



**Forest
Practices
Board**

Audit of Forest Planning and Practices

*0866740 B.C. Ltd.
Forest Licence A18700*

FPB/ARC/212

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Audit Results

Introduction

The Forest Practices Board is the public's watchdog for sound forest and range practices in British Columbia. One of the Board's roles is to audit forest industry practices to ensure compliance with the *Forest and Range Practices Act (FRPA)* and the *Wildfire Act*.

As part of its 2017 compliance audit program, the Board randomly selected the Cascades Natural Resource District for a full scope compliance audit. Within the district, the Board selected forest licence A18700, held by 0866740 B.C. Ltd., for audit. A map of the audit area appears on page 2.

This report describes what the Board audited and the results. Detailed information about the Board's compliance audit process is provided in Appendix 1.

Background

Aspen Planers Ltd. purchased 0866740 B.C. Ltd. (the licensee) in 2009 from Ainsworth Lumber Co. Limited. Aspen's staff manage forest licence A18700 from offices in Lillooet and Merritt.

The operating area is in the north-west part of the Cascades Natural Resource District and includes Seton, Carpenter, Anderson, Gun and Downton Lakes, and the Bridge River. Communities within the operating area include Lillooet, Bralorne and Gold Bridge. The popular South Chilcotin Mountains Provincial Park is also nearby.

There is a high level of First Nations and public interest in forestry activities in the area. The maintenance of scenic areas, visual quality, and the protection of cultural heritage features are important to these communities.

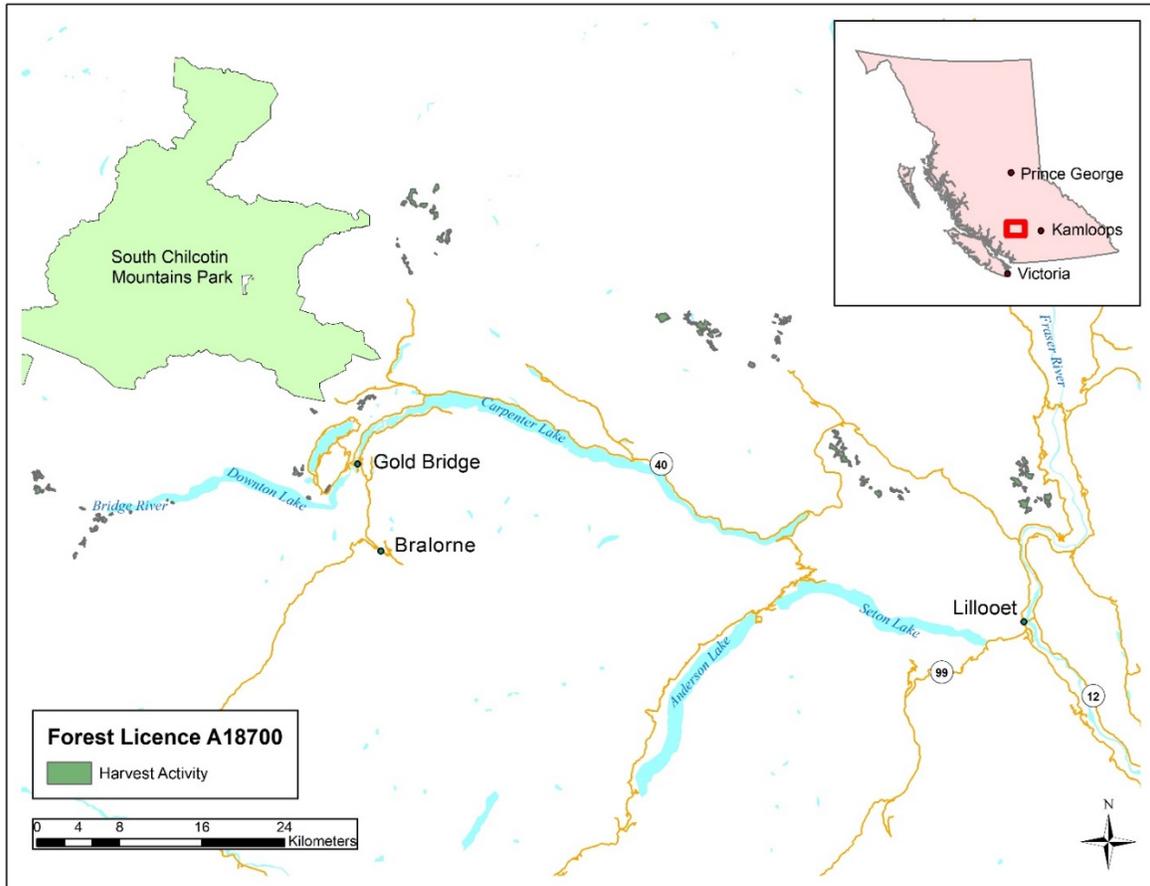
The licensee is permitted to harvest 228 534 cubic metres of timber each year under the terms of its forest licence.

The audit was originally scheduled to begin on July 1, 2017, but due to the provincial state of emergency brought on by extreme wildfire activity, fieldwork was postponed until late October.



Looking north from the Black Hills operating area over the Fraser River and the West Pavilion forest service road.

Map of the Audit Area



Audit Approach and Scope

This was a full scope compliance audit that examined harvesting, roads, silviculture, wildfire protection and associated planning governed by the *Forest and Range Practices Act* (FRPA) and the *Wildfire Act*.

All activities carried out between July 1, 2015, and November 2, 2017, were eligible for audit. These included operational planning (preparation of forest stewardship plans (FSP)ⁱ and site plans), silviculture activities, timber harvesting, wildfire protection, major structureⁱⁱ construction and maintenance, and the construction, maintenance and deactivation of roads.

Auditors assessed these activities for compliance with FRPA, the *Wildfire Act*, and applicable regulations. This work included interviewing licensee staff, reviewing the FSP and site plans, assessing silviculture records and visiting sites to review field practices. Sites were accessed by truck and by helicopter.

The standards and procedures used to carry out this audit are set out in the Board's *Compliance Audit Reference Manual, Version 7.1, July 2016*.

Two forest professionals, a professional engineer, and a chartered professional accountant made up the audit team. The team was in the field with licensee staff from October 30, 2017, to November 2, 2017.

Planning and Practices Examined

Operational Planning

The licensee is currently operating under Ainsworth Lumber Co. Limited's 2007 FSP. The district manager approved extensions to the term of the FSP on June 11, 2012, and December 16, 2016. The FSP will expire on June 11, 2018, over 11 years after it was first approved.

Auditors examined the FSP and stand-level site plans for consistency with legal requirements and government orders regarding old growth and wildlife. Auditors also confirmed whether site plans accurately identified site conditions during field sampling.

Timber Harvesting

The licensee harvested 295 000 cubic metres from 84 cutblocks, totaling 1456 hectares, during the audit period. Auditors examined 70 of those cutblocks, totaling 1344 hectares.

Road and Bridge Construction, Maintenance and Deactivation

The road and bridge activities population and sample are presented in Table 1.

Activity	Population	Sample
Road permit road construction	174 km	94 km
Road permit road maintenance	1024 km	347 km
Road permit road deactivation	26 km	26 km
Road permit road structures built	5 bridges	4 bridges
Road permit road structures maintained	72 bridges and major culverts	40 bridges and major culverts
Forest service roads maintained	164 km	70 km
Forest service roads structures maintained	17 bridges	12 bridges

Table 1. Road Activities by Population and Sample Size

Silviculture Obligations and Activities

The sole silviculture activity conducted during the audit was tree planting on 78 blocks. Twenty blocks were due to be regenerated and 156 blocks were required to be free growing by the end of the audit period. Auditors examined 10 planted blocks, 3 blocks with regeneration obligations and 27 blocks with free-growing obligations on the ground. Auditors also examined data submitted to the government's silviculture tracking system.

Wildfire Protection

Auditors encountered one active work site and assessed whether or not the licensee was prepared for a wildfire. As part of the harvest sampling, auditors examined fire hazard assessment and abatement practices.

Audit Findings

Operational Planning

Visual Quality Objectives

The licensee planned 14 cutblocks in a scenic area visible from Highway 40. The visual quality objective for the area is partial retention, which means that alterations (cutblocks) may be easy to see, small to medium in scale and natural and not rectilinear or geometric in shape.

Section 21(1) of FRPA states that the holder of a forest stewardship plan must ensure that the intended results specified in the plan are achieved and the strategies described in the plan are carried out. The FSP states that the holder will "conduct a Visual Impact Assessment and design harvesting to be consistent with the visual quality objectives established in the District Manager's letters dated July 28, 1994, and December 15, 1997."

The cutblocks in the eastern portion of CP 715 were carefully designed and logged to only marginally add to the alteration on the landform. Despite this, the licensee's past logging on the landform meant that the visual quality objective was already exceeded and could not be achieved until the older blocks reach "visually effective green-up" (VEG). VEG is the stage at which regeneration on the cutblock is perceived by the public as a newly established forest.

Any harvesting designs for the eastern portion of the cutting permit could not achieve the VQO because the VQO was already exceeded by past harvesting. As a result, the cutblock designs were inconsistent with the FSP, and that is non-compliance with section 21(1) of FRPA.

For cutblocks on the western portion of CP 715, the cutblocks, as designed, did not meet the visual quality objective and did not comply with section 21(1) of FRPA. However, visual quality classes are a continuum and none of the samples fell far from the class boundary.

Despite this non-compliance, it is clear that the licensee's efforts to manage visual quality have progressed. In light of this, the non-compliance is considered an area for improvement.

Aside from the visual quality management issue discussed above, the FSP met legal content requirements that apply to forest practices in the audit area. The licensee addressed site specific resources, such as cultural and riparian features in the site plans, by accurately identifying them and prescribing appropriate practices.

Timber Harvesting

Harvesting was conducted in accordance with the requirements of legislation and site plans. Soil disturbance was well managed and minimized, and natural drainage patterns were maintained. Riparian and cultural heritage features were accurately identified and protected. Auditors had no concerns about harvesting.

Road and Bridge Construction, Maintenance and Deactivation

Road Construction

Road construction difficulty ranged from low risk terrain with minimal issues to a few areas of steeper, but not unstable terrain. Natural drainage patterns were well maintained with adequate culvert sizing and placement. Roads with specific construction techniques recommended by a terrain specialist were well constructed and in accordance with those recommendations. Any deviations from the prescribed plan were documented.

Road Maintenance

The licensee maintains electronic ledgers indicating risk levels for each road system, the recommended inspection interval and required maintenance. Roads were well signed with radio frequencies and road names. A number of in-block roads were “seasonally deactivated” after harvesting, which the Board considers to be a maintenance activity. One part of the Yalakom Road was inaccessible due to a blockade by local residents.

Road Deactivation

The auditee deactivated, as per Section 82 of the FPPR, a total of 25.6 kilometres of road. A qualified registered professional prepared permanent deactivation prescriptions and the licensee followed them. Auditors had no issues with the deactivation measures.

Bridge Construction

All required bridge construction documentation was complete for the five bridges constructed and there were no concerns with the installation of the four new structures examined.

Bridge Maintenance

The licensee is responsible for 63 bridges and also maintains 9 wood box culverts (less than 6.0 metres bearing to bearing) located on their road permit roads and 17 bridges on FSRs, which only required surficial maintenance. The auditee also works in conjunction with the Regional Engineering group (Ministry of Forests, Lands, Natural Resource Operations and Rural Development) with respect to any issues on FSR structures where they are the primary maintainer. Auditors had no concerns with road and bridge planning and practices.

Silviculture Activities and Obligations

Planting

All sampled cutblocks met the chief forester's seed transfer guidelines for seed zone, elevation and geographic position. Blocks were planted promptly and the densities used are resulting in adequate stocking. There were no concerns with planting.

Obligations

The licensee is meeting its regeneration and free-growing obligations. Auditors had no concerns with silvicultural activities or obligations.

Wildfire Protection

Fire Hazard Assessment

The licensee assesses fire hazard for its blocks as part of the final road and block inspection. The fire hazard assessment method includes an assessment of the fuel hazard but does not adequately consider the risk of a fire starting and spreading, as required by section 11(4)(a) of the *Wildfire Regulation*. This is considered an area for improvement.

Fire Hazard Abatement

Slash was either piled or piled and burned on completed cutblocks. Auditors had no concerns with fire hazard abatement.

Fire Preparedness

The active worksite was well-prepared for wildfire and all activities met the requirements of the *Wildfire Regulation*. There were no concerns with fire preparedness.

Audit Opinion

In my opinion, the operational planning, timber harvesting, road construction, deactivation and maintenance, silviculture, and fire protection activities carried out by 0866740 B.C. Ltd. on forest licence A18700 in the Cascades Natural Resource District, between July 1, 2015, and November 2, 2017, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of November 2017.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

Without qualifying my opinion, I draw attention to the *Visual Quality Objectives* and the *Fire Hazard Assessment* sections of this report which describes two areas requiring improvement.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board including adherence to the auditor independence standards and the ethical requirements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with *Forest and Range Practices Act*, and *Wildfire Act*.



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Victoria, British Columbia
April 16, 2018

Appendix 1: Forest Practices Board Compliance Audit Process

Background

The Forest Practices Board conducts audits of government and range agreement holders under the *Forest and Range Practices Act (FRPA)*, section 122, and the *Wildfire Act (WA)*. Compliance audits examine forest or range planning and practices to determine whether or not they meet FRPA and/or WA requirements.

Selection of Auditees

The Board conducts about eight or nine compliance audits annually. Most of these are audits of agreement holders. The Board also audits the government's BC Timber Sales Program (BCTS). This section describes the process for selecting agreement holders to audit.

To begin with, auditors randomly select an area of the Province, such as a district. Then the auditors review the forest resources, geographic features, operating conditions and other factors in the area selected. These are considered in conjunction with Board strategic priorities (updated annually), and the type of audit is determined. At this stage, we choose the auditee(s) that best suits the selected risk and priorities. The audit selections are not based on past performance.

For example, in 2010, the Board randomly selected the Mackenzie district as a location for an audit. After assessing the activities within that area, we discovered that a large licensee had recently closed operations due to financial problems. As the Board has expressed concern in the past about financially strapped companies failing to meet outstanding obligations, such as reforestation and road maintenance, and we knew that some of the licence area is very remote, the new licence holder was selected for audit.

For BCTS audits, a district within one of the 12 business areas within the province is selected randomly for audit.

Audit Standards

Audits by the Board are conducted in accordance with the auditing standards developed by the Board. These standards are consistent with Canadian generally accepted auditing standards. The standards for compliance audits are described in the Board's *Compliance Audit Reference Manual*.

Audit Process

Conducting the Audit

Once the Board randomly selects an area or district and determines the scope of audit to be conducted and the licensee(s) to be audited, all activities carried out during the period subject to audit are identified (such as harvesting or replanting, and road construction or deactivation activities). Items that make up each forest activity are referred to as a population. For example, all sites harvested form the timber harvesting population and all road sections constructed form the road construction population.

A separate sample is then selected for each population (e.g., the cutblocks selected for auditing timber harvesting). Within each population, more audit effort (i.e., more audit sampling) is allocated to areas where the risk of non-compliance is greater.

Audit fieldwork includes assessments of features using helicopters and ground procedures, such as measuring specific features like riparian reserve zone width. The audit teams generally spend one week in the field.

Evaluating the Results

The Board recognizes that compliance with the many requirements of FRPA and WA, is more a matter of degree than absolute adherence. Determining compliance, and assessing the significance of non-compliance, requires the exercise of professional judgment within the direction provided by the Board.

The audit team, composed of professionals and technical experts, first determines whether forest practices comply with legislated requirements. For those practices considered to not be in compliance, the audit team then evaluates the significance of the non-compliance, based on a number of criteria, including the magnitude of the event, the frequency of its occurrence and the severity of the consequences.

Auditors categorize their findings into the following levels of compliance:

Compliance – where the auditor finds that practices meet FRPA and WA requirements.

Unsound Practice – where the auditor identifies a significant practice that, although found to be in compliance with FRPA or WA, is not considered to be sound management.

Not significant non-compliance – where the auditor, upon reaching a non-compliance conclusion, determines that one or more non-compliance event(s) is not significant and not generally worthy of reporting. However, in certain circumstances, events that are considered not significant non-compliance may be reported as an area requiring improvement.

Significant non-compliance – where the auditor determines a non-compliance event(s) or condition(s) is or has the potential to be significant, and is considered worthy of reporting.

Significant breach – where the auditor finds that significant harm has occurred, or is beginning to occur, to persons or the environment as a result of one or many non-compliance events.

If it is determined that a significant breach has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the Minister of Forests, Lands and Natural Resource Operations.

Reporting

Based on the above evaluation, the auditor then prepares a draft audit report. The party being audited is given a draft of the report for review and comment before it is submitted to the Board.

Once the auditor submits the draft report, the Board reviews it and determines if the audit findings may adversely affect any party or person. If so, the party or person must be given an opportunity to make representations before the Board decides the matter and issues a final report. The representations allow parties that may potentially be adversely affected to present their views to the Board.

The Board then reviews the draft report from the auditor and the representations from parties that may potentially be adversely affected before preparing its final report. Once the representations have been completed, the report is finalized and released: first to the auditee and then to the public and government.

ENDNOTES

- i A forest stewardship plan (FSP) is a key planning element in the FRPA framework and the only plan subject to public review and comment and government approval. In its FSP, BCTS is required to identify results and/or strategies consistent with government objectives for values such as water, wildlife and soils. These results and strategies must be measurable and once approved are subject to government enforcement. FSPs identify areas within which road construction and harvesting will occur but are not required to show the specific locations of future roads and cutblocks. FSPs can have a term of up to five years.
- ii Major structure includes bridges and major culverts.
- Bridge means a temporary or permanent crossing structure with a span length equal to or greater than 6 metres or an abutment height of 4 metres or greater.
 - Major culvert has a pipe diameter of 2 metres or greater or is a pipe or open bottom arch with a span greater than 2.13 metres.
- http://www.for.gov.bc.ca/hth/engineering/documents/publications_guidebooks/manuals_standards/Eng-Manual.pdf



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