SITE PLAN CP 420 BLOCK 5
COOPER CREEK CEDAR LTD.

A. TENURE IDENTIFICATION

LICENCE NO.:	CP:	BLOCK:	TIMBER MARK:	UTM:	LICENSEE NAME:
FL A30171	**420**	**5**	**FE5420**	**515568E / 5599792 N**	**Cooper Creek Cedar Ltd.**
AREA UNDER TENURE (ha):	MAPSHEET/OPENING #:		ELEVATION:	LOCATION:	
5.4	**82K057**		**1220-1440 m**	**Howser Creek**	

B. AREA SUMMARY

AREA OF NO PLANNED REFORESTATION (ha) (NPR)									
PERMANENT ACCESS	ROCK	WATER	SWAMP	OTHER NP	NC>4ha	WILDLIFE TREE RETENTION AREA (HA):	IMMATURE	OTHER (RESERVE)	TOTAL NPR AREA
0.4	**-**	**-**	**-**	**-**	**-**	**1.0**	**-**	**-**	**1.4**

NET AREA TO BE REFORESTED (ha)		
SU	SU AREA DESCRIPTION This block is located in Howser Creek	NET AREA TO BE REFORESTED:
A	**ICHwk1 – 01** Terrain is a long continuous steep slopes and moderately sloped benches. Aspect is northeast facing, slopes range from 65-100%. Surface soil and subsoil texture is Silty-Loam. Soils are moderately-well drained. Coarse fragment content is moderate (35-50%). Moisture regime is mesic and nutrient regime is medium. Humus form is a mor (10cm thickness) and rooting depth is 26cm. Soils are **sensitive**. Pre harvest stand density is 447 stems per hectare of Cw 55%, Hw 26%, Sx 19%. Retain 20-25 stems per hectare as per Section G – Silvicultural Systems. **Cable** harvest methods and a Clearcut with Reserves silviculture system.	**4.0**
	TOTAL NET AREA TO BE REFORESTED:	**4.0**
	TOTAL AREA UNDER THE PLAN:	**5.4**

SOIL DISTURBANCE

SU	Max. Allowable Soil Disturbance (%)	Max. Amount TAS May Exceed MASD Prior to Rehab (%)	Max. Allowable Soil Disturbance For Roadside Work Areas (%)	Maximum Permanent Access Structures (%)
A	5.0	5.0	25%	7.4

RESULTS AND STRATEGIES

Biodiversity Objectives	
Result or Strategy Description	**3.5.3 - Old and Mature Forest**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	'KBHLP Objective 2 – Old & Mature Forests' **Landscape Units K21 and K22** The proposed CP 420 falls within the following Landscape Unit / BEC pairings, with targets as per KBHLPO Objective 2: K21/ESSFwm, K21 / ICHmw2, K21/ICHwk1, and K22/ICHwk1. These pairings do not have Mature + Old seral forest targets and therefore no targets in Connectivity Corridor either. Mature analysis is not applicable to this proposal. Cooper Creek Cedar's FSP (2024-2029 Forest Stewardship Plan for Cooper Creek Cedar Ltd – Forest License A30171) Section 3.5.3 states Old Forest requirements will be met through spatially, non-legal Old Growth Management Areas (OGMA's). This applies to the proposed CP 420. Analysis shows targets for Old will be met after harvesting of CP 420 spatially through non-legal OGMA's. There is no planned harvest of OGMA in CP 420. There is no planned harvest of OG TAP priority deferral polygons.
Result or Strategy Description	**3.5.3 - Green-up**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	'KBHLP Objective 4 – Green-up' – The proposed cutblock is consistent with FPPR Section 65(2).
Result or Strategy Description	**3.5.1 - Objectives set by Government for Wildlife and Biodiversity – Landscape Level**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	'KBHLP Objective 4 – Green-up'. The proposed cutblock complies with Sections 64 and 65 of the FPPR.
Cultural Heritage Resources	
Result or Strategy Description	**3.7 - Objectives set by Government for Cultural Heritage Resources**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	A referral letter dated July 4, 2023 was sent to the appropriate individual(s) and/or group(s). White pine, devil's club and western yew are to be retained where practicable. If yew is felled and of sufficient size to handle, it will be yarded/skidded to and decked at landings for community members to retrieve.
Recreation Resources	
Result or Strategy Description	**4.3 - Recreation Sites**
Applies:	NO
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	The proposed cutblock is not located within a designated Recreational Area or Trail with legal objectives; therefore, managing for Recreation Resources is not applicable.
Riparian Management	
Result or Strategy Description	**3.4.1 Objectives set by Government for Fish, Water, Wildlife & Biodiversity in Riparian Areas**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	1) See Section E.1 for Riparian Management Strategies. 2) See Section F for management strategies related to Temporary Access Structures and Soil Disturbance that should be used during and post-harvest in order to prevent/reduce soil disturbance and sediment delivery.
Soil Objectives	
Result or Strategy Description	**3.1 - Objectives set by Government for Soils [FPPR Section 5 and 12.1(1)]**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	1) **SU A** contains sensitive soils and soil disturbance will not exceed 5**%**. Specific measures for mitigating soil disturbance levels are addressed in Section F of this Site Plan. 2) Areas of the block where temporary access structures are required will be rehabilitated. Specific rehabilitation measures are addressed under Section F of this Site Plan. 3) PAS (Permanent Access Structure) exceeds the recommended limit of **7.0%** and is estimated at **7.4%.** This is due to the size, topography and engineering constraints of the cutblock. 4) Areas within the block assigned to roadside work areas will not exceed **25%**.
Visual Objectives	
Result or Strategy Description	**3.6 – Visual Quality**
Applies:	No
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	CP 420 does not overlap a VLU with VQOs.

Water Management Objectives	
Result or Strategy Description	**3.4.4 - Consumptive Use Streams**
Applies:	No
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	'KBHLP Objective 6' – **CP420 Block 5** There are no legal points of diversion (POD) downstream of CP 420.
Wildlife Objectives	
Result or Strategy Description	**3.3.1 - Objectives set by Government for Wildlife - Species at Risk – Section 7 of the FPPR**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	The block is not within a Wildlife Habitat Area. There were no sightings of Species at Risk during field development of this cutblock. No Wildlife Habitat Features were observed during development of this CP.
Result or Strategy Description	**3.5.2 - Objectives set by Government for Wildlife and Biodiversity – Stand Level**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	One internal Wildlife Tree Retention Area is planned for this block, totalling **1.0 ha**. Overall wildlife tree retention percentage for block 5 is approximately 18.5%**.** Total WTRA for CP 420 is **9.9 ha** which constitutes approximately 12.5 **%** of the gross area of the permit. Wildlife tree retention in CP 420 is consistent with FPPR section 66.
Result or Strategy Description	**3.3.2 – Ungulates**
Applies:	YES
How the Result or Strategy Applies to the Site (or Rationale if it does not apply)	Block 5 does not overlap an ungulate winter range management unit

ADDITIONAL COMMENTS

Consistency Statement
This block is consistent with the approved **2024-2029 Forest Stewardship Plan for Cooper Creek Cedar Ltd – Forest Licence A30171**. This Site Plan is prepared for **FL A30171 CP 420 Block 5**, in accordance with FRPA Section 10(1), (2) & (3).
Community Watersheds
FSP Section **3.4.3** Not applicable - The proposed block is not located within a Community Watershed.
Enhanced Resource Development Zones
FSP Section **3.2.1** 'KBHLP Objective 7 – Enhanced Resource Development Zones – Timber' **Block 5** is within an Enhanced Resource Development Zone.
Fire Maintained Ecosystems
FSP Section **3.5.3** 'KBHLP Objective 8 – Fire maintained Ecosystems'. There are no NDT 4 ecosystems in the FDUs under this FSP; therefore the requirement to create a Result/Strategy for this objective does not apply.
Fisheries Sensitive Watersheds
FSP Section **3.4.2** At the time the FSP was developed there were no designated "Fisheries Sensitive Watersheds" in FDUs under this FSP, therefore the requirement to create a Result/Strategy for this objective does not apply.

Invasive Plants

FSP Section **4.1** – Invasive Plants

The InvasivesBC iMap BC website was checked on December 8, 2023. The following invasive species were reported in nearby areas to **CP 420** mainly at low elevations along Howser FSR and Duncan FSR: Canada thistle, Chicory, Common tansy, Oxeye daisy, Spotted knapweed, St. Johns wort and Hawkweed species.

Measures to prevent the introduction or spread of invasive plants noted in the FSP include:

- Cleaning equipment before moving from a worksite with existing infestations to a new work site.
- Minimizing soil disturbance during primary forest activities (PFA).
- Reseed exposed mineral soil, resulting from a PFA in the first available fall or spring within 12 months following the soil disturbance. Plan planting of cutblocks as soon after harvesting as possible.
- During PFAs minimize soil disturbance by:
  - Harvest on a snowpack, when feasible
  - Random skid to designated skid trails to minimize skidder traffic on the ground
  - Utilize benches for skid trails to minimize side cuts
  - Utilize brush to construct skid trails to reduce contact with the ground
  - Use overhead cable harvesting systems on steep ground
- Where grass seeding is undertaken, CCC will use certified grass seed (Canada common #1 or better grade) from reputable suppliers to ensure premium quality free of invasive plant seed, or a seed mix recommended by a MFLNRO range specialist.
- See FSP for additional strategies and practices regarding invasive plants.

Natural Range Barriers

FSP Section – **4.2**

Not applicable. There are no range tenures located in the FDUs covered by this FSP.

Timber

FSP Section **3.2** – Timber

As per Sec 12(8) of the FPPR, results or strategies are not required for an objective set by government for timber.

Wildlife – Caribou

FSP Section – **3.3** and **3.5.3**

'KBHLP Objective 3 – Caribou' was cancelled and replaced by *GAR Order #U-4-012 – Mountain Caribou – Southwest Kootenay Planning Unit.* This block falls within the Southern Mountain Caribou Matrix Range and Beneficial Management Practices (BMPs) for operating in woodland caribou habitat have been applied to CP 420. BMPs include:

- Caribou Sign and Sightings - Staff and contractors are to report any sightings or sign to supervisor.
- 'Silviculture treatments will not result in the conversion of forest cover to pure spruce stands. The intent is to have silviculture practices result in a species composition that existed prior to forest harvest'. A mixed species composition will be planted.

Wildlife – Grizzly Bear Habitat – Connectivity

FSP Section **3.3** and **3.6.3**

'KBHLP Objective 5 – Grizzly Bear Habitat & Connectivity Corridors'.

The majority of CP 420 falls within Connectivity Corridor.

See RESULTS AND STRATEGIES section 3.5.3: Old and Mature forests.

STOCKING REQUIREMENTS

SU	NAR (ha)	Standards ID #	Other Performance Standards
A	4.0	1057894	See Section H - Stocking Requirements

C. MANAGEMENT OBJECTIVES & STRATEGIES

C.1 MANAGEMENT OBJECTIVES

- Objectives for **CP 420 Block 5** include protecting, and maintaining biodiversity and wildlife values.
- Harvest this mature stand of **Cw Hw Sx** for sawlogs, chips and value-added products and manage for a healthy, free growing stand of planted and natural **CwFdLwPwHw Sx** for similar end products.
- **Wildlife Tree Retention Area (WTRA):** WTRA is planned for retention, totalling **1.0 ha** in size (18.5% of the block). The reserve shelters mature stand values, wildlife values, riparian areas and portions of stand structure that are similar to the harvest area.
- **Kootenay Boundary Land Use Plan – Implementation Strategy (June 1997):** This block is located within the designated **Landscape Unit K21**– Intermediate BEO Assignment.

C.2 CONDITIONS THAT MUST EXIST AFTER HARVEST OR TREATMENT TO ACCOMMODATE KNOWN FOREST RESOURCES

C.2a WILDLIFE

Stand Level attributes/ concerns identified:

Ungulate Winter Range: See RESULTS AND STRATEGIES section **3.3.2 - Ungulates**

Migratory Bird Habitat Assessment: Block 5 is within Migratory Bird Risk Rating 5/6 polygon (VRI). CCCs adopted Migratory Bird Management Strategy's matrix therefore requires:

1) The entire Site will be scheduled outside Restricted Period 1 (April 23-August1), OR
3) The Rank 6 polygons will be scheduled outside Restricted Period 1, OR
4) Two or more BMP's with DoP rank 2 (moderate) must be selected from the list of BMPs and applied to the Site.

This block is to be scheduled for harvesting outside restricted period 1.

BMP PL3 and SO4 have been implemented as well. PL3 refers to the appropriate training of forest planners, layout personnel, and forest workers. SO4 refers to operation specific recommended practices when chance encounters of active nests occur.

Wildlife Management Actions Prescribed:

Total Area specified for the retention of wildlife trees: **1.0 ha** (18.5% of gross area)

Wildlife Tree Retention Area (WTRA):

Cw7 Hw 2 Sx1– 130 years – 31.0m – 70%cc – An area containing large cedar and hemlock with large branching patterns and cavities. Good browse in small canopy openings. Complex vertical stand structure.

WTRA also provides structure values for wildlife, perching and cover opportunities. WTRAs have been established in part, as a best management practice for the reduction of migratory bird incidental take.

C.2c FISHERIES

There are no fish streams within the block.

See Section E.1 for Riparian Management Strategies.

Drainage from the the cutblock area flows down slope towards Tea Creek.

C.2d WATERSHEDS

See section 3.4.4 (Consumptive Use Streams)

C.2e RECREATION

Not applicable. The proposed cutblock is not located within a designated Recreational Area or Trail with legal objectives.

C.2f BIOLOGICAL DIVERSITY

Landscape Unit – K21 (Howser Creek): Intermediate BEO Assignment.

C.2g VISUAL RESOURCE MANAGEMENT

See RESULTS AND STRATEGIES section 3.6 (Visual Quality)

C.2h CULTURAL HERITAGE

See RESULTS AND STRATEGIES section 3.7 (Objectives set by Government for Cultural Heritage Resources).

See section E.5 for Archaeological information.

C.2i RANGE

Not applicable. There are no range tenures located in the FDUs covered by this FSP.

C.2j OTHER RESOURCES

Trapping / Guiding:

Trappers or guiding license holders in the area will be identified and notified through the Forest Stewardship Planning process.

Windthrow:

Windthrow hazard is **Moderate** for adjacent mature stands. Mature stands surrounding the harvest area are similar to the block with moderately well drained soils. Irregular block boundaries will mitigate the impacts of wind.

Soils are fine to moderate with 26 cm rooting depth.

CONDITIONS NOT APPLICABLE TO THIS SITE PLAN

THE FOLLOWING CONDITIONS WERE CONSIDERED, AND FOUND NOT TO BE APPLICABLE TO THIS SITE PLAN:

None identified.

E. MANAGEMENT STRATEGIES

E.1 RIPARIAN MANAGEMENT STRATEGIES

RIPARIAN RESERVE ZONE (RRZ)

RIPARIAN/ LAKE ID	RIPARIAN/ LAKE CLASS	HARVESTING Y/N	SU XREF	DESCRIPTION OF THE PURPOSE AND EXTENT OF REMOVAL OR MODIFICATION OF TREES AND ANY RELATED FOREST PRACTICES IN RIPARIAN RESERVE ZONE(S)
Tea Creek	S3	N	N/A	20m RRZ: Block 5 is located >100m from Tea Creek. No harvesting will take place within the RRZ

RIPARIAN MANAGEMENT ZONE (RMZ)

RIPARIAN/ LAKE ID	HARVESTING Y/N	SU XREF	MANAGEMENT STRATEGIES FOR RIPARIAN OR LAKESHORE MANAGEMENT AREAS INCLUDING PROTECTING STREAM BANKS (if there is no RRZ), MAINTAINING SHADE, AND DEBRIS MANAGEMENT. IF FELLING AND/OR YARDING ACROSS STREAMS. INCLUDE EITHER THE RESIDUAL BASAL AREA OR DENSITY FOR RMZ (S) AND LMZ (S).
Tea Creek S3	N	-	20m RMZ: Block 5 is located >100m from Tea Creek. No harvesting will take place within the RMZ

NON-CLASSIFIED (NC) RIPARIAN AREAS

RIPARIAN/ LAKE ID	SU XREF	MANAGEMENT STRATEGIES
-	-	-

Section E.1 continued

1) **Fall and skid timber away from riparian features** (streams, NCD's, wetland) where practicable. Any debris entering a riparian feature as a result of harvesting will be removed upon completion of harvesting activities unless it does not obstruct water flow or its removal would cause further damage to the riparian feature. **Minimize crossings** on **watercourse channels** to the extent possible.
2) Where **watercourses** are crossed more than once, it is recommended to place a temporary skid bridge (e.g.: logs placed in draw) in order to prevent a potential diversion of flow.
3) All **machine trails** and **crossings** (NCD) should be fully rehabilitated upon the completion of harvesting or prior to the next freshet. Excess material that could cause redirection of natural drainage patterns should not be left at crossing locations.
4) **All surface drainage patterns** should be maintained and any that are disrupted as a result of harvesting operations should be restored immediately.
5) **A post-harvest inspection** should be completed to assess the amount of logging debris/excess soil within the wetted perimeter of all subtle drainage features. All natural drainage patterns should be maintained and left free of excess debris (slash or soil) that could result in a redirection of seasonal surface runoff/drainage diversion.
6) **Basal area retention** levels for the in-block RMZ (within the NAR) are based on windthrow, windfirmness, wildlife habitat, water quality, and operational constraints.

E.2 FOREST HEALTH MANAGEMENT STRATEGIES

SU	Code	Nelson Region DRA Risk Factors	Points	Relative Risk	Comments
A	DRA	Site factors	**8**	H	• Armillaria is absent or present at low levels within the stand. • The Nomographic Zones in Section 3.0 of the "Armillaria Root Disease Management Guidelines for the Nelson Forest Region" (June 1998) indicate that Alternative or Intensive deferred treatments for root disease management are appropriate for this site, should Armillaria become a problem. • Alternative treatments will include planting a species mixture that includes species tolerant and /or moderately susceptible to Armillaria (e.g.: Cw, Lw, Pw). Fd (highly susceptible) may be included but should be limited to a maximum of 50% of the mix. Microsite selection should reflect buffer zones around infected stumps, if they can be identified. • Hand-pulling (preferred) or pop-up spacing (alternative) should be considered in the future should Armillaria become a limiting factor in meeting regeneration or free growing requirements (see section H).
		Host factors	**5**	M	
		Inoculum potential	**0**	L	
		Disease factors	**5**	M	
		Total	**18**	**M**	

Other Forest Health Factors

SU	Code	%	Comments	Current risk to inventory
-	-	-	-	Low

E.3 VEGETATION MANAGEMENT STRATEGIES

LIVESTOCK TO BE USED FOR VEGETATION MANAGEMENT: YES: ☐ NO: ☒

See Section H5: BRUSHING / STAND TENDING

E.4 COARSE WOODY DEBRIS (CWD) MANAGEMENT STRATEGIES

CWD levels are low (10-15% ground cover). CWD is predominantly composed of 20-50cm diameter stems. Cw, Sx and Hw are the dominant CWD species.

Manage for **minimum** CWD levels post-harvest in accordance with wildfire mitigation strategies. Post-harvest CWD will consist of non-merchantable existing levels and snags, along with residue and breakage.

(FPPR Section 68): **Manage for the minimum of 4 logs per hectare,** each being at least **2 metres** in length and at least **7.5cm** in diameter at one end.

See the SITE PREP section (H3) for additional CWD management strategies.

E.5 ARCHAEOLOGICAL IMPACT ASSESSMENT

Archaeological overview mapping shows that Block 5 does not overlap polygons assessed with high potential for the presence of archaeological sites.

F. SOIL CONSERVATION

F.1 SITE DISTURBANCE

	HAZARD RATINGS			SOIL CHARACTERISTICS		
SU	SOIL COMPACTION	SOIL DISPLACEMENT	SURFACE SOIL EROSION	DEPTH TO UNFAVOURABLE SUBSOIL (cm)		TYPE OF UNFAVOURABLE SUBSOIL
				MIN(cm)	MAX(cm)	
A	High	Very High	Very High	60	60	none to 60cm

F.2 SOIL DISTURBANCE LIMITS

SU A: ARE THERE SENSITIVE SOILS? ☒ YES ☐NO

MAX. PROPORTION OF TOTAL AREA UNDER THE PRESCRIPTION ALLOWED FOR PERMANENT ACCESS STRUCTURES (PAS): **7.4%**

Roadside harvesting or temporary landings will be used.

DEACTIVATION OF PERMANENT ACCESS STRUCTURES: Any landings will be deactivated – debris will be piled & burned, water control will be installed around all landings.

SU	MAXIMUM ALLOWABLE SOIL DISTURBANCE WITHIN THE NET AREA TO REFOREST (%)	MAXIMUM EXTENT SOIL DISTURBANCE LIMITS MAY BE TEMPORARILY EXCEEDED TO CONSTRUCT TEMPORARY ACCESS STRUCTURES OR EXCAVATED OR BLADED TRAILS (%)
A	**5%**	**5%**

MASD for Roadside Work Areas: 25%

Maximum soil disturbance levels may be exceeded for short periods of time; however any temporary access structures or excavated or bladed trails will be rehabilitated to the extent necessary to bring the SU net area back into compliance with the specified soil disturbance limits.

See **Section F.4** below for description of temporary access structures or excavated or bladed trails, if any.

Avoid harvesting during spring freshet/breakup conditions when soils are moist to reduce soil displacement and compaction.

Steep slopes >35% are present within SU A, see **Harvest Plan Map.** Cable harvest methods will be used.

TSFA

As per the TSFA the in-block portion of Spur 5-1 will be reclaimed within 5 years of construction.

F.3 REHABILITATION TIME FOR TEMPORARY ACCESS STRUCTURES

MAXIMUM ALLOWABLE TIME TO COMPLETE REHAB (MEASURED FROM COMPLETION OF HARVEST): **1 YEAR**

F.4 MANAGEMENT STRATEGIES FOR TEMPORARY ACCESS STRUCTURES

SU	GENERAL LOCATION:	MAX ALLOWABLE HEIGHT OF CUTBANKS (m)	AVERAGE HEIGHT OF CUTBANKS (m)	EQUIPMENT TO BE USED (IF OTHER THAN EXCAVATOR)
A	Blading or excavating is expected to occur in parts of the unit with moderate to steep slopes.	0.8	0.3	Skidder, cat.

- **SU A** : Logging Method: Cable. Uphill and downhill yarding to roadside

  See Section E.1 for stream management strategies.

The following will apply for any excavated/bladed trails that are required:

- Maximum trail width is 4m.
- Actual dimensions of bladed trails may vary depending on topography.
- The amount of bladed trail constructed will be kept to a minimum.

Short sections that become bladed trails where a non-bladed trail crosses a hump or ridge will be exempt from rehabilitation requirements provided that the soil disturbance limits in this SP are not exceeded.

Rehabilitation for bladed or excavated trails:

Any bladed or excavated trails will be rehabilitated as follows:

- De-compact the trail, including removing woody debris that is conducting subsurface moisture
- Place fill material that was sidecast on the excavated portion of the trail
- Re-contour the slope
- Re-establish natural surface drainage
- Place some woody debris over exposed mineral soil

G. SILVICULTURAL SYSTEMS

SILVICULTURAL SYSTEMS

SU	SYSTEM / VARIANT / PHASE
A	Clearcut with reserves silviculture system.
SU	STAND STRUCTURE AND SITE CONDITION - COMMENTS
A	Post-harvest stand structure will be even-aged with one age class. Planted trees and natural regeneration will include **CwFdLwPwHw (Sx)** **1 Wildlife Tree Group Reserve Area (WTRA):** totalling 1.0 ha **Leave Trees** Retain 20-25 stems/ha. Retention trees will be retained as single trees &/or small groups. 30% of the leave trees will target the largest/oldest stems, the remainder will represent the pre-harvest stand. Retain western white pine, devil's club and western yew where present and practicable to do so. Reserve all sub-merch where practicable.

H. STOCKING REQUIREMENTS (As per DSE South Columbia Default Stocking Standards Version 1.0, April 1, 2018)

LICENCE #	CP	BLOCK	OPENING NUMBER	LOCATION
A30171	420	5	82K057	Howser Creek

H1 ECOLOGICAL INFORMATION

SU	Net Area (ha)	Zone	Subzone	Variant/ Phase	Site Series (complex - %)	Elevation			Slope position	Soil Texture (0-30cm)
						Min	Max	Avg		
A	4.0	ICH	wk	1	01	1220	1440	1330	Mid	SiL

RATIONALE FOR STOCKING STANDARD FSP ID SELECTION

STANDARDS UNIT FSP ID #	CHANGE FROM STANDARD PRACTICE	COMMENT: (For example: Forest health (DRA) or Rocky site)
A: 1057894	N/A	-

H2 STOCKING REQUIREMENTS FOR SILVICULTURAL SYSTEMS OTHER THAN SINGLE TREE SELECTION

Standard unit	Standards ID	Regen Delay (years)	Free Growing Early (yrs)	Free Growing Late (years)
A	1057894	4	9	20

Preferred Species		Acceptable Species		Post Spacing Density (sph)				Max Coniferous (sph)
Species	Min FG ht (m)	Species	Min FG ht (m)	Min	700	Max	1800	10,000
Cw Hw[201] Fd[9,14,58,203] Pw[31]	Fd-1.4, Lw Pw-2.0 Cw,Hw- 1.0	Lw[9,14,16,32] Sx[10,13,204]	Lw-2.0, Sx – 1.0	Well Spaced Trees (stems/ha)				
				Target	Minimum pref&acc	Minimum preferred	Min Horizontal Inter-tree distance (m)	
				1200	700	600	2.0*	
						Height Relative to Competition (%)		
						150		

** Early Free Growing has been left in for information purposes only. In RESULTS it is in the comments section only and does not preclude making FG declarations early.

Other Required Stocking Information/Footnotes :

9- suitable on warm aspects

10 – suitable on cool aspects

13- suitable at upper elevations

14 –suitable at lower elevations

31 - must use of blister rust resistant stock. See BC Journal of Ecosystems and Management 10(1): 97-100 for supplementary information.

58 – South Area – Fd limited to a max 50% of preferred and acceptable well-spaced stems in the IDFmw and all subzones of the ICH due to root rot. See Root Rot Handbook (2017, in press).

201 – Maximum 50% of preferred and acceptable well-spaced trees

203- Recommended on sites for climate change adaptation

204- Not recommended on sites due to climate change concerns

* - a reduced MITD of 1.7m may be used to facilitate planting superior microsites, when sites have: mechanical site preparation (mounding and disk trenching), been previously fill planted, or conditions where obstacle planting for snow creep is necessary. Reduced MITD applies to PLANTED TREES ONLY

H3 SITE PREPARATION

TECHNIQUE (S) / LIMITING FACTORS

Options

- Broadcast burn or Spot burn if needed within the NAR to reduce excessive slash cover. Low to Moderate intensity burn, impact rank 2 to 3. Steep slopes may limit mechanical site prep options.
- Pile, or pile and burn, slash accumulations on roadsides and landings, or within the NAR.
- Piling treatment during dry weather conditions or when soils not saturated.
- Burn piles in the spring or fall.
- Mechanical bunching (pile and burn) where feasible.
- Piles in the NAR may be left unburned in order to contribute to wildlife habitat and coarse woody debris values.
- Mechanical site preparation (e.g.: mounding, scarification) where necessary and feasible, combined with brush/slash piling, utilizing an excavator.

H4 PLANTING

SU	Area (ha)	Regen. Method	Species	Age	Stock Type	Season	Stems/Ha	Total Stems
A	4.0	Plant	Cw Fd Pw (Sx Lw)	1+0	PSB 412A	Spring	1400-1600	5600-6400

LIMITING FACTORS / COMMENTS:

- Fd limited to a maximum of 50% of preferred and acceptable well-spaced stems.
- Hw is an preferred species, and moderate amounts of Hw natural regen exist within certain areas the block. Expect additional natural regeneration. Hw may comprise a maximum 50% of well-spaced stems
- Manage for a high diversity of planted trees as a climate change adaptation strategy. Increasing species diversity may help buffer the negative impacts of climate change, and make forests more resilient when faced with extreme weather events. This strategy is meant to reduce the forest health risks to future timber supply by providing a diversity of species should one or more become susceptible to pests or other damaging agents. Replanting these stands with a higher diversity of species, including species that are more adapted to hotter and drier growing conditions like Lw and Fd will promote a stand that is more likely to tolerate a warming climate.
- Microsite selection for Lw, and Fd should be concentrated to dry sites with obstacle protection, with Cw(Sx) populating draws and cold air exposures.
- Limiting factors include high snowpack persisting late in the season.
- Plant as soon as possible following harvesting or site prep operations. **Note:** a post-harvest assessment should be completed to assess the necessity of site preparation prior to planting. If site prep is needed, the person completing the assessment will generate a prescription surrounding the areas that are required and the methods to be employed.
- Anticipated Timing/Constraints: Treatment needs will be assessed through periodic walkthroughs and silviculture surveys.

H5 BRUSHING / STAND TENDING

TECHNIQUE (S) / LIMITING FACTORS

Current Brush Hazard: Low brush inside harvest area. In canopy openings or roadsides competitive species of brush have established such as alder, willow, fireweed and thimbleberry.

Future Brush Hazard: Moderate overall with potential for higher hazards. Timely crop establishment will be crucial in managing for brush hazard. A robust herbaceous community is expected.

Brushing Methods: Should brushing become necessary, manual treatments are the preferred methods.

Risks and Considerations: Woody brushing or stand tending treatments must be carefully assessed due to pathogen ability to colonize wounds on stocking.

Anticipated Timing: Treatment needs will be assessed through periodic walkthroughs and silviculture surveys. Treatment timing will be prescribed at the time of brush assessment.

I. ADMINISTRATION

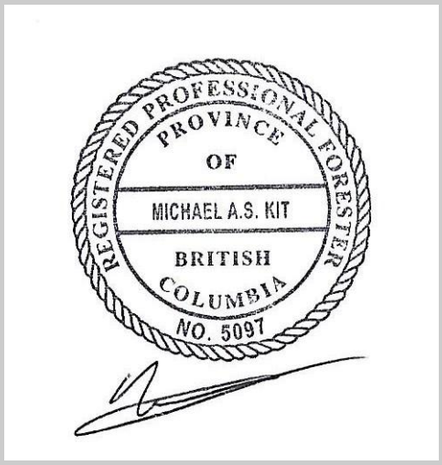
RPF SIGNATURE AND SEAL:

Mike Kit

RPF Name (Printed)

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.

Date: October 27 2025 RPF #: 5097



RPF Signature and Seal

SITE PLAN PREPARED BY:

Tom Haukaas, RFT

MAJOR LICENSEE SIGNING AUTHORITY:

SITE PLAN ATTACHMENTS:

☑ SP MAP(S)

Licence Holder Signing Authority Signature

Licence Holder Signing Authority Name (Printed)

Date: _____

Area Calculations	Standards Units					
	A				TOTAL HA	%
HAZARD RATINGS:						
Compaction	High					
Soil Displacement	Very High (36)					
Surface Erosion	Very High (33)					
Forest Floor Displacement	High (20)					
Mass Wasting	Very High (69)					
Harvest System	Cable					
TOTAL AREA	5.4				5.4	
						% WTP/RES
WTRA	1.0				1.0	18.5
NP	-				-	-
OTHER Reserve	-				-	-
						% Disturbance
Proposed roads	0.4				0.4	7.4
Existing roads	-				-	
Landings						
Total disturbance permanent access structures	**0.4**				**0.4**	**7.4**
NET AREA TO BE REFORESTED	**4.0**				**4.0**	
Sensitive Soils (Y/N)	Yes					
Temporary Access Structures: Road, landing, excavated or bladed trails that will be rehabilitated (% of NAR).	5% (excavated/bladed trails)					
Max. Allowable dispersed Soil Disturbance (% of NAR by Standards Unit) as a result of harvesting, mechanical site preparation, or hazard abatement activities.	5%					

Rehabilitation/Deactivation measures:

All landings and trails within the NAR are temporary and will be rehabilitated by decompacting, re-contouring, surface restoration, followed by planting.

Proposed Roads (permanent):

Spur 5: 210m x 20m width=0.4 ha

Existing Roads (permanent):

-

See **Section F.4** for discussion of rehabilitation of excavated/bladed trails.