvesting will create early seral conditions which may provide potential habitat in this area.
Barn Swallow, Olive-sided Flycatcher, Rough-legged Hawk: Clear cut with reserves may provide forage area & roosts and open forest conditions.
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.

RECREATION & TRAILS

The block is within the Greystokes Recreation Zone and overlapped by a Zone 2 VQO area. Retain 15 - 20 trees within the conventional harvest area. Target wolfy, Veteran and basal scarred trees for retention.

Silviculture Considerations

Lodgepole Pine, Fir, Spruce, Balsam and Cedar are growing well on plantations in the vicinity. Alder is on site at low levels, and is in greater amounts in the adjacent old logged block. Ingress is expected.

Pest Codes

SU(s)	Pest Code	% Percent	Management Strategies
A	Insect		Old MPB - 38% red and 41% grey attack. Endemic beetle activity within the block.
A	Windthrow		This general area has been assessed as having a Moderage windthrow hazard. Approx 8% of Pli are blown down.
A	Disease		No evidence of significant disease was noted during fieldwork.

STOCKING REQUIREMENTS

FREE GROWING STOCKING REQUIREMENTS FOR SILVICULTURAL SYSTEMS - Check Footnotes for Restrictions												
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/140	Lw/200	Pli/200	Bl/100	Cw/100				7		20
		Sx/100										

SU	Standards Id	Layer Name	Target Stocking (TSS) (wsph)	Minimum Stocking (MSSpa) (wsph)	Minimum Preferred (MSSp) (wsph)	Minimum Horiz. Distance (m)	Minimum Pruning Ht. (m)	Residual Stand Structure		Height Relative to Comp.
								BA (m2/ha)	Density (sph)	
A	1005574		1200	700	600	2.00				

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GENERAL STOCKING STANDARDS COMMENTS AND APPROVED VARIANCES
<p>7.4(b) The minimum inter-tree distance will be:</p> <p>(ii) 1.6 metres on sites that:</p> <p>(A) are hygric or sub-hydric; or</p> <p>(B) are within the following ESSF subzones:</p> <p>(l) dc1, dc2, vc, vv, wc2 and wc4; and</p> <p>(A) to utilize preferred microsites, surveyors may utilize this MITD on no more than 20% of the survey plots in a block; and</p> <p>(B) such use will be clearly recorded on the survey cards;</p> <p>(iii) 2.0 metres on all other sites.</p> <p>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.</p> <p>7.4 (e)(i) 25,000 countable stems per hectare for Lodgepole Pine leading stands (Lodgepole Pine greater than or equal to 80% of the inventory), or</p> <p>(ii) 10,000 countable stems per hectare for all other stands.</p> <p>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.</p>

SU	STANDARDS ID	STANDARDS ID FOOTNOTES	OTHER REQUIRED INFORMATION
A	1005574	<p>Site Series 01YS.</p> <p>Additional FSP approved footnotes include: Fdi9:</p> <p>Restricted to southerly aspects (SSE to WSW)</p> <p>Fdi14;</p> <p>restricted to lower elevations of biogeoclimatic unit unless superseded by FSP section 7.4(h)</p> <p>Lw9;</p> <p>restricted to southerly aspects (SSE to WSW) for upper elevations</p> <p>Lw14;</p> <p>restricted to lower elevations of biogeoclimatic unit unless superseded by FSP section 7.4(h)</p> <p>Sx10;</p> <p>restricted to northerly aspects (NW to ENE) for lower elevations</p> <p>Sx13;</p> <p>restricted to upper elevations of biogeoclimatic unit unless superseded by FSP section 7.4(h)</p> <p>Bl10;</p> <p>restricted to northerly aspects (NW to ENE) for lower elevations</p> <p>Bl13;</p> <p>restricted to upper elevations of biogeoclimatic unit unless superseded by FSP section 7.4(h)</p> <p>Cw10;</p> <p>restricted to northerly aspects (NW to ENE) for lower elevations</p> <p>Cw13;</p> <p>restricted to upper elevations of biogeoclimatic unit unless superseded by FSP section 7.4(h)</p> <p>CwE;</p> <p>Cw may be moved to preferred if present >15% volume of mature stand and planted in a mix with other preferred species up to 35%.</p>	<p>The block elevation ranges from 1351-1515m (average is 1433) with a SE aspect and the average elevation of ICHmk1 is 1300m.</p> <p>Fdi is preferred species (55%) as per FSP section 7.4(h), Lw is a preferred species as the block is in the upper elevation but has a SE aspect.</p> <p>Sx is a preferred species as the block is in the upper elevation of the BEC.</p> <p>Bl and Cw are acceptable species as the block is in the upper elevation of the BEC.</p>

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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)	Okanagan
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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 Road Permit R14669 - 68001 road section.

The term "Drill Down", 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 government. A current Drill Down report and maps are attached to this SP file.

Riparian Management			
Riparian Requirements and Basal Area Retention in RMZ's			
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	Riparian Practice Requirements	No	There are no classified streams, lakes or wetlands are within, or under the influence of this block. Riparian classifications are as per Section 47, 48 and 49 of the FPPR.
How is this SP consistent with the Results, Strategies or Measures?		N/A	
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	Riparian Retention Requirements	No	see 5.3.2 above
How is this SP consistent with the Results, Strategies or Measures?		N/A	

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)
5.3.4	Fisheries Sensitive Watershed	No	Drill Down report indicates this block is not within a Fisheries Sensitive Watershed.
How is this SP consistent with the Results, Strategies or Measures?		N/A	
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	No	This cutblock is not within a Community Watershed nor is it located within 5 km of a domestic water intake.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

Biodiversity			
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)
5.5.1	Biodiversity - Landscape Level	Yes	The maximum allowable cutblock size is 40 hectares within the Okanagan TSA.
How is this SP consistent with the Results, Strategies or Measures?		The block does not create an aggregate non greened up opening greater than 40 ha. Adjacent blocks have met green up.	
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	This block is located in the Upper Kettle Landscape Unit. The BEO is low for this block.
How is this SP consistent with the Results, Strategies or Measures?		Approved Draft OGMAs have been established for this LU, which are consistent with the target for an 'low' BEO. Wildlife Tree Patches and CWD are consistent with the objective for this LU. (see 5.6.2., 5.6.4 and 5.6.5.)	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.5.3	Old Growth in the Okanagan	No	There are no OGMAs within or immediately adjacent to this block.
How is this SP consistent with the Results, Strategies or Measures?		N/A	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.6.2	Wildlife Tree Retention (WTR)	Yes	This cutblock is within the ESSFdc1 BEC (Ver. 3) of the Upper Kettle Landscape Unit. The Minimum WTR for the block is 3.5% with a block target of 8.0%.
How is this SP consistent with the Results, Strategies or Measures?		This cutblock meets 6.9% Wildlife Tree Retention, and will meet the Cutting Permit target (8.0%), consistent with the targets for this Landscape Unit.	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.6.3	Restrictions on Harvesting WTR	No	There is no plan for harvesting Wildlife Tree Retention.
How is this SP consistent with the Results, Strategies or Measures?		n/a	

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 drill down 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)
5.6.4	Basic CWD	Yes	Basic CWD does apply to this block as it is < 20 ha.
How is this SP consistent with the Results, Strategies or Measures?		SEE CWD MANAGEMENT STRATEGIES UNDER THE 'FOREST MANAGEMENT' HEADING.	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.6.5	Enhanced CWD	No	This block is within the Grizzly Specified Area (8-232), and has High-Moderate suitable habitat. ECWD does not apply as the block is < 20 ha and to be cable harvested. The drilldown report indicates that this block does not fall within any other areas specified within 5.6.5 (a) of the FSP that requires Enhanced CWD.
How is this SP consistent with the Results, Strategies or Measures?		n/a	

Species at Risk

Wildlife - Section 7 Species at Risk (Attach current Drill Down Report to File)

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.2.2	Tiger Salamander	No	The drill down report indicates no potential habitat for this species. No occurrences of this species or its habitat were noted during fieldwork (block has no wetlands or aquatic habitat adjacent to open forests/grasslands, &/or sage-grassland complex, deep wet fissured bedrock or wet talus slopes), block is not in the BG, IDF, or PP BEC variants, and known occurrences of this species are limited to the South Okanagan area and below 600m elevation.. The R/S has not been triggered for this species.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.2.3	Great Basin Spadefoot (Toad)	No	The drilldown report indicates no potential habitat for this species. No occurrences of this species or its habitat (Ponds, wetlands, or flooded areas (aquatic habitat) adjacent to; dry grasslands, open woodlands, Py forests & sagebrush flats and semi-arid shrub lands) were noted during fieldwork. Known occurrences of this species are typically below 600m elevation. There is to be no mature THLB impact due to the management of this species.The R/S has not been triggered for this species.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.2.4	Great Basin Gopher Snake	No	The drilldown report indicates no potential habitat for this species. No occurrences of this species or its habitat were noted during fieldwork within the block (talus slopes, rock outcrops, open Py forests & warm, dry grasslands below 1100m). The species is not known to occur within this biogeoclimatic zone. There is to be no mature THLB impact due to the management of this species.The R/S has not been triggered for this species.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.2.5	Flammulated Owl	No	The drill down report indicates no potential habitat for this species. No occurrences of this species or its habitat were noted during fieldwork (open, dry Fd, Py and At forests with vets >65cm's, an abundance of snags, and canopy closure <50%). The block is not in BG, PP or IDF BEC variants. The R/S has not been triggered for this species.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.2.8	Fringed Myotis (Bat)	No	The drill down report indicates no potential habitat for this species. No occurrences of this species or its habitat were noted during fieldwork (caves, small cliffs, rock crevices/outcrops, as well as large dbh Py, vets, snags, grasslands and elevation below <860m). There is to be no mature THLB impact due to the management of this species. This species is not known to occur within this biogeoclimatic zone. The R/S has not been triggered for this species.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.2.9	Spotted Bat	No	The drill down report indicates no potential habitat for this species. No occurrences of this species or its habitat were noted during fieldwork (caves, large cliffs, rock crevices/outcrops, as well as large dbh Py, vets, snags, grasslands and elevation below <900m). There is to be no mature THLB impact due to the management of this species. This species is not known to occur within this biogeoclimatic zone. The result / strategy has not been triggered for this species.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

Wildlife - Okanagan Shuswap

Requirements for Marten, Fisher, Bighorn Sheep and Williamson's Sapsucker as per the LUO Order.

File ID: 921.LV2310.A74912	Licence No.: A74912	Timbermark: BJ6921	CP: 921	Block: LV2310
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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)
5.2.3.2	Marten Areas	No	The drill down report indicates that this block does not fall within a high suitability Marten habitat area.
How is this SP consistent with the Results, Strategies or Measures?		N/A	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.3.3	Fisher Areas	No	The drill down report indicates that this block does not fall within a moderate suitability fisher habitat area.
How is this SP consistent with the Results, Strategies or Measures?		N/A	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.3.4	Bighorn Sheep Areas	No	The drilldown report indicates that this block is not within any mapped Bighorn Sheep areas.
How is this SP consistent with the Results, Strategies or Measures?		N/A	
R/S/M ID	R/S/M Title	Applicable	How Results, Strategies or Measures Apply to the Site (Include Rationale if No)
5.2.3.5	Williamson's Sapsucker Areas	No	The drill down report indicates that there is no potential habitat for this species. No occurrences of this species or its habitat (active nest, mid-low intensity burn, mature deciduous trees, veteran PI, Fd >60cm dbh) were noted during fieldwork. The R/S has not been triggered for this species.
How is this SP consistent with the Results, Strategies or Measures?		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)
5.8.1	Cultural Heritage Resources	Yes	This block and roads have been through Information Sharing Referral 13-FN-01 with the applicable First Nations.
How is this SP consistent with the Results, Strategies or Measures? 		FN bands completed an office review of the proposed block and roads. Based upon the office review WFN requested a field review. WFN was unable to complete their CHR Field Reviews due to snow. Tolko represented by Kyle Runzer and WFN represented by Nancy Bonneau agreed that the CP submission and approval can proceed and that WFN will complete a CHR assessment in the spring of 2015 before any road construction or harvesting proceeds. Tolko and WFN have agreed to work together to address any concerns that may be raised before any road construction or harvesting proceeds. Concerns remain for LV2310 until the field assessments are completed.	

Soils

Soil Distrubance 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)
5.1.1	Soils	Yes	This block is not situated on sensitive soils. Permanent and Temporary access structures are required for the harvesting of this block.
How is this SP consistent with the Results, Strategies or Measures?		Soil Disturbance and Temporary Access Structures are within limits. Allowable limits for Permanent Access Structures (PAS) is 7%. There is 5.0% PAS associated with this block. Allowable soil disturbance - dispersed block = 10% , the planned TAS % in this block is 5.6%. Allowable disturbance - roadside work areas = 25 %.	

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)
5.12.2	Road Construction / Habitat Values	Yes	The Drilldown report indicates that this block is located within Grizzly Bear Specified Area # 8-232 with High- Moderate / Moderate suitable habitat - requiring access managment.. The drill down report indicates that this block is not located within any other critical habitat areas requiring access management as per 5.12.2 of the FSP.
How is this SP consistent with the Results, Strategies or Measures?		As per 5.12.2 (b) (i) (B) of the FSP: (a) approximately the first 100 m of R14669 - 68001 road will be permanently deactivated in such a way that pick up access is restricted, or barricaded, as soon as practicable following the confirmation that regen delay has been achieved on the cut block accessed by this road.	

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	No	The drill down report shows this block is not located within Visual Zone 1.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

Recreation

Management associated with Recreation Sites, Trails, Zones or Tourism Areas

File ID: 921.LV2310.A74912	Licence No.: A74912	Timbermark: BJ6921	CP: 921	Block: LV2310
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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)
5.9.2	Recreation Sites, Trails and Walk in Lakes	No	The drill down report indicates that this block does not overlap any Recreation Sites, Trails, or walk in Lakes.
How is this SP consistent with the Results, Strategies or Measures?		N/A	
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	The drill down report indicates that this block falls within a designated Intensive Recreation Zone Graystokes Cat: Shared Use (All Season) and within a Zone 2 VQO. There are no Recreation Trails or Tourism Areas that apply.
How is this SP consistent with the Results, Strategies or Measures?		This cutblock has been through Information Sharing Referral 13-FN-01 with the applicable local interest groups. Comments were not received. The block boundary has been made as irregular as practicable considering cable harvesting method and previously harvested openings adjacent to the east boundary. Single trees will be retained within the conventional area to break up the visuals.	

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	The drill down report indicates that this block is not situated on a High Hazard Site.
How is this SP consistent with the Results, Strategies or Measures?		Areas of mineral soil >0.1ha exposed by forest operations outside of the NAR will be seeded within 1 year of completion of operations with a mixture of seed that meets or exceeds the Canada Common #1 specification in the Seeds Act R.S.C. 1985.	

Range			
Natural Range Barrier Identification and Mitigation			
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	Natural Range Barriers	No	The range tenure holder for this area is Roy Quesnel. No fences were encountered during layout and no comments were received as a result of the 13-FN-01 referral for this block. As far as the author is aware the block does not remove or render ineffective a natural range barrier.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

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	No	The drill down report indicates that this block does not overlap with a Community Crown Interface Area.
How is this SP consistent with the Results, Strategies or Measures?		N/A	

GENERAL WILDLIFE MEASURES UNDER GAR

GAR ID	GAR Title	Applicable	How General Wildlife Measures Apply to the Site (Include Rationale if No)
8-232	Grizzly Bear Specified Area-OKTSA	Yes	The drill down report indicates that this block falls within the Grizzly Specified Area (8-232).
How the SP is consistent with this GAR Order and GWM's		General Wildlife Measures defined under GAR Order 8-232: This proposal achieves the GWM as follows: GWM 1 - A GIS analysis was completed in March of 2015 to determine how much of the management unit ESSFdc1 (BEC ver 3) within the Upper Kettle LU was: > 19.5 m tall and within patches of at least 5 ha. in size. This analysis included all current and proposed cut blocks up to September 2014 (included all cut blocks that had been referred for Tolko's FSP - 14FN01). This analysis shows that there is a current surplus of 6,364 ha of stands greater than 19.5 m tall in patches > 5ha in size. GWM 2 - does not apply as there are no avalanche tracks near or adjacent to the proposed block. GWM 3 - does not apply as it is not within a BEC which is not considered to be a potentially important Vaccinium producing area. (Block has been classified as the ICHmk1 BEC) GWM 4 - There are no riparian areas associated with this block that meet the requirements for revised stocking standards. GWM 5 - There are no roads adjacent or within the block that meet the definition of a licensee mainline and no non merchantable stems will be retained adjacent to any roads.	
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	No	The drill down report indicates that this block is not within the Mule Deer Winter Range (UWR).
How the SP is consistent with this GAR Order and GWM's		N/A	
GAR ID	GAR Title	Applicable	How General Wildlife Measures Apply to the Site (Include Rationale if No)
U-8-006	Moose Winter Range - OKTSA	No	The drill down report indicates that this block is not within the Moose UWR from the GAR Order U-8-006.
How the SP is consistent with this GAR Order and GWM's		N/A	
GAR ID	GAR Title	Applicable	How General Wildlife Measures Apply to the Site (Include Rationale if No)
U-8-005	Mountain Goat - OKTSA	No	The drill down report indicates that this block is not within Mountain Goat Wintering Range (UWR).
How the SP is consistent with this GAR Order and GWM's		N/A	
GAR ID	GAR Title	Applicable	How General Wildlife Measures Apply to the Site (Include Rationale if No)
U-8-004	Mountain Caribou - OKTSA	No	The drill down report indicates that this block is not within Mountain Caribou Wintering Range (UWR).
How the SP is consistent with this GAR Order and GWM's		N/A	

ADMINISTRATION

PREPARED BY (RPF SIGNATURE AND SEAL):

Prepared by:

Peter Love, RPF
Name (Printed)

R.P.F.'s Approval:

Peter Love, R.P.F
R.P.F.Name (Printed)

1428
Date Signed (YMD) R.P.F. Number

Pete Love

Date: 2015.04.17 15:53:35 -07'00'
R.P.F. SIGNATURE AND SEAL

RPF LEGAL STATEMENTS AND COMMENTS

RPF Prepared 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.