

Planning Unit 084144 Forest Harvest Plan

1. Introduction

This Forest Harvest Plan (FHP) for Planning Unit 084144 includes maps and reports that clearly show and document the planned harvest area boundaries, roads and water crossings within the planning unit.

This plan is being submitted for acceptance, for a 5-year FHP approval under the 2015-16 Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) Annual Operating Plan (AOP).

2. Planning Unit Specific Comments

Planning Unit 084144 is located east of Grand Rapids Wildland Reserve.

The planning unit is located in Forest Management Unit (FMU) A14. Alberta-Pacific Forest Industries Inc. (Alberta-Pacific) has rights to D as deciduous landbase and DC, CD and C as shared coniferous landbase.

The harvest design utilizes the 2006 Spatial Harvest Sequence (SHS). The coniferous design (coniferous SHS) is shown for landbase integration purposes. Detailed coniferous block and road design, variances to the coniferous SHS and coniferous profile reporting will be completed by the coniferous operator during their planning process.

Integration

This FHP is in FMU A14 and has been provided to Millar Western Forest Products Ltd. (Millar Western) for review.

Alberta-Pacific has received their agreement for this plan on September 9, 2015.

Millar Western holds active timber disposition CTLA140003 within portions of this planning unit.

Watershed

The Horse River forms a portion of the west and south planning unit boundary. This watercourse has been surveyed as fish bearing and will be buffered accordingly. It has also been identified as a navigable water way. The access to this planning unit crosses the Horse River along License of Occupation (LOC) 770167 and utilizes an existing bridge.

All unsurveyed channeled creeks have been buffered and crossed as though they were fish bearing.

Stand Structure

An average of 5% of the merchantable volume will be left in stand structure over the FMU. The structure will be left as layout patches, and as single trees and small clumps of timber at the operators' discretion.

Debris Management

One or more of the following debris management strategies apply for blocks within this planning unit:

- Methods described in the Forest and Prairie Protection Act and Regulations, and/or
- Thinly spread slash throughout the block, and/or
- Stump side processing.

Blocks within this planning unit will not utilize the retention of debris piles.

The deciduous utilization standard will be 15/10. The coniferous utilization standard will be 15/11.

Design Comments

During the layout phase of this operation, Alberta-Pacific looked for signs of insect or disease infestations. No signs were found.

3. Block Information

The following table summarizes the volumes within Alberta-Pacific's FHP blocks.

Landbase Volume Summary

Company	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
Alberta-Pacific	630	149,285	0	8,569	157,854

Alberta-Pacific Deciduous First Entry Block Listing
(Values Affected by Rounding)

Source Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
8413429591	F	INC		19	4,282	0	132	4,414
8413429731	F	INC		9	2,293	0	72	2,365
8413430851	F	INC	U	83	21,053	0	672	21,725
8413430881	F	INC		3	721	0	23	744
8413431491	F	INC		6	1,607	0	152	1,759
8413431511	F	INC	U	117	28,319	0	1,268	29,587
8413432131	F	INC		17	3,642	0	136	3,778
8413432181	F	INC		2	579	0	21	600
8413432461	F	INC		1	102	0	3	105
8413432941	F	INC		1	156	0	5	161
8413432981	F	INC		1	143	0	16	159
8414425541	F	INC	U	27	6,328	0	273	6,601
8414426831	F	INC	U	51	12,674	0	800	13,474
8414427281	F	INC		9	2,022	0	150	2,172
8414427461	F	INC		5	949	0	224	1,173
8414427641	F	INC		15	3,542	0	1,037	4,579
8414433931	F	INC	U	15	3,793	0	133	3,926
8414434161	F	INC		6	1,397	0	65	1,462
8414435181	F	INC		74	18,612	0	608	19,220
8414435661	F	INC	U	5	1,169	0	130	1,299
8414435671	F	INC		2	463	0	116	579
8414436571	F	INC		2	444	0	111	555
8414436731	F	INC		12	2,408	0	279	2,687
8414436891	F	INC		3	545	0	53	598
8513404351	F	INC		12	3,113	0	122	3,235
8513404421	F	INC		4	1,123	0	46	1,169
8513405281	F	INC		3	510	0	53	563
8513406461	F	INC		17	3,293	0	102	3,395
8513408311	F	INC		1	240	0	20	260
8513408651	F	INC		8	1,807	0	239	2,046
8513408851	F	INC		4	1,056	0	43	1,099
8513409211	F	INC		32	7,949	0	256	8,205
8513409521	F	INC		2	565	0	17	582
8513409551	F	INC		2	432	0	13	445
8513409751	F	INC		8	2,253	0	87	2,340

**Alberta-Pacific Deciduous First Entry Block Listing
(Cont.)**

(Values Affected by Rounding)

Source Id	Harvest Season	Conif Charge	Detail Plan	Area (ha)	Decid (m3)	Conif (m3)	Inc Conif (m3)	Total (m3)
8513409971	F	INC		6	1,648	0	52	1,700
8513410141	F	INC		2	471	0	28	499
8513410571	F	INC		13	2,693	0	676	3,369
8514401141	F	INC		2	372	0	23	395
8514401221	F	INC		3	327	0	56	383
8514401671	F	INC		6	627	0	90	717
8514401861	F	INC		6	1,523	0	56	1,579
8514402191	F	INC		1	237	0	7	244
8514402731	F	INC		7	830	0	75	905
8514403511	F	INC		5	973	0	30	1,003
Total				630	149,285	0	8,569	157,854

4. Access and Road Information

Landuse agreements will be in place prior to use of any third party dispositions being used.

Main Access to Planning Unit

Township	Crossing Location	Field Call
84-11-4	3289	I
	3489	SP
	3579	SP
	3659	I
84-12-4	0114	LP
	0314	SP
85-12-4	0292	SP
	0516	T
	0521	E
	0522	T
84-13-4	3469	E
85-13-4	0241	E
	0271	E
	0281	E

Planning Unit Temporary Road Information

Existing access has been utilized where possible to minimize the clearing of new Right of Way (RoW).

New access and channelled watercourse crossings will be reclaimed in order to restrict access. All terrain vehicle (ATV) access may be left to facilitate silviculture activities.

New access and channelled watercourse crossings will be reclaimed as per Section 11.3.4 of the OGRs. Road reclamation and abandonment details are listed in the AOP when the blocks and roads are scheduled.

Main Access and Crossings

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
01141	4W	0.39	Frozen			
01221	4W	0.82	Frozen			
01671	4W	0.19	Frozen			
01861	4W	1.02	Frozen	0184	E	U
				0194	B	U
02191	4W	0.61	Frozen			
02731	4W	0.06	Frozen			
03511	4W	0.07	Frozen			
04351	4W	1.02	Frozen	0443	E	U
04421	4W	0.54	Frozen			
05281	4W	1.58	Frozen	0519	B	U
				0665	E	U
				0675	E	U
06461	4W	3.46	Frozen	3259	E	U
08311	4W	0.14	Frozen			
08651	4W	0.08	Frozen			
08851	4W	0.62	Frozen			
09211	4W	1.93	Frozen	0992	E	U
09521	4W	0.28	Frozen	0953	E	U
09551	4W	0.05	Frozen			
09751	4W	0.62	Frozen	0986	B	U
09971	4W	0.68	Frozen			
10141	4W	0.20	Frozen	0995	E	U
10571	4W	0.82	Frozen	0281	E	U
				1055	E	U
25541	4W	0.59	Frozen	2544	SP	U
				2554	E	U
				2565	SP	U
				2585	E	U
26831	4W	3.06	Frozen	2515	I	U
				2663	E	U
				2673	SP	U
27281	4W	1.48	Frozen	3432	SP	U
27461	4W	1.28	Frozen	2747	E	U
27641	4W	0.76	Frozen	2755	E	U
				2784	E	U
29591	4W	2.57	Frozen	3275	E	U
29731	4W	0.32	Frozen			
30851	4W	1.75	Frozen			
30881	4W	0.05	Frozen			
31491	4W	1.19	Frozen	3159	T	U
				3169	E	U
31511	4W	6.46	Frozen	3059	E	U
				3145	E	U

Main Access and Crossings (Cont.)

Road No.	Class	Length (Km)	Construction Season	Crossing Location	Field Call	Navigability
31511				3146	E	U
				3195	E	U
32131	4W	1.48	Frozen			
32181	4W	0.24	Frozen			
32461	4W	0.63	Frozen	3255	E	U
32941	4W	0.18	Frozen			
32981	4W	0.99	Frozen	3349	T	U
33931	4W	0.17	Frozen			
34161	4W	0.02	Frozen			
35181	4W	3.84	Frozen	0231	E	U
				0317	E	U
				3487	E	U
				3488	E	U
35661	4W	0.10	Frozen	3577	E	U
35671	4W	0.64	Frozen	0291	E	U
36571	4W	0.82	Frozen	3669	I	U
				3679	I	U
36731	4W	0.81	Frozen	3695	E	U
36891	4W	0.70	Frozen	3139	E	U
Total Class 4W:		45.31				
Total Class 4S:		0.0				
Total Class 4P:		0.0				

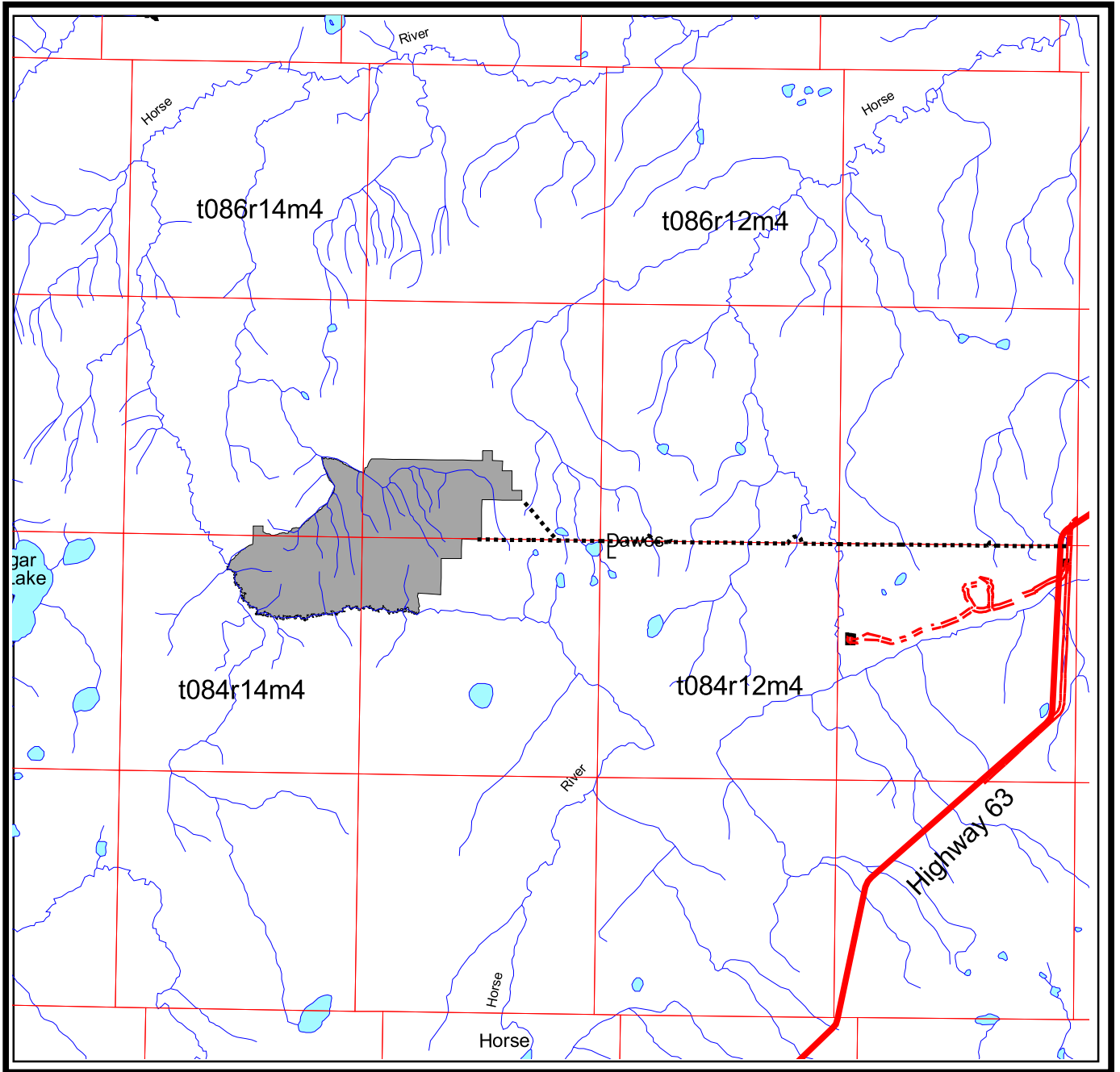
Skid Trail Crossings

Road No.	Crossing Location	Base Info	Field Call	Navigability
26831	2642	E	I	U

In the above tables, possible “Base Info” watercourse classifications are indefinite (E), intermittent (I), perennial (P) or unmapped (UM). The possible “Field Call” channelled watercourse classifications are ephemeral (E), intermittent (I), transitional (T), small permanent (SP), large permanent (LP), lake < 4 ha (SL), lake ≥ 4 ha (LL) beaver pond (B), spring (S), saturated soils (SS) or no channelled watercourse (NW). The “Navigability” rating identifies channelled watercourse as being potentially navigable (N) or potentially unnavigable (U) based on the possibility of traveling the stream with a vessel. The “Field Call” channelled watercourse classifications in the above table are based on Table 1 of the OGRs at the time, and during the conditions, when layout was conducted.

Planning Unit 084144

Access Map



1:250000



Alberta-Pacific
Forest Industries Inc.



5. Non Timber Values

Public Involvement

Copies of this harvest plan will be available for viewing at the Athabasca, Fort McMurray and Lac La Biche libraries, TimberNorth-Athabasca, the Alberta-Pacific Wabasca field office and the Alberta-Pacific mill site.

The Public Involvement for this plan was completed during the previous year's GDP review meetings.

No concerns have been identified through the public involvement process to date.

Aboriginal Consultation

The Aboriginal Consultation for this plan was completed during the previous year's GDP review meetings.

No concerns have been identified through the Aboriginal Consultation process to date.

Trappers

The holders of the following Registered Fur Management Areas (RFMA) have been contacted regarding harvesting activities within Planning Unit 084144:

- 1576
- 2238
- 2326

No concerns with the harvest design have been identified through the Trapper Consultation process to date. Concerns regarding the use of LOC 770167 as a haul route have been raised by a trapper, as the route runs next to a cabin. Al-Pac is continuing to work on this issue with the trapper.

Guides and Outfitters

The holders of the following permits within Wildlife Management Unit (WMU) 519 have been notified of Alberta-Pacific's harvest plans within Planning Unit 084144:

- | | | |
|--------|--------|--------|
| - 0260 | - 0541 | - 0861 |
| - 0429 | - 0709 | - 1023 |
| - 0446 | - 0818 | - 1124 |
| - 0483 | - 0858 | |

No concerns have been identified through the Guide and Outfitter Consultation process to date.

Forest Recreation Groups

There are currently no active forest recreation groups with interests within this planning unit.

Historical Resources

Known historical resource sites have been addressed during the design of this plan. Lands on which historical resource sites are likely to occur will be checked prior to commencement of operations.

Forest Aesthetics

No concerns have been identified.

Land Use

As per a Land Status Automated System (LSAS) land standing report dated February 12, 2015, a portion of PNT 060117 falls within the planning unit. The disposition does not affect the harvest design.

Wildlife

A portion of this planning unit is within Caribou Range.

Operations will adhere to the Alberta-Pacific wildlife plan submitted annually in the fall.

Access and Access Management

Existing access has been utilized where possible to minimize the clearing of new RoW.

Continuous flow roads have been designed to reduce the amount of two-way traffic through certain areas of the planning unit (i.e. Road 09211).

The following policy has been implemented to mitigate access management concerns:

- Temporary road systems will be closed as soon as possible after the harvesting, hauling, and silviculture activities have been completed.

The following access control practices will also be implemented:

- If a significant delay occurs between harvesting and hauling, temporary access controls on roads will be utilized to restrict access by motorized vehicles. These controls may include the placement of logs on the road, snow berms, and/or removal of creek crossings.
- Slash rollback at strategic points (such as at the ends of the block or at the junction of the temporary road and permanent road) will be completed as soon as possible after logging to discourage access by all terrain or four wheel drive vehicles.

Since the planning unit falls within a Caribou Range, the timing of operations will be completed as per the Alberta-Pacific Forest Management Plan (FMP) and OGR's.

6. Spatial Harvest Sequence Summary

The table below summarizes the variance (in area) from the SHS, for Alberta-Pacific harvesting.

SHS Tracking					
SHS Tracking	Decid. Cover Type	Sw Cover Type	Sb Cover Type	Pj Cover Type	Total Cover Type
Total SHS in Planning Unit	805.1	0.0	0.0	0.0	805.1
FHP SHS Harvest ha.	615.1	0.0	0.0	0.0	615.1
Deleted SHS ha. (reportable)	87.2	0.0	0.0	0.0	87.2
Deferred SHS ha. (reportable)	12.0	0.0	0.0	0.0	12.0
Variance % ⁽¹⁾ (reportable)	12.3%	0.0%	0.0%	0.0%	12.3%
Addition ha.	74.3	0.0	0.0	0.0	74.3
Bypassed ha.	0.0	0.0	0.0	0.0	0.0
Total Harvest ha. ⁽²⁾	689.4	0.0	0.0	0.0	689.4

(1) Variance % is the Deleted and Deferred SHS ha. expressed as a percentage of the Total SHS in the Planning Unit.

(2) Total Harvest ha. is the sum of FHP SHS Harvest ha. and Additions ha.

7. Silviculture Information

The following table outlines the initial silviculture declarations for FHP blocks within Planning Unit 084144. Cover group balanced declarations will be submitted post harvest.

Alberta-Pacific Silviculture Declarations

Source Id	Area (ha)	Std_ Mod	Open_ Desig	Species_ Gr	Silv_ Harv
08413429591	18.7	D	CC	DE	CC
08413429731	8.8	D	CC	DE	CC
08413430851	83.5	D	PC	DE	UP
08413430881	3.2	D	CC	DE	CC
08413431491	6.1	D	CC	DE	CC
08413431511	116.8	D	PC	DE	UP
08413432131	17.1	D	CC	DE	CC
08413432181	2.3	D	CC	DE	CC
08413432461	0.4	D	CC	DE	CC
08413432941	1.3	D	CC	DE	CC
08413432981	1.3	D	CC	DE	CC
08414425541	26.6	D	PC	DE	UP
08414426831	51.4	D	PC	DE	UP
08414427281	8.9	D	CC	DE	CC
08414427461	4.9	D	CC	DE	CC
08414427641	15.3	D	CC	DE	CC
08414433931	15.0	D	PC	DE	UP
08414434161	5.8	D	CC	DE	CC
08414435181	74.3	D	AV	DE	CC
08414435661	5.1	D	PC	DE	UP
08414435671	2.2	D	AV	DE	CC
08414436571	2.1	D	CC	DE	CC
08414436731	11.0	D	CC	DE	CC
08414436891	2.8	D	CC	DE	CC
08513404351	12.1	D	CC	DE	CC
08513404421	4.3	D	CC	DE	CC
08513405281	3.2	D	CC	DE	CC
08513406461	17.3	D	CC	DE	CC
08513408311	1.5	D	CC	DE	CC
08513408651	7.7	D	CC	DE	CC

Alberta-Pacific Silviculture Declarations (Cont.)

Source Id	Area (ha)	Std_ Mod	Open_ Desig	Species_ Gr	Silv_ Harv
08513408851	4.1	D	CC	DE	CC
08513409211	31.6	D	CC	DE	CC
08513409521	2.4	D	CC	DE	CC
08513409551	1.9	D	CC	DE	CC
08513409751	7.9	D	CC	DE	CC
08513409971	5.8	D	CC	DE	CC
08513410141	1.9	D	CC	DE	CC
08513410571	12.9	D	CC	DE	CC
08514401141	2.4	D	CC	DE	CC
08514401221	2.7	D	CC	DE	CC
08514401671	5.5	D	CC	DE	CC
08514401861	5.8	D	CC	DE	CC
08514402191	1.1	D	CC	DE	CC
08514402731	7.0	D	AV	DE	CC
08514403511	5.5	D	CC	DE	CC

In the above table, the codes for “Std_Mod”, “Open_Type”, “Species_Gr” and “Silv_Harv” are as per the Alberta Regeneration Information System (ARIS) domain codes. “AV” under “Open_Desig” is not an ARIS code but is used internally for the tracking of understorey avoidance blocks. If a block contains adequate amounts of Balsam Fir, so that fir is an acceptable coniferous regeneration species, a code of FA is used in the “Species_Gr”.

All deciduous blocks will be Leave for Natural (LFN).

8. OGRs Variances

Blocks

The following table identifies blocks greater than 7.0 ha that may exceed 5% road disturbance once turnabouts are constructed.

Road Percent

Source Id	% Road Class	Comments
08413429591	6	Extra road required; access to other blocks.
08413429731	6	Extra road required due to rugged terrain.
08413430851	5	Extra road required due to rugged terrain.
08413431511	5	Extra road required; access to other blocks.
08413432131	5	Extra road required; access to other blocks.
08414426831	5	Irregular shaped block (western island).
08414427281	6	Extra road required; access to other blocks.
08414427641	6	Extra road required; access to other blocks.
08414435181	5	Extra road required; access to other blocks.
08414436731	7	Irregular shaped block.
08513404351	6	Extra road required; access to other blocks.
08513408651	10	Narrow block and/or irregular shaped block.
08513409211	6	Extra road required; access to other blocks.
08513410571	10	Narrow block and/or irregular shaped block.
08514402731	5	Narrow block and/or irregular shaped block.

The percent road class values have been achieved by rounding the road disturbance percent to the nearest whole number.

Block 08414435181 is broken into 2 independent islands that together are greater than 10ha. One island contains >2 ha clumps of ≥ 600 stems/ha of White Spruce understorey at grid location 0241. Due to road placement and understorey dispersion strip orientation would not be conducive to a windfirm design. Block 08514402731 also contains >2 ha clumps of ≥ 600 stems/ha of White Spruce understorey at grid location 0272. Due to understorey dispersion, strip orientation would not be conducive to a windfirm design in this block either. The area to the east of this understorey patch would be isolated by strips thereby increasing the amount of road disturbance in the block. These blocks will be protected using avoidance methods.

Block 08414434161 contains >2 ha clumps of ≥ 600 stems/ha of White Spruce understorey. Due to road and boundary location, the area in which the understorey was surveyed is too narrow to protect. The road was put in this location to minimize road disturbance in the block. The understorey will not be protected by avoidance or high intensity protection.

No understorey assessments will be submitted for these blocks.

Some blocks in this planning unit will have high effort understorey protection. These blocks also contain areas that have >2 ha clumps of ≥ 600 stems/ha of White Spruce understorey that will be protected with avoidance and not high intensity protection:

- Block 08413430851:
 - Grid reference 3073 - the block shape limits the room for operators to turn around in the block. As high effort strips would be destroyed during operations, understorey will be better protected using avoidance methods.
 - Grid reference 3067 - once decking areas and backline are cut, a large part of the understorey will be removed. Understorey avoidance will better meet protection objectives. The main road in this area is on a seismic line in order to maximize existing access for roads.
- Block 08413431511:
 - Grid reference 3048 – the distribution of understorey is not conducive to high effort strips with regard to orientation and windfirming the protection strips. The avoidance method of protection will better protect the understorey in this area.

Roads

Road Comments

Road No.	Class	Comments
01671	4W	This road is within 200m of a lake.
27281	4W	This road is within 200m of a lake.
35661	4W	This road is within 200m of a lake.
35671	4W	This road is within 200m of a lake.