Forest Practices Board

Visual Quality of a Chilliwack Cutblock

Complaint Investigation 060739

FPB/IRC/141

July 2008

During 2006, the Board completed a review of its complaint investigation program. One of the conclusions of the review was that there should be greater emphasis put on addressing issues of importance to participants. Consequently, this report is written with a focus on the participants as the audience and centers on clarifying issues facing them, and providing information for their use.

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Executive Summary

This investigation examines the harvesting of a pair of cutblocks above Lake Errock, near Harrison Mills. A resident of Sardis was disappointed that he could see the very visible cutblocks from Chilliwack. The Ministry of Forests and Range (MFR) told the complainant that, while the visual impact of the cutblocks was not consistent with the recommended visual quality objectives for the area, it met the legal requirements. The complainant asked the Board to clarify how this could happen and to determine whether it can be prevented in the future.

The investigation revealed that the two cutblocks were in a scenic area that had a recommended visual quality class of *retention*. In such areas, forest activities are not supposed to be visually evident. However, under the *Forest Practices Code of British Columbia Act* (the Code), the licensee was not required to achieve the visual quality class, but had to specify measures to manage visual impacts in its forest development plan (FDP). The licensee said that the cutblocks would have to be visually evident, but that they would be designed to soften the visual impact.

As harvesting progressed, the licensee encountered a significant blowdown problem and, after discussing the problem with MFR, retained more trees in the remaining portions of the cutblock. The licensee also adjusted its prescription for the adjacent cutblock. Despite their efforts, the harvested cutblocks were quite visible.

The MFR took a number of steps as a result. MFR:

1. Examined the cutblocks to determine if enforcement actions were warranted but concluded that the cutblocks complied with the legal requirements.

2. Had two ministry visual specialists review the visual impact assessment provided in the FDP, and they concluded there were problems with its accuracy.

3. Reviewed the administration of the FDP to see if further refinements were needed to ministry procedures, but concluded that the existing procedures would become redundant when forest stewardship plans replaced forest development plans under the new *Forest and Range Practices Act* (FRPA).

With respect to the complainant's question about how this situation could happen, the investigation found that a number of issues contributed to the unexpected visual impacts of the cutblocks:

- While there was a recommended visual quality class of retention specified for this area, the Code only required the licensee to specify measures to manage the visual impacts – it did not require the licensee to meet the retention objective.

- The licensee encountered blowdown during harvesting, modified its harvesting as a

result, but still was unable to achieve the intended natural appearance. Problems with the licensee's original visual impact assessment also contributed to the poor outcome.

In response, MFR took a number of steps. It:

- reviewed the situation for contraventions of the legislation, but found none;
- reviewed the licensees visual assessment and found some issues with it; and
- reviewed its own procedures to identify improvements, but found that the procedures will no longer be needed under the new FRPA.

With respect to the complainant's question about whether this type of situation can be prevented in the future, the investigation found that the visual assessment process is different under FRPA. In the future, licensees will be responsible for ensuring their harvesting is consistent with established visual quality objectives, and the ministry will no longer review visual impact assessments prepared by licensees.

Observations

The complainant asked the Board to clarify how such significant visual disturbance could happen and whether it could be prevented in the future. More diligence by all parties would reduce the likelihood of this happening again. All participants stated that the visual impact of the cutblocks was unacceptable. Each explained how some component of the planning or operations had contributed to the visual impact of the cutblocks. The participants provided observations that will be useful to licensees and government ministries as they continue to consider visual resources as an important component of forest planning FRPA.

Requirements under the Forest and Range Practices Act (FRPA)

As of December 2004, the Chilliwack Forest District's recommended visual quality classes (rVQCs), which were put in place under the Code, were continued into FRPA as established visual quality objectives (VQOs).[1]

Licensees now operate under FRPA. In a forest stewardship plan (FSP) prepared under FRPA, a licensee must specify results or strategies in relation to objectives, such as VQOs, and the plan must be consistent with those objectives. A licensee must also achieve the intended results specified in the FSP and/or carry out the strategies specified.

Under FRPA there is no explicit requirement to conduct visual impact assessments, nor is there a specific requirement that a licensee achieve a given visual quality objective. FRPA is designed as

[1] Section 17 of the *Government Action Regulation*.

a result-based legislative framework. Unlike the situation that partially gave rise to this complaint, the district manager does not have the discretion to approve any strategies or results that propose less than the established VQO. The licensee is solely responsible to ensure that its operations are consistent with its FSP results or strategies, including VQOs.

Predicting visual impacts

Under FRPA, the definition of the visual quality class is the legal requirement. When planning cutblocks under FRPA, licensees should assess expected results against the applicable visual quality class definition, rather than using the purely mathematical method of basing an assessment on a calculated percent alteration. Percent alteration is merely policy, serving as a predictor tool. Calculations can only predict cutblock impacts in a very general way.

The Board previously reported that licensees have used mathematical assessments as a primary decision-making tool, and that over-reliance on numbers can result in a failure to achieve an assessed VQO.[2] This happened most often when visual impact assessments target the upper numerical limit of the visual quality range.

Under FRPA, government review and approval of visual impact assessments and visual assessment packages are eliminated. However, licensees can still contact ministry specialists and staff to discuss issues, concerns and approaches to managing visual resources.

Professional dialogue is not legislated, but is expected from forest professionals.

Risk of blowdown

Risk of blowdown is a significant factor in designing cutblocks for visual management. Treatments such as partial cutting and irregular cutblock boundaries are excellent tools for managing visual resources. However, scattered small patches of reserve trees or thin buffer strips can be more vulnerable to blowdown, particularly in exposed areas. Licensees must ensure that site plans consider the risk of blowdown and design cutblocks to account for the potential risk.

Subsequently, licensees should ensure that operators understand the requirements of the site plan for cutblocks in visually sensitive areas. Licensees must also diligently monitor operations and adjust site plans, using the services of a forest technologist or forester as required. Monitoring for visual quality during the felling stage should be done from all publicly significant viewpoints.

[2] For a description of the BC visual resource management framework and an evaluation of visual management in the Campbell River District, see the May 2005 Forest Practices Board report entitled, *Audit of Visual Resource Management Campbell River Forest District*. http://www.fpb.gov.bc.ca/news/releases/2005/05-31.htm.

Compliance and enforcement

Commitments in FSPs (results and strategies) should be measurable and verifiable. They should also be sufficiently clear and understandable for decision makers and the public to comprehend the potential visual impact.

Once harvesting has been completed, compliance and enforcement staff need to inspect and investigate issues with visual quality, referencing the FSP. Investigations need to address on-site conditions, site plan components and adherence to FSP commitments. This may require a multi-disciplinary approach. The use of contracted specialists, or regional and branch visual expertise may be needed.

The Investigation

On September 21, 2006, the Forest Practices Board received a complaint from a resident of Sardis (the complainant). The complainant requested an investigation into the harvesting of a pair of cutblocks above Lake Errock, near Harrison Mills. The complainant was disappointed that he could see the very visible cutblocks in a well-travelled view-shed. The Ministry of Forests and Range (MFR) told the complainant that, while the visual impact of the cutblocks was not consistent with the recommended visual quality goals for the area, it met the legal requirements. The complainant asked the Board to clarify how this could happen and to determine whether it can be prevented in the future.

Background

Scenic landscape management

Visual quality is 1 of 11 forest values managed for in Crown forests. Visually sensitive areas are areas that could cause concern to the public if forest practices or other resource development activities alter their visual appearance.

The province developed and incorporated a visual resource management framework into the *Forest Practices Code of British Columbia Act* (the Code) and it has been continued in the *Forest and Range Practices Act* (FRPA). Scenic landscapes are identified using a visual landscape inventory. During the inventory process, landscapes are assessed for sensitivity to forest alterations and are assigned a 'visual sensitivity class.' A visual quality objective (VQO) is established based on the visual sensitivity class and other factors. The VQO establishes how much alteration or harvesting is visually acceptable in a given landscape.

The 2001 *Visual Impact Assessment Guidebook* (VIA Guidebook) provides guidance on how to assess visual impacts, and includes procedures for completing an assessment. It also provides evaluation criteria to assess whether or not proposed timber harvesting and road construction/modifications will meet visual quality objectives. The guidebook's practices are not mandatory under FRPA. However, they are useful for developing site-specific visual management strategies and prescriptions.

In this case, the forest development plan (FDP) was submitted prior to FRPA coming into effect, so the Code applies to these two cutblocks.

The Code regulated visual quality in two ways. Scenic areas were managed in accordance with established visual quality objectives (VQOs) or with visual quality classes (rVQCs) recommended by a district manager.

If VQOs were established, a licensee had to do a visual impact assessment that showed how the harvest proposal would meet that objective. If rVQCs had been recommended by the district

manager, an FDP had to specify measures to manage for the visual resource. This was the situation here, as rVQCs were in place.

The Chilliwack Forest District had also required licensees to provide specific information for scenic areas—a visual assessment package (VAP)—with the development plan whenever proposed cutblocks approached or exceeded the numerical limits for the rVQC.

History of the cutblocks

On February 9, 2004, 606546 BC Ltd. (the licensee) submitted its FDP to the Chilliwack Forest District for approval. The licensee operates out of Harrison Mills, north of Chilliwack. The FDP contained two cutblocks southwest of Harrison Mills that are clearly visible from Lake Errock, Kilby Provincial Park (Kilby Beach), Highway 7 and a variety of other locations in the Fraser Valley.

In 2003-2004, the licensee was finding it hard to find accessible and affordable timber harvesting opportunities in its traditional operating area. The licensee decided to propose two cutblocks in the visually sensitive area at Lake Errock.[3] The licensee spent almost two years trying to get approval for the blocks, making several modifications to the VAP. The licensee decided it could not meet the requirements of the recommended visual quality class, so it asked for those requirements to be relaxed. Even so, the licensee proposed other measures to reduce visual quality impacts on the Lake Errock cutblocks.

On February 17, 2004, the licensee re-submitted the VAP to reflect design changes to the cutblocks in the Lake Errock area. MFR approved the FDP[4] on March 5, 2004.

The harvesting of one cutblock, number 39, became noticeable to the public by the end of January 2006. MFR received a complaint about the visual impact from a resident of the Bayview Road neighbourhood near Lake Errock, where a number of homes have a direct view of the hillside containing the two cutblocks.

The licensee tried to adjust its operations in response, but the options were limited. MFR district staff investigated and concluded the operations complied with the Forest Practices Code. Subsequently, MFR decided to review how it had administered the approval of the FDP.

[3] Unit #512 of the Visual Landscape Inventory.

[4] The Board's investigation examined the development plan approved on March 5, 2004. An additional VAP was submitted with a FDP major amendment application March 29, 2005, but this was not included in the materials provided to the Board. For the purposes of this investigation, participants all referred to and discussed the VAP provided in the March 5, 2004, approval.

Discussion

The investigation examined:

1. The recommended visual quality class and the measures proposed by the licensee to manage the scenic area.
2. Why MFR approved the two cutblocks, even though they would exceed the recommended visual quality class of retention.
3. The licensee's response to government and public concerns with the harvesting.
4. MFR's response to the public concerns.

1. What was the recommended visual quality class and what measures did the licensee propose to manage the scenic area?

The FDP included a description of the rVQC and detailed what measures the licensee would take to manage the visual resources.

1.1 What was the recommended visual quality class for the Lake Errock Area?

The Code required that FDPs identify scenic areas and specify measures to protect visual resources. The two cutblocks were in a scenic area with a rVQC of retention. RVQCs describe the level of visible alteration that is considered appropriate for a specific landscape. The Visual Impact Assessment Guidebook defines retention as the level of landscape alteration which results in forest activities that are not visually evident.

1.2 What did the licensee propose to manage visual resources?

The FDP included measures to manage visual quality and also identified some risks to visual resources.

The Code did not require a licensee to actually meet rVQCs. Rather, licensees only had to specify, in their FDP, the measures that would be taken to protect visual values. The Chilliwack forest district, as of January 2000, required development plans to include a VAP whenever proposed cutblocks approached or exceeded the numerical limits for the applicable rVQC. The numerical limit is an estimate of the percentage of landscape area that looks like it has been recently harvested. The proposed cutblocks did approach or exceed the numerical limits for the retention, so the licensee included a VAP for Lake Errock in its FDP.

The licensee identified several factors (or risks) that it considered in designing the cutblocks and specified measures it would take to manage the visual impacts.

1.2.1 What factors did the licensee consider in designing the cutblocks?

The licensee's VAP said that it considered four factors in designing the cutblocks. In the Board's opinion, these four factors were risks. That is, these factors worked against, or had to be managed, to meet the rVQC.

First, the cutblocks were located on the lower slopes, which are more difficult to screen or to manage. The licensee said:

> Both proposed cutblocks are on visible mid-lower slope ridges that are impossible to fully screen given the need to construct roads and without leaving very high retention levels.

Second, the licensee said it needed to use conventional roaded cable and ground-based skidding systems due to high development costs for roads and bridges. The implication was that the choice of harvesting system, and use of roads, limited the flexibility in cutblock design, but the licensee did not elaborate on how this constrained or affected the ability to manage visual resources. The use of these systems can influence the design or shape of the block, location of the block, design of retention areas and amount of retention. Cable harvesting systems can result in straight edges to cutblocks and roads that are visible due to the ground disturbance.

Third, the licensee noted that second-growth fir and hemlock stands were a windthrow risk. The individual trees were tall, with low taper. As well, these tall trees, with their small diameters, resulted in small diameter-to-height ratios. These factors increase the risk of blowdown. The licensee recognized that these conditions would require care in selecting patches of leave trees. As well, the leave patches could not be dispersed, which would likely not provide perfect visual screening.

Lastly, the licensee said its operating areas were quite restricted, heavily constrained by several factors and its tenure was for a low volume. As such, the licensee said it needed to harvest the two cutblocks in this location. The need for the two cutblocks is not a factor in terms of managing the visual resources except that it could have driven the proposed harvesting design. This may be a rationale for the proposal in terms of need, but would not directly influence visual design. Costs to operate within the retention rVQC were likely high and, by proposing operations that were less expensive, the proposed cutblocks could not meet the retention rVQC.

1.2.2 What measures did the licensee propose to manage the visual resource?

The licensee conducted a visual assessment of the proposed cutblocks to demonstrate how the cutblocks might affect the visual quality of the area. The assessment addressed the proposed alteration (the impact of the two cutblocks) using three criteria: 1) definition of the VQO; 2) cutblock design; and 3) alteration range.

1) Definition of the visual quality objective

The goal of visual simulations and assessments are to identify if the proposed operation will achieve the VQO or rVQC. To do so, the evaluation must be conducted from all important viewpoints. The licensee's VAP noted that it had assessed the proposal from three viewpoints and described the existing visual condition and the impact of the proposed cutblocks. The licensee used the same viewpoints found on the 1999 Chilliwack visual landscape inventory.

The proposed cutblocks (39 and 40) would further exceed the rVQC of retention. That is, even before the licensee began harvesting, the landscape unit's existing condition did not meet the definition of retention. The VAP said that an old diamond-shaped cutblock was visible above the proposed cutblocks, from Highway #1 overpass. As well, recent alteration (harvesting) on Indian Reserve lands could be seen from the Kilby Beach viewpoint.

The VAP described which visual quality class definition the proposed cutblock would meet in combination with existing conditions on the site. The proposal noted that, for each of the viewpoints, the **existing** visual condition was dominant and out of scale and that the new proposed cutblocks, "*are required to be visually evident.*"

The rVQC of retention meant that the activities should not be visually evident. Instead, the VAP indicated that, by definition, the harvesting of the two cutblocks would result in partial retention as visible from Kilby Beach (the most sensitive viewpoint) and modification to maximum modification as visible from the post office and the overpass. The two cutblocks, as viewed from both the overpass and the post office, are seen with the old diamond-shaped opening. In combination, they elevate the existing visual condition beyond retention class.

Using partial retention, the proposed cutblocks would be visible but remain subordinate in the landscape, while maximum modification would result in cutblocks that are visually dominant and out of scale, but appear natural in the background. Maximum modification results in a dominant change to the original landscape or visual condition, particularly in the middle ground. Two of the viewpoints used to evaluate the cutblocks showed the cutblocks in the middle ground.

The licensee identified that, from the post office and the overpass viewpoints, the proposed cutblocks could result in the landscape alteration of maximum modification. From the Kilby Beach viewpoint, the result would be partial retention. However, the rVQC, regardless of the viewpoint used, was retention and not partial retention or modification.

2) Alteration percentages and range

In designing cutblocks and estimating the impact on landscapes, there is a numeric assessment which can be used to predict whether an objective can be achieved. This is a measure of alteration expressed as a percentage of a landform that has been altered in perspective. Each VQO/rVQC has a corresponding range of alteration percentages. The percentage is only to be

used as an indicator of which class the proposed cutblocks on a landscape falls into. The Visual Impact Assessment Guidebook states:

> …it is imperative that all existing and proposed operations meet the basic VQO definition and exhibit elements of good visual design. The numerical assessment should be used only as a yardstick to help determine into which class the cumulative alterations on a landscape fall.

The estimated alteration ranges and the predicted partial retention rVQC differ from the VAP section 1 description.

Section 1 stated that the proposed cutblocks, in combination with the existing visual condition of the area, would result in a change to maximum modification from the Post Office and Highway 1 viewpoints, and partial retention from the Kilby Beach viewpoint.

However, the alteration percentages calculated in the VAP indicated that the proposed cutblocks would stay within the partial retention range. The VAP said that proposed cutblock design would soften the visual impact by making the altered landscape appear natural. So, although the numbers would go higher, the licensee proposed measures (such as visual design) that it said would soften the visual impact.

3) Cutblock design

The VAP provided illustrations and computer generated pictures of the cutblocks. They indicated the shape of the blocks, the location of the blocks on the landscape, and the design of leave strips or timber retention areas inside the blocks. The illustrations and pictures were part of the VAP submitted on February 9, 2004, and are part of the FDP.

The VAP described the proposed cutblocks and what they would look like. Specifically:

> Blocks 39 and 40 are in a mid-slope position and are to be developed as small openings with individual (minor) and group (major) tree retention with an irregular feathered stand edge along boundaries. Edge treatment will create a series of irregular openings with little evidence of block edge. The most visible areas will be in the upper portions of block 39.

The VAP anticipated that the proposed retention tree pattern might have to be adjusted. The VAP said:

> Adaptive management will be implemented during operations including faller instruction regarding leave tree retention through frequent monitoring from within the block. The planned retention pattern may require adjustment in portions of the blocks.

Notably, the submission contained a computer graphic representing its desired outcome.

The VAP described the cutblock design. The depiction in the VAP indicated that the cutblock design was irregular in shape (i.e., it was not symmetrical), thus somewhat natural in appearance. The leave strips were depicted as a series of varied openings. As well, the VAP proposed to feather the cutblock edges and leave islands of timber.

Cropped and zoomed picture of the VAP for Cutblock 39 and 40 from Kilby Beach viewpoint 1e – VAP, February 2006.

2. Why did the Ministry of Forests and Range approve the two cutblocks that would exceed the recommended visual quality class of retention?

Given that the rVQC was retention, why was the FDP approved when it proposed two cutblocks that would be more visible than what was required for retention?

The acting district manager approved the FDP under section 41(1)(b) of the Code. This section required the district manager to be satisfied that the plan adequately managed and conserved forest resources.

The acting district manager had the discretion to consider the measures proposed in the FDP to manage the scenic quality of the area and to balance this with other forest values and resource use. This includes the discretion to accept measures in the FDP that predicted less than the rVQC of retention, and this is what happened here.

In this case, the acting district manager was balancing the scenic values with the economic needs of the licensee. The rationale relied on commitments the licensee provided in the VAP. The rationale further noted:

> I am confident that the strategies listed below by the licensee to lessen the visual impact by good design will not have an adverse impact on the visual integrity of this landscape.

The district manager identified the strategies as:

- edge treatments to soften block boundaries
- patches of timber to mitigate visual impacts
- proposed operations borrowed from the natural character of the landscape
- major lines of force identified and used to develop the blocks
- limit visual impacts to 2.9 percent within the retention visual sensitive unit

The acting district manager reviewed the VAP. Prior to approval, district staff and the licensee focused on reducing the percent alteration projections. The VAP projected a combined visual impact of the two cutblocks as 2.9 percent alteration on the landform. This would achieve the partial retention rVQC from all the viewpoints.

Even though the description of the projected visual condition was at odds with the percent alteration projections, blocks with good design characteristics can exceed the numbers and still fit the corresponding visual class. Accordingly, the district operating procedures specified that a licensee can exceed the numerical guidelines if the cutblocks have good designs.

District staff reviewed the submission for visual design. MFR staff told the Board that they examined the simulations from the Kilby Beach viewpoint and concluded that the cutblocks consisted of small openings following the lines of force. That is, the longer portion of the openings was orientated in the same direction as the lines of force. As well, the simulation and maps illustrated that the openings had varied spacing, were asymmetric, and somewhat organic in shape. The block boundaries were generally curved, the edges were to be feathered and the cutblock retained islands of timber. Staff concluded that the submission had the necessary elements of good design.

The acting district manager told the Board that he knew the area well and considered the viewpoints selected as reasonable, and the FDP contained a VAP that included the design of the cutblocks. As well, he accepted and considered the licensee's past performance and was satisfied that past operations had been reasonably done. For these reasons, the acting district manager approved the FDP, in part because it included adequate measures to address the visual resources.

3. What did the licensee do in response to the concerns with the harvesting of the cutblocks?

In January 2006, MFR received a complaint about the harvesting of cutblock 39. In response to the complaint, and concerns raised by MFR, the licensee adjusted the harvest plan for both cutblocks.

As harvesting progressed, the licensee encountered a significant blowdown problem and, in one case, an entire leave strip fell. The licensee discussed the issue with MFR district staff and further altered its harvesting on the remainder of the cutblock to try and retain more trees. The licensee also adjusted its prescription for the adjacent cutblock. Cutblock 40 was considerably smaller than cutblock 39 and had been approved as a clearcut without any reserves. The licensee added a reserve patch of timber to reduce the total visual impact of the two cutblocks. Cutblock 40 was subsequently harvested.

May 2, 2006 – Kilby Beach viewpoint, MFR photo.

4. What was the Ministry of Forests and Range's response to the harvesting concerns?

In response to a complaint from a nearby resident, MFR inspected the site and discussed the issues with the licensee. MFR then undertook three distinct actions:

1. MFR examined the forest practices for possible contraventions.
2. MFR regional and provincial staff examined the VAP and evaluated the effectiveness of the harvesting.
3. MFR reviewed how it administered the cutblocks.

4.1 MFR's examination of forest practices for possible contraventions

Section 67 of the Code required that any person who carries out timber harvesting must do so in accordance with an operational plan. The FDP is an operational plan, which in this case included the VAP.

Ideally, an investigation would examine:

- the commitments made in the FDP;
- any conditions applied in the district manager approval; and
- whether forest practices were consistent with the FDP and site plan.

An investigation should examine the visual condition that was achieved and whether the measures specified in the FDP were implemented. Following harvest, Chilliwack MFR compliance and enforcement (C&E) staff examined the area for compliance with the Code.

4.1.1 What did C&E staff use to evaluate the forest practices?

District C&E staff examined the cutblocks in the field and compared their findings to the cutting permit and an appraisal map. On June 5, 2006, staff provided a briefing note to the district manager that summarized what they examined and their conclusions.

The briefing note stated that the Exhibit "A" map (cutting permit) was considered to be the only legal commitment to reserve areas from harvesting. As well, the visual impact of the block exceeded the rVQC for the area, as determined by a qualified assessment. However, the briefing note did not provide details.

The briefing note did not reference the commitments contained in the FDP—namely the VAP. The FDP is an operational plan which contained the VAP and logging plan maps showing locations of the reserves. Therefore, the Exhibit "A" map is, in the Board's view, not the only legal commitment for reserves from harvesting. The measures described in the FDP and VAP must be followed and this includes the logging plans. The briefing note only reflected the block inspection and did not address the cutblocks in terms of visual quality and compliance with the FDP.

4.1.2 What did MFR conclude from its review of forest practices?

On May 24, 2006, MFR staff examined the site to ensure that the block shape, feathered edges, leave tree patches and other measurable commitments were met.

The C&E briefing note cited examples where the retained trees were "marked to leave." However, staff concluded that the amount of screening provided by the retained trees was minimal. As well, they noted that the retained trees were concentrated in dense clumps within each patch.

The briefing note concluded that the retention patches were in the locations identified on the appraisal map and contained the appropriate number of trees. The briefing note said:

> …the three 10% dispersed retention patches that appear as three 'stripes' of retention that span the upper part of the block between the backing and Branches

> 39 and 39C are in place in the locations shown on the appraisal map…The number of retained stems in each patch appears to be roughly 10% (consistent with the appraisal map) but the stems are concentrated in a few dense clumps within each patch…

However, the logging map, dated January 30, 2004, indicates that the three strips were to be 20 percent retention areas, not 10 percent. The logging plan map shows retention patches in the same locations as the appraisal map. Therefore, contrary to the conclusions of the C&E investigation, there were not sufficient leave strips left in the areas above branch road 39 and 39C.

The briefing note goes on to note that the *20 percent dispersed retention areas* above the road located at station 2+299 was not present at all.

The three strips of retention in the top section of the block were less than the prescribed 20 percent, and one 20 percent area to be left in the centre of the cutblock had been removed.

4.1.3 Did the C&E staff bring any alleged contraventions to the district manager for consideration of an administrative penalty?

MFR staff determined that one leave strip was missing. However, they concluded that the level of retention required by the cutting permit was consistent with the level of retention on the appraisal map. Staff considered the context of the FDP, but noted that many of the commitments either were not measurable or were open-ended.

Even though a retention patch was missing and three other retention strips were compromised, bringing this to the statutory decision maker would have been problematic. The VAP contained contradictory statements. It predicted both modification and maximum modification as the achieved visual condition. However, the numerical assessments predicted partial retention. As well, the VAP identified that the retention trees could be at risk of blowdown, and that the retention strips would likely be clumped and not evenly distributed. The VAP also stated the planned retention pattern may require adjustment and that the screening provided by the retention strips would be less than perfect.

Even though the retention strips were insufficient, the achieved visual condition of modification would have been consistent with the VAP. It was unlikely that the district manager would find non-compliance with the FDP, considering the general comments contained in the VAP and the predicted visual conditions.

District staff concluded that, given the statements in the plans that were either open-ended or not measurable, there was compliance. Therefore staff did not bring any alleged contraventions to the district manager for determination of administrative penalties.

4.2 MFR regional and provincial staff examined the VAP and evaluated the effectiveness of the harvesting

In response to the concerns, visual resource management staff from MFR regional office (regional staff) examined the two blocks. As well, the visual resource management specialist from the ministry's Forest Practices Branch (Branch staff) reviewed the cutblocks and the visual quality management.

The regional staff accompanied the district C&E staff to the field and discussed the visual components with them. It was clear to them that cutblock 39 (cutblock 40 wasn't harvested at this point) was exceeding the partial retention class when viewed from the Lake Errock Post Office and South Lake Errock viewpoints. A formal report was not filed.

Branch staff reviewed and analysed the FDP commitments (including the VAP) and the achieved visual condition and provided this to the district manager. The district used this information in a review of its administration of the forest development plan.

Both the regional staff and the Branch staff concluded that the harvested cutblocks were in the modification to maximum modification category. In addition, the Branch report to the district manager identified many issues with the VAP and with the completed harvesting.

4.2.1 Concerns with the VAP

One of the Branch staff's concerns was the accuracy of the simulations. One simulation (Lake Errock Post Office) depicted the two cutblocks on the wrong landform (location). The result was the incorrect conclusion that the cutblocks would be screened from view. This inaccuracy was the principle reason why the blocks exceeded the numeric assessment of partial retention from this viewpoint.

Another concern was the numeric assessment itself. The calculations used by the licensee were applied to the total scene in the landscape unit, as opposed to a single landform.[5] This understated the visual impact. The percent alteration calculation is to be applied to a landform. A scene consists of several landforms so, by applying the calculation to the entire scene, the percentage change is significantly less.

The selection of viewpoints that capture both the most significant and the best view of the proposed cutblocks (and therefore the worst case scenario) should be used. The viewpoints showing the most impact were thought to be from the surface of Lake Errock, and from Kilby Beach. The licensee used three viewpoints that had been used in the inventory of the area. However, visual assessments and simulations require that the licensee choose viewpoints of significance. Those are not always the same as those used in the inventory.

[5] Appendix 8 of the 2001 *Visual Impact Assessment Guidebook* contains the procedure to determine percent alteration.

The Visual Impact Assessment Guidebook states:

> Complete the assessment from the viewpoint(s) that provide the best view of the land-form or unit on which the proposed operation is to occur. These viewpoints may or may not correspond to those shown on the visual landscape inventory map. Confirm the viewpoint(s) selection with the district office.

Regional and Branch staff believe the licensee should have also simulated the views from two of most publicly significant viewpoints—from South Lake Errock and from the Bayview Road neighbourhood.

4.2.2 Concerns with the harvested cutblocks

The Branch report discussed the visual impact of the harvested cutblocks. The report concluded that the blocks were both angular, not irregular, in shape. They contained insufficient retention patches, which were placed equidistant within the block, producing an unnatural appearance. As well, the final block appeared to be out of scale with the environment. The upper and side boundaries were straight in appearance; the upper boundary did not appear to be softened by a feathered edge.

In summary, the Branch report concluded that one of the VAP simulations showed the two blocks in the wrong location from the Lake Errock Post Office viewpoint. This underrepresented the visual impact from that viewpoint. Additionally the harvested cutblock did not have as much timber in the leave strips as the VAP design illustrated and what was left had an unnatural appearance.

4.3 District review of the administration of the cutblocks

Subsequent to the C&E investigation, district MFR staff reviewed their administration of the FDP to see if further refinements were needed to their procedures.

They concluded that the existing procedures were sufficient. Nevertheless, the district added five factors that staff should examine when reviewing VAP submissions. However, that procedure is becoming redundant as FSPs replace FDPs as part of FRPA. All forest harvesting approved after December 2004, must be consistent with established VQOs under FRPA.

Notably, with FSPs, the MFR review of individual impact assessments is eliminated. Instead, the ministry ensures that FSPs contain results or strategies that are consistent with government objectives. Under FRPA, the ministry scrutiny of preliminary designs (digital terrain modelling) no longer happens. It is up to the licensee to ensure that its cutblock designs are consistent with the government objectives.

Conclusions

In response to the complaint, the Board investigated and identified several issues that occurred during the planning, approval and harvesting operations that all contributed to the unexpected visual impact of the cutblocks. The Board concluded as follows.

1. What was the recommended visual quality class and what measures did the licensee propose to manage the scenic area?

The two cutblocks were in a scenic area that had a rVQC of retention. The Code defined retention as forest activities that were not visually evident. The licensee was not required to achieve the rVQC, but was required to specify measures to manage visual impacts in its FDP. To meet this obligation, the licensee conducted a visual assessment of the proposed cutblocks to examine how the harvesting might affect visual quality.

The licensee said in its FDP that, despite the rVQC of retention, the cutblocks would have to be visually evident. However, the cutblocks would be designed to soften the visual impact by making the altered landscape appear natural. The proposed cutblocks were to be irregular in shape; leave strips (patches of timber to be left standing) were to create a series of varied openings with little evidence of block edge; and the cutblock edges would be feathered (thinned) to make them less evident.

2. Why did the Ministry of Forests and Range approve the two cutblocks that would exceed the recommended visual quality class of retention?

Under the Code, approval of an FDP involves discretion. The acting district manager had the discretion to consider the measures proposed in the FDP to manage the scenic quality of the area and to balance this with other forest values and resource use. That is what happened here; the acting district manager balanced the scenic values with the economic needs of the licensee. The acting district manager considered the licensee's commitments in the visual assessment package, and the strategies proposed by the licensee to lessen the visual impact using good cutblock design, and concluded that the measures in the FDP were adequate. The acting district manager also considered the good past performance of the licensee when it approved the proposed FDP.

3. What did the licensee do in response to the concerns with the harvesting of the cutblocks?

As harvesting progressed, the licensee encountered a significant blowdown problem and, in one case, an entire leave strip toppled. The licensee discussed the problem with the MFR district staff and altered its harvesting for the remaining portions of the cutblock to retain more trees. The licensee also adjusted its prescription for the adjacent cutblock.

4. What was the Ministry of Forests and Range's response to the harvesting concerns?

In response to a complaint from a local resident, MFR inspected the site and discussed the issues with the licensee. MFR then undertook three distinct actions.

First, MFR district staff examined the forest practices for possible contraventions and, in particular, examined the cutblocks on site to ensure that the block shape, feathered edges, leave tree patches and other measurable commitments had been achieved.

MFR staff identified one proposed leave strip that was not left on the cutblock as had been planned, but concluded that the overall level of retention achieved was consistent with what was required by the cutting authority and what was indicated on the appraisal map. The Board investigation found more deficiencies than the ministry. However, MFR district staff noted that many of the strategies and commitments in the FDP were either not measurable or were open-ended, which affected enforcement.

Second, MFR district staff asked regional visual resource management staff and Forest Practices Branch visual resource management specialist to review the visual quality management on the cutblocks. Both noted problems with the accuracy of the visual impact assessment. As well, they examined the visual impact that was actually achieved, and concluded that the blocks were angular rather than irregular in shape and contained insufficient retention patches which were placed equidistant within the block. The regional and Branch staff concluded that result was "modification" to "maximum modification" visual quality. That was significantly different from the objective of partial retention, as anticipated in the numerical assessment section of the VAP.

Third, MFR district staff reviewed the administration of the FDP to see if further refinements were needed to their procedures. They concluded that the existing procedures were sufficient for operations under the Code. However, they noted that the procedure would become redundant when FSPs under FRPA replaced FDPs approved under the Code. All forest harvesting approved after December 2004, must be consistent with the established VQOs under FRPA.