



**Forest  
Practices  
Board**

## **Audit of Forest Planning and Practices**

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*Carrier Lumber Ltd.  
Forest Licence A18158*

**FPB/ARC/166**  
September 2014

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# Audit Results

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## Background

As part of the Forest Practices Board's 2014 compliance audit program, the Board randomly selected the Prince George District as the location for a full scope compliance audit. Within the district, the Board selected forest licence A18158, held by Carrier Lumber Ltd. (Carrier) and located in the Prince George timber supply area, for an audit.

The audit area includes the communities of Prince George and Fort St. James. Carrier's activities were located in 10 distinct operating areas—six in the Prince George district and four in the Fort St. James district (see map on page 2).

The Prince George and the Fort St. James land and resource management plans (LRMPs)<sup>1</sup> were both completed in 1999 and apply to the audit area. The LRMPs create resource management zones, and objectives and strategies for various resources, including water, fish, biodiversity, sustainable economic development (including timber harvesting), recreation, tourism, access, and culture/heritage. The LRMPs are not legally binding and provide advice to the licensee.

Carrier, Canadian Forest Products Ltd., and BC Timber Sales completed the Prince George sustainable forest management plan (PGSFMP) in March 2010, to provide forest managers with a management system to meet sustainable forest management objectives. At present, Carrier's operations are certified to Sustainable Forestry Initiative (SFI) sustainable forest management standard and the Programme for the Endorsement of Forest Certification chain of custody standard.

Under FL A18158, Carrier has an allowable annual cut of 253 027 cubic metres per year.

During the two-year audit period, June 1, 2012—June 19, 2014 Carrier harvested approximately 499 000 cubic metres of timber, primarily to salvage mountain pine beetle (MPB) infested timber.

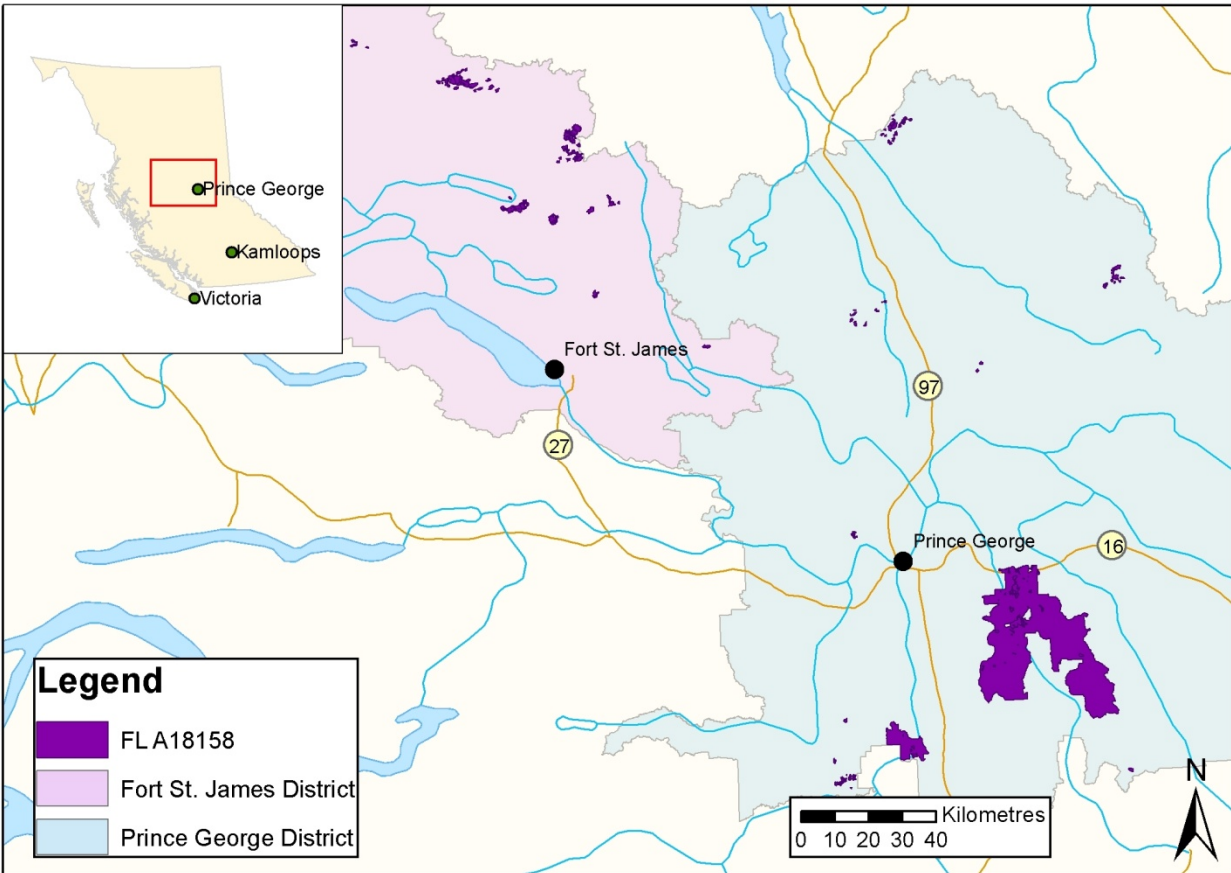
Carrier Lumber Ltd., a second generation family-run operation, was founded in 1951 and FL A18158 is one of four forest licences held by the company that supplies fibre to their mill in Prince George.

Three forestry professionals and a chartered accountant made up the audit team. The Board's audit field work took place from June 16 to 19, 2014. Additional information about the Board's compliance audit process is provided in Appendix 1.

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<sup>1</sup> Prince George Land and Resource Management Plan <http://www.for.gov.bc.ca/tasb/SLRP/plan71.html>  
Fort St James Land and Resource Management Plan <http://www.for.gov.bc.ca/tasb/SLRP/plan33.html>

## Map of Carrier Lumber Ltd. – Forest Licence A18158



### Audit Approach and Scope

The Board conducted a full scope compliance audit, in which all harvesting, roads, silviculture, fire protection activities and associated planning, carried out between June 1, 2012, and June 19, 2014, were included. These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA), and related regulations.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 7.0, September 2012*, sets out the standards and procedures that were used to carry out this audit.

## Planning and Practices Examined

### *Operational Planning*

Carrier's planned activities are in accordance with their forest stewardship plan (FSP)<sup>2</sup> and are guided by the LRMPs. The FSP<sup>3</sup> and site-level plans were examined to ensure that they were consistent with legislated requirements. Site-level plans were also evaluated to ensure that they accurately identified site conditions through harvesting, road and silviculture field sampling.

### *Timber Harvesting*

Of the 36 cutblocks (3221 hectares) that were harvested, 18 cutblocks (2461 hectares) were sampled as part of the audit. Sampling is focused on areas of the auditee's operations where the risk of impact to a resource feature is deemed to be high.

Risk can be a function of site conditions, natural circumstances, and the particular practices involved. This approach assured the auditors focused a reasonable proportion of their sampling on harvest operations adjacent to the following features:

- Riparian – S1-S3 (anadromous and resident fish) – 9 of 15 cutblocks = 56 percent
- Riparian – S4 (resident fish) – 8 of 14 cutblocks = 57 percent
- Riparian – S5 and S6 (non-fish) – 6 of 13 cutblocks = 46 percent
- Fish stream crossings – 6 of 7 cutblocks = 86 percent
- Slopes > 60 percent – 2 of 2 cutblocks = 100 percent
- Sensitive soils – 9 of 11 cutblocks = 82 percent

The percentages are based on the sampled cutblocks as compared to all the cutblocks with one of these resource features present.

### *Road Construction, Maintenance, Deactivation*

Carrier's road activities included 67.2 kilometres of construction, 236.1 kilometres of deactivation, and 276.2 kilometres of maintenance obligations. The auditors examined 54.9 kilometres of construction, 68.5 kilometres of deactivation, and 82.6 kilometres of maintenance activities.

Carrier constructed seven bridges and the auditors examined all seven of them. There were also 17 bridges with maintenance obligations and the auditors examined 10 of them.

### *Silviculture Activities and Obligations*

Silviculture activities included planting in 38 cutblocks, manual brushing in 5 cutblocks, chemical brushing in 5 cutblocks, and site preparation in 1 cutblock. Carrier also had

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<sup>2</sup> Carrier's FSP is a joint effort involving several licensees. The current FSP is titled: "Canadian Forest Products Ltd., Carrier Lumber Ltd., Takla Track and Timber Ltd., Conifex Inc. - Prince George and Fort St. James Districts and Tree Farm Licence 30 Forest Stewardship Plan – February 4, 2011 (updated with Amendment 34 - ARA-010, submitted February 5, 2014)"

<sup>3</sup> 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 FSPs licensees are 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 cut blocks. FSPs normally have a term of five years.

obligations for regeneration delay on 3 cutblocks covering 230 hectares and for free growing on 36 cutblocks covering 1159 hectares.

Auditors examined planting activities in 12 cutblocks, manual brushing in 3 cutblocks, chemical brushing in 2 cutblocks and site preparation in 1 cutblock. Auditors also examined obligations in all 3 regeneration delay cutblocks and in 13 free-growing cutblocks.

### ***Fire Protection***

Auditors examined hazard assessment and abatement activities on 17 cutblocks, in conjunction with harvest auditing. Fire hazard was assessed at the completion of harvesting. No fire tool inspections were conducted because there were no active operations during the field audit.

## **Findings**

The audit found that the planning and field activities undertaken by Carrier on FL A18158 complied with the requirements of FRPA, WA and related regulations.

### ***Operational Planning***

The FSP was consistent with FRPA and other applicable legislated requirements. Planning at the landscape and site-plan levels was consistent with this joint FSP. Requirements were also consistent with the Prince George and Fort St. James LRMPs, which are not legally binding.

Carrier has also committed to other non-legal requirements including sustainable forest management through a joint sustainable management plan (PGSFMP), which covers this licence. Carrier works with other signatories to this plan to jointly develop sustainable forest management indicators and targets through a public process. This overall commitment to sustainable forest management planning within its operating areas helped Carrier achieve the positive audit results noted below.

Site plans and site plan maps were provided for all harvest blocks in the audit period. The maps accurately identified wildlife tree patches, proposed permanent road locations, streams and their classification, and ecological units.

Site-specific resource features were addressed in site plans by accurately identifying and prescribing practices for these features. These resource features included streams and wetlands, wildlife habitat, and cultural heritage features. In some situations, cutblock boundaries were established to exclude areas with identified features from the area to be harvested.

Sixteen of the sample cutblocks concentrated on removing mountain pine beetle (MPB) damaged stands. Two cutblocks addressed blowdown salvage and spruce bark beetle concerns.

### ***Timber Harvesting***

Harvesting practices were consistent with site level plans. Overall, natural drainage patterns were maintained, machine-free zones were established on streams, retention levels on small streams were appropriate, and soil disturbance was well managed within FRPA limits. Wildlife tree retention consisted of patches and individual trees.

Retention was achieved as planned, either in patches or as individual trees. In situations where Douglas-fir was a minor component of a stand, these trees were retained as individual leave trees.



*Tree retention along a small wetland.*

Roads were stable and stream crossings were well-maintained and in good condition. Roads were deactivated as soon as possible after harvesting, and the deactivation was dependent on when the activities were completed and time of year. Areas harvested over the winter (frozen conditions) were deactivated during drier periods (late summer/early fall) and prior to the next winter season.

Carrier constructed seven bridges during the audit period. Construction met legal requirements and no concerns were identified. Carrier had bridge maintenance obligations, which were also met, and no concerns were identified.

#### ***Silviculture Activities and Obligations***

Silviculture activity included planting, site preparation, manual brushing, and chemical treatments; regeneration delay and free-growing obligations. All blocks were reforested promptly with ecologically appropriate species and all treatments were carried out as planned.



*Free growing mixed stands of trees.*

Deciduous species and healthy-forest leave areas were also retained to provide some green trees in the dead pine-dominated landscape.

Visual quality objectives were addressed effectively through block boundary design, location of wildlife tree patches and retained screens of timber adjacent to a major highway.

#### ***Road Construction, Maintenance, and Deactivation***

No concerns were identified with road construction, maintenance or deactivation.



*One of seven compliant bridges constructed by Carrier during the audit period.*

Regeneration due dates and free-growing obligations were met in all sampled blocks. Seedlings used for reforestation met the *Chief Foresters Standards for Seed Use* and there were no concerns noted with planting.

Auditors observed several blocks in the free-growing sample that were well stocked with free-growing mixed stands of pine, spruce and Douglas-fir. These mixed stands date from a period when planting several species in one block was not as common as it is today.

### ***Fire Protection***

No concerns were identified with hazard assessment or abatement. Fire hazard was managed during operations and at the completion of harvesting, as required in the *Wildfire Act*. Methods included piling and burning, piling in preparation for further treatment, grinding for pellet feedstock, or leaving for wildlife use.

### **Audit Opinion**

In my opinion, the operational planning, timber harvesting, road construction, deactivation and maintenance, silviculture and fire protection activities carried out by Carrier Lumber Ltd. on Forest Licence A18158 between June 1, 2012, and June 19, 2014, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of June 2014. No opinion is provided regarding fire tools.

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 this audit report.

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. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA, and WA.



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Director, Audits

Victoria, British Columbia  
September 4, 2014



# Appendix 1: Forest Practices Board Compliance Audit Process

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## Background

The Forest Practices Board conducts audits of government and 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 sAuditees*

The Board conducts about 8 or 9 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.

***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.



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