Forest Practices Board

Logging Old-Growth Forest Near Port Renfrew

Complaint Investigation 100953

FPB/IRC/174

February 2011

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Commentary

This investigation brings attention to the special value of trees of exceptional size or form, age or historical significance. Such trees, and sometimes the forest stands that contain them, having withstood the ravages of time over many centuries, can inspire awe and reverence, a sense of spirituality and connection to past events. Descriptors such as mammoth, heritage, cathedral-like, ancient, antique and monumental are not uncommon.

Equally, this complaint signals again a public interest in seeing ancient trees and forest stands preserved to live out their natural lives and functions, and managed as a social, economic and ecological asset to the public and surrounding communities. Ancient forest stands can be older than the ancient trees within them, having avoided major disturbances through generations of the trees we see today. Such stands may represent rare and unique biodiversity values—plant, animal and physical communities developed through thousands of years. The Board's earlier report on the "antique" forest stands of Dome Creek near Prince George dealt in part with this issue, and identified that current forest policy does not classify old-growth in a sufficiently refined way to capture the full range of old forest values.[1]

Some proportion of the province's unusual trees and forest stands are already reserved from timber harvesting by inclusion in parks, old-growth management areas, and other forest reserves. Others remain in areas slated for timber harvest. No one knows for certain how much occurs where, or whether the most valuable and unusual sites are protected. That is because BC's current forest inventory, biodiversity guidance and policies for old-growth retention do not recognize a difference in values between forest stands 250 years old and those 500 years old or older. A result is that the "discovery" of ancient, exceptional and irreplaceable trees often occurs with the onset of harvest planning. This situation can lead to public uncertainty and a sense of urgency and conflict in considering whether, in the circumstances, such trees should be protected.

The Board considers that certain individual, or small groups of, exceptional trees on the timber harvesting land base may provide a higher social and economic value if they are treated as a special resource feature and excluded from timber harvesting. The Board recognizes that there are practical constraints, such as worker safety, that will influence such consideration, and encourages government, forest professionals, and forest licensees to seek creative means to conserve trees of exceptional size or form, age or historical significance and, where appropriate, the forest stands that contain them.

[1] < http://www.fpb.gov.bc.ca/IRC137_Biodiversity_in_the_Interior_Cedar_Hemlock_Forests_Near_Dome_Creek.pdf>

Introduction

The Complaint

In June 2010, the Forest Practices Board received a complaint from an environmental consultant/scientist and freelance writer concerned about the logging of old-growth forest near Port Renfrew. While on a visit to see big, old trees in an area environmental groups call "Avatar Grove," the complainant also visited a clearcut logging block and observed several cedar tree stumps three or more metres in diameter. The complainant estimated the age of those harvested trees to be more than 900 years. The complainant considers that such large and old trees should not be cut down because, in his view, they will never be replaced. The complainant wants logging of "ancient" old-growth trees to stop; an old-growth strategy to be developed, especially for ancient trees; and Avatar Grove to be saved from logging.

Background

What is an ancient tree and how is it different from old-growth?

To the complainant, an ancient tree is perhaps 500- to more than 1,000-years old, very large and cathedral-like, and usually western red cedar, Douglas fir or Sitka spruce. BC's forestry legislation does not define an ancient tree. In BC, the age of old-growth forest is based on available forest inventory data and the rate of natural disturbance in different biogeoclimatic (BEC) variants.[2] The area of concern to the complainant is in the coastal western hemlock BEC zone of the Gordon landscape unit.[3] Old-growth there is described by government as forest stands that are over 250-years old. For the purpose of this report, the Board describes *old growth* as stands greater than 250-years old and *ancient trees* as individual trees that are very large and are, or likely are, more than 500-years old.

FIGURE 1. An ancient tree retained adjacent to cutblock 7184.

[2] Biogeoclimatic (BEC) classification is used to describe ecosystems. A BEC zone is a biogeographic area having similar patterns of energy flow, vegetation and soils as a result of a broadly homogenous macro-climate. BEC subzones further define the climate. A BEC variant is a division of a subzone that is wetter, drier, cooler or hotter than other areas in the subzone.

[3] The former Forest Practices Code's *Biodiversity Guidebook* defined "landscape unit" as a planning area, generally up to about 100,000 hectares in size, delineated according to topographic and geographic features, such as a watershed or series of watersheds. In 2004, government legally established landscape units across the province and identified the amount of old-growth to be maintained within them.

Where is the cutblock?

The cutblock is a five-hectare clearcut in the Gordon River drainage north of Port Renfrew, within the Gordon landscape unit and Tree Farm Licence (TFL) 46. TFL 46 is held by Teal Cedar Products Ltd. (the licensee). The licensee harvested the cutblock, which it calls "Setting 7184," during March and April 2010.

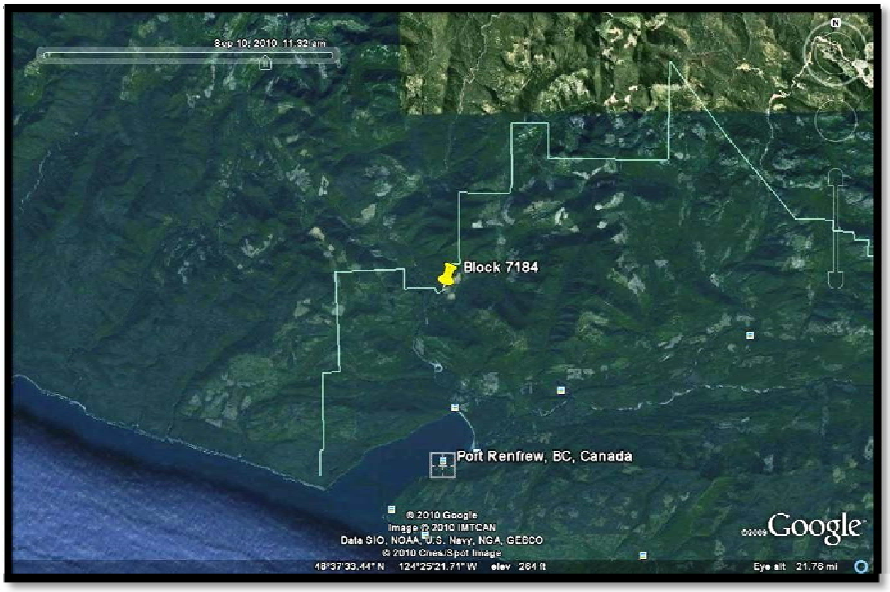

FIGURE 2. Cutblock 7184 north of Port Renfrew.

What is Avatar Grove?

An environmental group nicknamed an approximately 60-hectare area in the Gordon River drainage, "Avatar Grove." The name was based on a popular movie to draw public attention to protection of old-growth forests.[4] About one-quarter of the area is protected from most forest practices within three government-designated old-growth management areas (OGMAs); the remainder is available for harvest within the licensee's operating area. The site contains some very large and unusually-shaped ancient trees scattered within a younger century-old forest stand that likely originated from a wind or fire disturbance. The environmental group considers the area to be of exceptional public value owing to its proximity to Port Renfrew, low elevation, good road and ease of access. Some businesses in Port Renfrew want to develop the area into a park for eco-tourism.

FIGURE 3. An ancient tree in "Avatar Grove."

[4] <http://www.ancientforestalliance.org/news-item.php?ID=33> and <http://www.box.net/shared/074mcxfei8>

How is old forest on Crown land managed in BC?

Over the past two decades, protection of old-growth forest for biological conservation has been a policy of the provincial government through land-use planning, including park expansion, and through implementation of the former *Forest Practices Code of British Columbia Act* (the Code), which included provisions for old-growth representation and distribution at the landscape level, and retention of wildlife trees at the stand level. In 2004, government enacted a Ministerial order under the Code that established provincial non-spatial[5] old-growth objectives by landscape unit. The order set a requirement for retention of old forest consistent with the Code's *Biodiversity Guidebook*.[6] Unless otherwise directed by government, the 2004 order remains in effect under the current-day *Forest and Range Practices Act* (FRPA).

FRPA contains government objectives that relate directly to old-growth management. Section 9 of FRPA's *Forest Planning and Practices Regulation* (FPPR) states that government's objective for wildlife and biodiversity at the landscape level is, without unduly reducing the supply of timber from BC's forests and to the extent practicable, to design areas on which timber harvesting is to be carried out that resemble, both spatially and temporally, the patterns of natural disturbance that occur within the landscape. FPPR section 9.1 states the objective for wildlife and biodiversity at the stand level is, without unduly reducing the supply of timber from BC's forests, to retain wildlife trees.[7]

Forest licensees' forest stewardship plans (FSPs) must specify results or strategies consistent with FRPA objectives. However, inclusion of the phrase "to the extent practicable" in FRPA's landscape-level biodiversity objective recognizes that not all natural disturbance patterns are easily replicated by industrial forest operations (for example, small canopy gaps in coastal ecosystems) and so allows for traditional harvest patterns such as clearcutting to continue.[8] To provide for more explicit management, government may make certain orders under the *Land Act* which apply to forest licensees operating under FRPA. Such orders can include that a specified percentage of a landscape unit or an identified area of Crown forested land be retained as old growth.

The changes in available mechanisms over time for old-growth management across BC have resulted in different approaches being applied in different parts of the province. Consequently, the extent and implementation of old-growth planning by landscape unit also varies across the province. The Board is conducting a separate special investigation to assess the status of old-growth retention across the province and will likely report on that topic later in 2011.[9]

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[5] Non-spatial means not required to be spatially identified on a map.

[6] <http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/biodiv/biotoc.htm>

[7] FRPA defines wildlife trees as a tree or group of trees that provide wildlife habitat, and assist in conservation of stand-level diversity. The FPPR sets a default amount that a minimum of seven percent of cutblocks must be wildlife tree retention in patches, groups or individual stems.

[8] <http://www.for.gov.bc.ca/hth/timten/FRPA_implementation/Bulletins/FRPA%20No%203%20Defining%20practicable%20under%20FRPA%20June%209%202005.pdf>

[9] < http://www.fpb.gov.bc.ca/Planning_for_Old_Growth_Retention_TERMS_OF_REFERENCE.pdf>

Discussion

The Board considered how government is managing old-growth forests and ancient trees in the Gordon landscape unit; whether the established OGMAs there are likely to contain ancient trees; how the licensee dealt with ancient trees in the course of harvesting the cutblock of concern; and whether a process may be available to further protect "Avatar Grove." The Board did not assess whether old-growth management in the Gordon landscape unit is effective for maintaining biodiversity, social or cultural values.

How is government managing old-growth forest in the Gordon landscape unit?

Under natural disturbance, landscape units like the Gordon would probably have nearly 50 percent of their area in forest stands over 400-years old. Owing to its long harvest history, 25 percent (about 4,200 hectares) of the Crown forested land base in the Gordon landscape unit is currently old growth.[10]

In 2006, the Integrated Land Management Bureau (ILMB) completed the *Renfrew Aggregate Landscape Unit Plan*.[11] The purpose of that plan was to spatially identify potential OGMAs over five landscape units, including the Gordon. The process for potential OGMA selection considered information about forest inventory, marbled murrelet and goshawk habitat, archaeological sites, rare ecosystems, ungulate winter range, the likely presence of large cedar trees, patch size and habitat connectivity.

In 2009, ILMB established formal land-use objectives by Ministerial order under the *Land Act* for the five Renfrew landscape units (now called the *Renfrew Sustainable Resource Management Plan* area). The 2009 order replaced the earlier non-spatial order and legally established the draft OGMAs identified in 2006.[12] In addition, the 2009 order sets an objective for retention of wildlife tree patches (WTPs) that varies by BEC subzone. In the Gordon landscape unit, the required amount of wildlife tree retention ranges from 5 to 14 percent of the harvested area. The 2009 order requires that WTPs include larger trees and, if present, remnant old-growth patches and live or dead veteran trees.

[10] Data supplied by the Integrated Land Management Bureau.

[11] <http://www.for.gov.bc.ca/ftp/DSI/external/!publish/Stewardship/SIFD_Objectives_Matrix/6_Biodiversity/Renfrew_LU/Renfrew_SRMP_Plan.pdf>

[12] Established OGMAs are protected from most forest practices, with some exceptions for necessary roads, minor forest operations and traditional use by First Nations.

The Gordon landscape unit has 16,787 hectares of Crown forested land base. The order spatially identified and established 2,633 hectares of OGMAs[13] (15.7 percent of the Crown forested land base). Eighty percent (2,113 hectares) of the OGMAs are over 250-years old; ILMB included 520 hectares of currently younger forest within the OGMAs, which ILMB explained is intended to enhance habitat connectivity or to obtain some additional conservation benefit in anticipation of those areas continuing to age.

Finding

Government has a strategy in place for the management of old-growth forest in the Gordon landscape unit. It has spatially identified and legally established 15.7 percent of the forested Crown land in the Gordon landscape unit as OGMAs, and also requires 5 to 14 percent of harvested areas to be retained as wildlife trees.

Do OGMAs in the Gordon landscape unit include ancient trees?

To assess the possible proportion of ancient trees in the landscape unit, the Board considered available forest inventory information as summarized by ILMB. Forest inventory information typically describes the dominant tree cover in a relatively homogeneous forest stand (i.e., species, age and height). Individual ancient trees occur throughout the landscape unit as remnants of previous disturbances, but such occurrences are often difficult to detect from available forest inventory data. Consequently, that data likely underestimates the extent of ancient trees on the landscape.

The amount of detail in available forest-cover inventory for the province varies from place to place. For the Gordon landscape unit, inventory data for the timber supply area outside of tree farm licences (TFLs 46 and 44) contains the greatest detail about age; it classifies individual forest stands up to 400-years old or older. Inventory information for TFLs is less detailed; it classifies forest stands up to 279-years old or older. Forest stands and individual trees in either of these oldest age categories may be older, but it is not known by how much. Inventory data for age is not available for the 185 hectares of the Gordon landscape unit, within the Pacific Rim National Park Reserve.

ILMB used the available forest inventory datasets to plan old-growth retention in the Gordon landscape unit. In 2006, when ILMB initially identified the 2,633 hectares of now established OGMAs, 2,113 hectares were over 279-years old. At least 1,465 hectares of that were greater than 300-years old and, within that area, 156 hectares of forest stands were greater than 400-years old. Although the available inventory is not sufficiently precise to determine how much is ancient, the area of OGMA in forest stands over 400-years old (slightly less than six percent of all the OGMAs or about one percent of the landscape unit) suggests a high likelihood that forest stands with ancient trees are present. OGMAs are largely protected from most forest practices,

[13] Includes 170 hectares of park; OGMAs cannot be established within a park but suitable areas within a park can contribute to the OGMA target.

so the majority of trees in OGMAs are intended to live out their natural lives, possibly also to become ancient, provided they are not subject to some other disturbance.

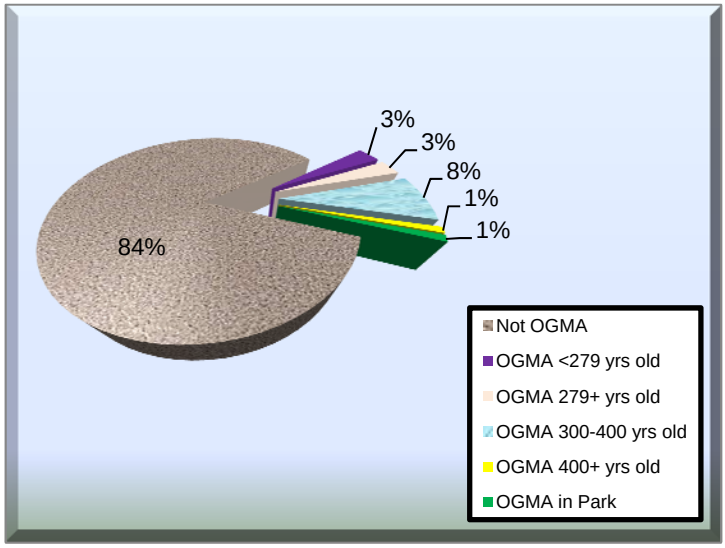

FIGURE 4. OGMA in the Gordon landscape unit.

Finding

Almost six percent of forest stands within designated OGMAs, or about one percent of the Gordon landscape unit, are 400-years old and older. This suggests that ancient trees are represented in the OGMAs.

How does the licensee deal with ancient trees in its operating area?

The licensee's operating area includes old growth and younger second-growth forest. The licensee said the presence of ancient trees is not unusual in its operating area and that many of those trees have high market value. The licensee recognized that such trees can have high biological, social and cultural values. To help plan for all values, the licensee took a lead role in the *Renfrew Aggregate Landscape Unit Plan*, which identified the now legally-established OGMAs. As required by FRPA, the licensee's approved FSP includes results or strategies for government's objectives for wildlife and biodiversity at both the landscape and stand levels.

At the landscape level, the licensee's FSP commits it to maintain forests in the OGMAs, except for some permissible operational and forest health activities.[14] This is consistent with government's 2009 order that established the OGMAs.

[14] A list of permissible activities sets the criteria for "maintain." Depending on the type and degree of activity, the licensee must identify replacement forest of equivalent age, structure and area either (in priority) directly adjacent to the affected OGMA or in the same BEC variant and landscape unit.

Also consistent with government's 2009 order, at the forest stand (cutblock) level, the licensee's approved FSP commits it to retain wildlife trees. The licensee's primary considerations for locating wildlife tree retention areas are:

- effective harvest planning to minimize operational conflicts;
- incorporation of significant wildlife or biodiversity values;
- dead trees or areas of dead tree recruitment;
- unique or under-represented ecological, social or cultural features;
- old growth residual trees associated with second-growth harvest areas; and (in the absence of the above features)
- an area representative of the stand to be harvested.

In the Gordon landscape unit, depending on the BEC subzone, the licensee must retain wildlife trees ranging in area from 5 to 14 percent of its cutblocks. The wildlife tree retention objective for the BEC subzone containing the cutblock of concern is 10 percent. To meet that requirement, the licensee identified a 0.5-hectare WTP adjacent to the cutblock. The WTP contains trees representative of tree size in the harvested stand, and includes some ancient and dead trees.

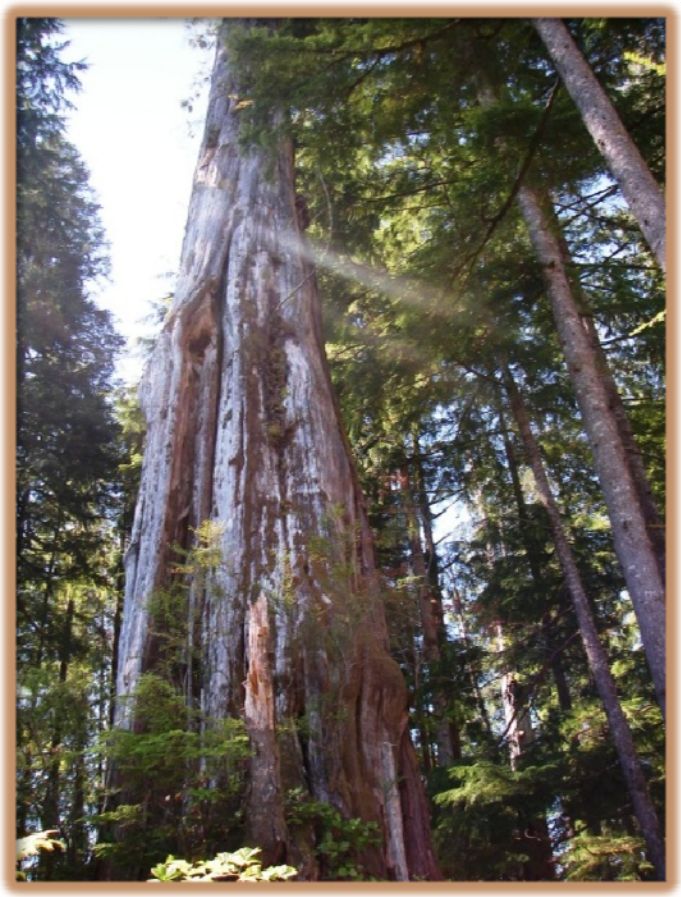

FIGURE 5. An ancient dead tree in the wildlife tree patch of cutblock 7184.

The licensee harvested several ancient trees in its cutblock. The complainant wants ancient trees to be recognized as a separate and important subset of old-growth trees and protected wherever they occur through selective logging practices. The licensee noted that, whether or not such trees are valuable to its operations, they are often deteriorating and frequently have dead tops, broken limbs and substantive rot. Consequently, they can be dangerous to forest workers and, if so, must be felled for safety unless otherwise assessed by trained personnel. The licensee explained that the cutblock of concern was cable-harvested, so it was neither safe nor operationally feasible to retain unsound individual trees within the harvested area. At least two of the trees of concern to the complainant were likely felled for safety. Much of the trunk of one, previously a standing snag, was felled outside the cutblock boundary and remains on-site as coarse woody debris (an important factor of stand-level biodiversity).

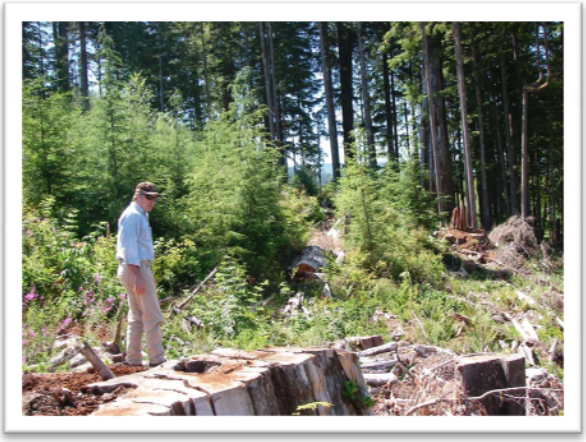

FIGURE 6. Large snag felled with top retained on-site (top is visible in the background).

Finding

The licensee does not deal specifically with ancient trees in its harvesting plans; it is not required to. However, it does implement FRPA provisions at the landscape and stand levels to protect biodiversity; those actions typically include protection of some large and possibly ancient trees.

Is there a process available to further protect Avatar Grove?

The complainant wants all or most of Avatar Grove protected for its aesthetic and touristic values. About 25 percent of the grove area is already within parts of three OGMAs, with the remainder available for harvest within the licensee's operating area. Current options to protect the unprotected part of the area include creation of a new park or other reserve, or expansion of the existing OGMAs. It is unknown whether the unprotected area warrants protection based on its ecological and social values. If so, government has available policy and procedures to guide potential amendment of its land-use objective.[15]

Finding

If further protection is warranted for Avatar Grove, government has a process to amend its land-use objective for old-growth.

[15] Government recently reorganized its natural resource agencies including ILMB. The Minister responsible for the *Land Act* would continue to be the implementing agency for the policy and procedures. <http://archive.ilmb.gov.bc.ca/slrp/lrmp/policiesguidelinesandassessements/docs/Approved_LUOR_Policies_and_Procedures_Feb_14_08.pdf>

Conclusion

BC's forestry legislation does not define an ancient tree. To the complainant, an ancient tree is perhaps 500 to more than 1,000-years old; very large and cathedral-like; and usually western red cedar, Douglas fir or Sitka spruce.

Government has a strategy in place for the management of old-growth forest stands in the Gordon landscape unit. Government has spatially identified and legally established 2,633 hectares (15.7 percent) of the 16,787 hectares of forested Crown land in the Gordon landscape unit as OGMAs. Eighty percent (2,113 hectares) of the OGMA area is old growth over 250-years old; the remaining 20 percent (520 hectares) is currently younger.

Almost six percent (156 hectares) of forest stands within the OGMAs, or about one percent of the landscape unit, are 400-years old or older. This suggests that ancient trees are represented in the OGMAs. In addition, government requires the retention of 5 to 14 percent of harvested areas in the Gordon landscape unit as wildlife trees, which could include ancient trees. To manage more precisely for the presence of ancient trees, a more detailed forest inventory would be required.

The licensee does not deal specifically with ancient trees in its harvesting plans; it is not required to. However, it does implement FRPA provisions at the landscape and stand levels to protect biodiversity; those actions typically include retention of some large and possibly ancient trees. The licensee harvested several ancient trees in the cutblock of concern to the complainant. At least two of those trees were likely felled for worker safety reasons. Much of the trunk of one, previously a standing snag, remains on-site as coarse woody debris. The licensee also retained some ancient trees in the wildlife tree patch for that cutblock.

About 25 percent of Avatar Grove is already protected from most forest practices within parts of three OGMAs. If ecological and social circumstances warrant the change, government could initiate a process to amend its land use objective for old-growth to further protect the area.

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Forest Practices Board

NEWS RELEASE

For Immediate Release
Feb. 10, 2011

Complaint highlights public value of ancient trees

VICTORIA – A complaint investigation report released today brings attention to the special value of trees of exceptional size or form, age or historical significance.

Such trees can be from 500 to over 1,000 years old. Having withstood the ravages of time over many centuries, they can inspire awe and reverence, a sense of spirituality and connection to past events.

"This complaint highlights the strong public interest in seeing more ancient trees and forest stands preserved to live out their natural lives and functions, and managed as a social, economic and ecological asset to the public and surrounding communities," said board chair Al Gorley.

The report is the result of an investigation into a public complaint about logging of very large old trees near Port Renfrew on the west coast of Vancouver Island. In the circumstances, the licensee complied with existing forestry legislation for the protection of old-growth and biodiversity values. As part of its cutblock plan, the licensee also retained some trees of similar size and age to those harvested.

"The licensee did nothing wrong, but the complaint led the board to consider that certain individual, or small groups, of exceptional trees that sometimes occur on the timber harvesting land base may provide a higher social and economic value if they are treated as a special resource feature and excluded from timber harvesting," added Gorley.

The board encourages government, forest professionals, and forest licensees to seek additional creative means to conserve trees of exceptional size or form, age or historical significance when they encounter them in their forestry work. However, the board also recognizes that there are practical constraints, such as worker safety, that may require some of these trees to be removed.

The Forest Practices Board is B.C.'s independent watchdog for sound forest and range practices, reporting its findings and recommendations directly to the public and government. The board is required to investigate public complaints about forest planning and practices.

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