

**Spelkúmtn Community Forest**  
**Preliminary Visual Impact Assessment for:**  
**Blocks GR1000, GR1001, GR1001A**

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Date prepared: November 8, 2022



A handwritten signature in blue ink, appearing to be "Adrian Litz", written below the professional seal.

**Introduction**

This preliminary visual impact assessment is being completed for the following blocks:  
Blocks GR1000, GR1001 and GR1001A.

The blocks are located on lower slope positions on the lower slopes of Mount Currie across the Green River from the Pemberton Airport. (see Appendix A-Viewpoint Map). The blocks are located on rolling, broken and benched sidehill terrain on northerly aspects. The visible landscape in the vicinity of the blocks can be described as a visual mosaic with a variety of natural and altered shapes, textures and canopy heights present. There are talus slopes, landslide scars, mid-slope ridges and benches, avalanche tracks, road right of ways and previously harvested areas representing a variety of age classes. There are several recently harvested (8-10yrs) cut blocks adjacent to these planned areas. The previously harvested areas have all achieved effective visual greenup with average crop tree heights of 3.5m and a vigorous tall woody shrub layer averaging 4m height, the combined vegetation layers in these younger cutblocks provides effective visual green-up of these areas. Observed current site conditions are that the adjacent previously harvested areas are not visible or are mostly screened from significant public viewpoints by the tall deciduous (black cottonwood) stand which border the Green and Lillooet Rivers. The stands will also screen the majority of the proposed blocks from view. The blocks are distributed across Visual Sensitivity Unit (VSU) #152. The blocks are potentially visible from the following areas which have been identified as Significant Public Viewpoints as shown on the attached Viewpoint Map:

- VP #3 – from center of neighborhood of Mt Currie New Site IR6
- VP #5 – from the intersection of Rancheree St / Rancheree Road, IR1
- VP #8 – From the clubhouse vicinity of Sunstone Golf Club
- VP #10 - from the Pemberton Airport terminal buildings

Based on visual renders and on field observations these VPs have been identified as the significant viewpoint locations where the blocks will be most visible / have the greatest visual impact. The viewpoints selected represent areas where members of the public may gather and observe views of the surrounding landscape and from where the blocks are expected to be most visible

None of the blocks included in this analysis are anticipated to be visible from the village of Pemberton.

The blocks are planned for ground-based logging systems utilizing hoe forwarding techniques. The blocks will all have a component of internal retention of mature trees distributed as dispersed individuals or as small clumps of retained trees.

The VSU containing these blocks which will be assessed by this VIA has the following inventory descriptors based on the Sea to Sky District Landscape inventory (classified according to the Visual landscape Inventory Procedures and Standards Manual). All of the blocks assessed in this VIA are within a portion of the landscape with visual objective of **Partial Retention**. The visual inventory information for the visual polygon being assessed within this report is described in table 1.

**Table 1**

	<b>VLU #152</b>
Visual Quality Objective (VQO)	PR (Partial Retention)
Existing Visual Condition (EVC):	M (Modification) updated to PR (Partial Retention)
Visual Absorption Capacity (VAC):	H (High)
Visual Sensitivity Class (VSC):	3 - Moderate

The visual landscape inventory describes VLU #152 as having an existing visual condition of Modification (M). However, this descriptor is based on the condition of the visual landscape at the time of the last district level data capture in 1993. All harvesting within these VLU's contributing to the 1993 ranking have achieved visual green-up. The existing visual condition has been updated (by report author) to Partial Retention, which reflects the current status of the visual landscape.

Under Part 1, Section 1.1 of the Forest Planning and Practices Regulation (B.C. Reg. 269/2010), **Partial Retention** is defined as:

*Partial Retention: consisting of an altered forest landscape in which the alteration, when assessed consisting of an altered forest landscape in which the alteration, when assessed from a significant public viewpoint, is*

- (i) easy to see,*
- (ii) small to medium in scale, and*
- (iii) natural and not rectilinear or geometric in shape;*

The BC Forest Practices Code Visual Impact Assessment Guidebook – 1997, provides a method for completing a numerical assessment of the percent alteration to a visible

landform from previously harvested and existing non-greened-up cutblocks as well as from proposed harvesting. The Guidebook and provides targets for the range of the alteration percentage which are recommended to be achieved to meet the VQO defined in the FPPR. The guidebook recommends that for partial retention, the percentage alteration to the visible landform is between 2.1% to 7.0%.

This Visual Impact Assessment (VIA) will assess the project blocks for consistency with the regulatory objective of the blocks to meet the definition of partial retention (as provided above) and provide a numerical assessment (as per Guidebook methodology) to assess the percent alteration of the visual landscape anticipated from existing and planned harvest to demonstrate consistency with the alteration limits for the assigned VQO for each VLU.

The regulatory and numerical assessments have been completed utilizing Digital Terrain Models (DTMs) which produce simulations of the expected views from identified viewpoints by modeling the planned block shape on the existing landscape. The DTMs were produced using *Nature Studio 2* software utilizing a 1:20,000 scale TRIM digital elevation model. The digital (GIS) information utilized in creation of the DTMs has been provided by Lil'wat Forestry Ventures and by the MoFLNRO "Land and Data Warehouse". The information is somewhat limited in detail (i.e. 20m TRIM contours) and therefore the model cannot predict fine scale outcomes which may occur due to unforeseen unique local topography.

*Google Earth* imagery was utilized during the planned view assessments and to identify the most significant viewpoints.

### **Visibility of the blocks and viewpoint selection**

This assessment addresses the visual impact of the blocks from 4 viewpoints (VP #3, #5, #8, #10) as described above. The VP's have been identified as locations where the potential for visual impact from logging is likely to be most evident. The viewpoint map identifies the location of the selected VPs. (See Viewpoint Map – Appendix A)

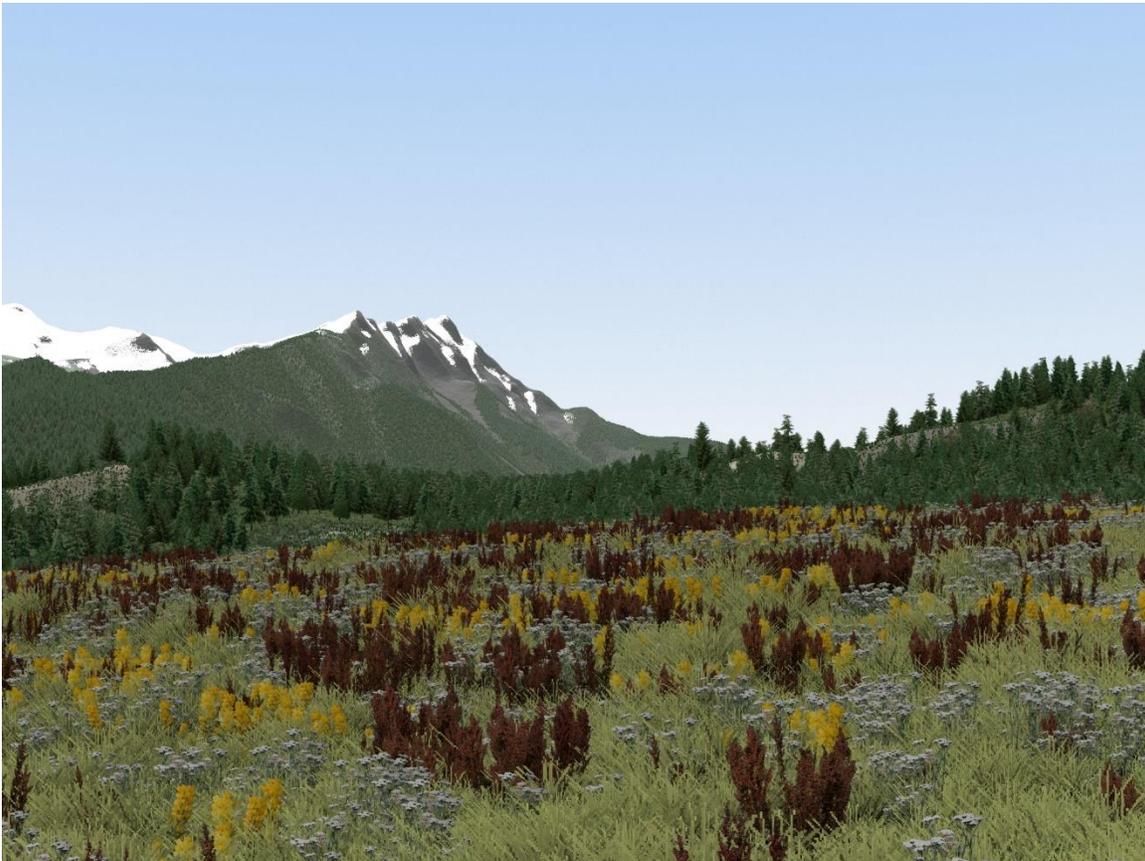
### **Visual Design**

The 3 blocks assessed in this VIA have been engineered with good visual design principles to mitigate / minimize their visual impact when viewed from significant public viewpoints. Design elements that have been implemented include the following:

- The blocks are designed with somewhat natural appearing boundaries which mimic patterns of disturbance present on the landscape. Talus slopes, landslide scars, avalanche paths and previously harvested areas representing a range of age classes are present across the visible landscape. The visual mosaic resulting from these features is a non-uniform complex with a range of shapes and textures present which increases the ability of the planned disturbance to be absorbed / blend into the visual landscape.
- The blocks are somewhat irregular and organic in shape in both plan view and perspective view. Sharp angles and linear boundaries have been avoided as much as practicable.

- The blocks have been designed to fit into the terrain and aligned so that the blocks are screened by and/or blend with natural landscape features and patterns or existing forest cover.
- The blocks have been designed with strategic placement of retention patches and wildlife tree retention areas, to provide additional screening and decrease visibility of planned harvesting.
- All blocks are planned to reserve a component of the standing timber within the harvest boundaries, as scattered individual stems and small clusters. These trees, although not represented in the DTMs which have been produced, will serve to decrease block visibility, soften sightlines and contribute to the organic appearance of the blocks.

**Visual Assessment Analysis based on the visual simulation models and photographs**  
**VP3 – View 1**



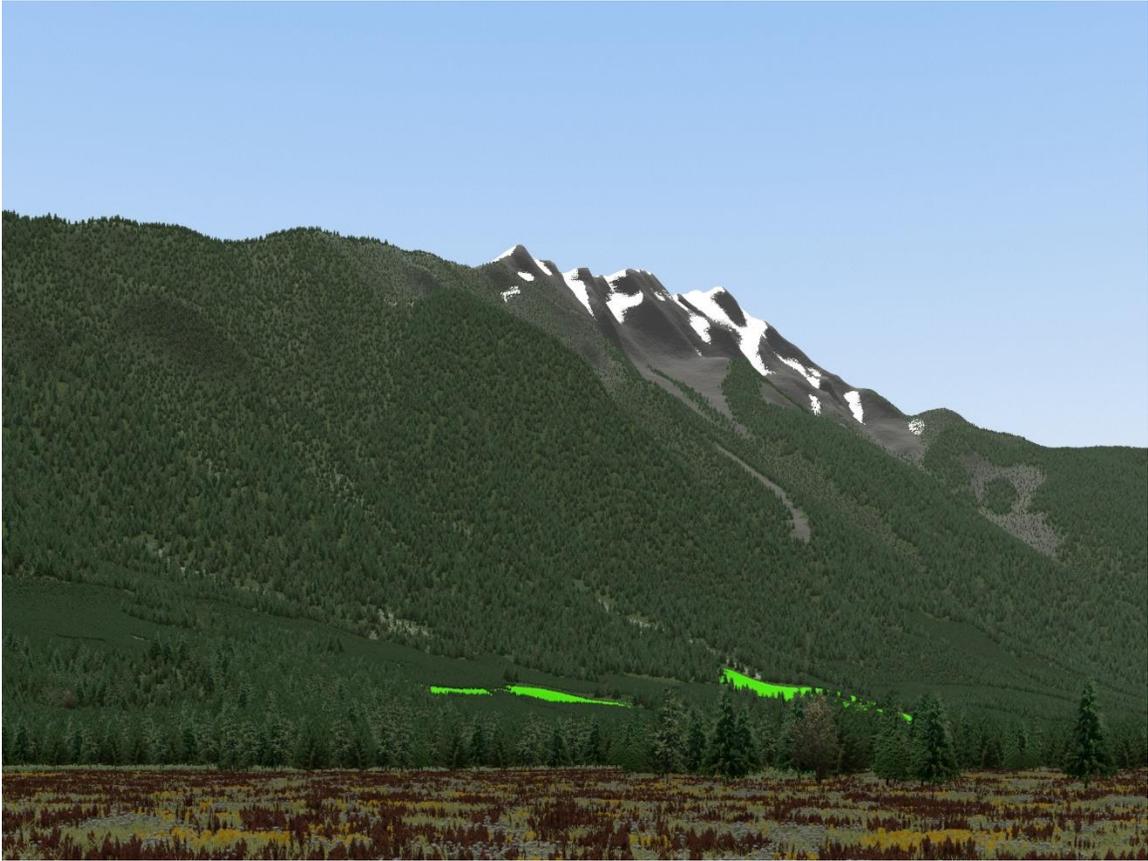
**Visual Simulation #1:** GR1000, 1001 and 1001A as viewed looking SouthWest from viewpoint #3 (IR6 new site) at VLI polygon #152. This view illustrates that the blocks will not be visible from this location due to screening from foreground terrain.



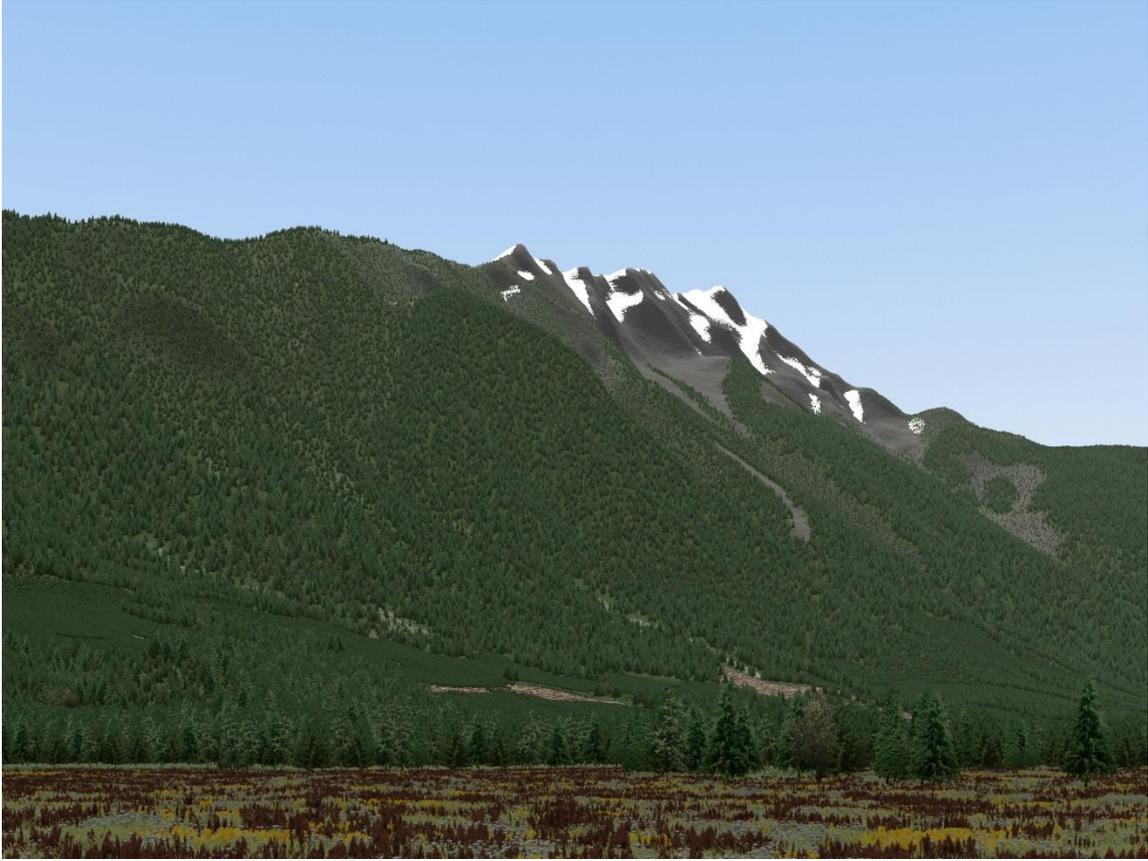
**VP 3 Actual View:** GR1000, 1001 and 1001A as viewed looking SouthWest from viewpoint #3 (IR6 new site) at VLI polygon #152. This actual view illustrates that the blocks will not be visible from this location due to screening from foreground terrain

**VP 3 Assessment:** The visual simulation of the expected view looking SouthWest from VP3 illustrates that the post-harvest view of blocks GR1000, 1001, 1001A will meet the FRPA definition for “Partial Retention” assigned to VLI polygon #152. The blocks will not be visible from this location and there is no visual impact from these blocks when viewed from IR6 townsite.

## VP5 – View 2



**Visual Simulation #2:** Block GR1000, 1001 and 1001A as viewed looking SouthWest from viewpoint #5 (intersection of Rancheree St and Rancheree Road – IR1) at VLI polygon #152. This view highlights the portions of planned blocks with the potential to be visible from VP5(green highlight). This visual simulation does not account for the presence of the mature cottonwood stand that exists between the VP and the block location. Actual views of the area, as illustrated by the photograph below, suggest that none of the block area will be visible.



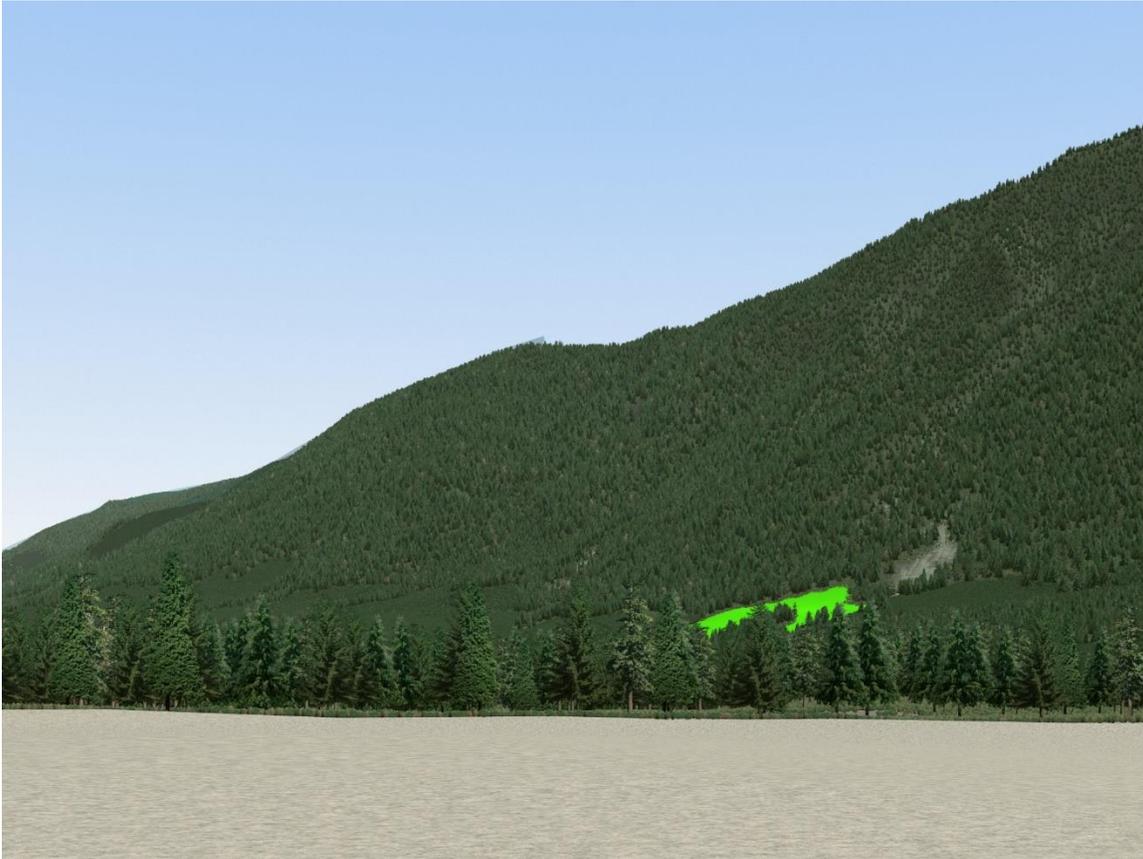
**Visual Simulation #3:** Block GR1000, 1001 and 1001A as viewed looking SouthWest from viewpoint #5 (intersection of Rancheree St and Rancheree Road – IR1) at VLI polygon #152. The view represents the actual expected post-harvest view. The planned 5-10sph retention distributed across the harvest areas as individual retention trees and as small clumps are not represented in the model. The simulation does not account for the foreground screening effect from mature stands along the Green and Lillooet rivers.



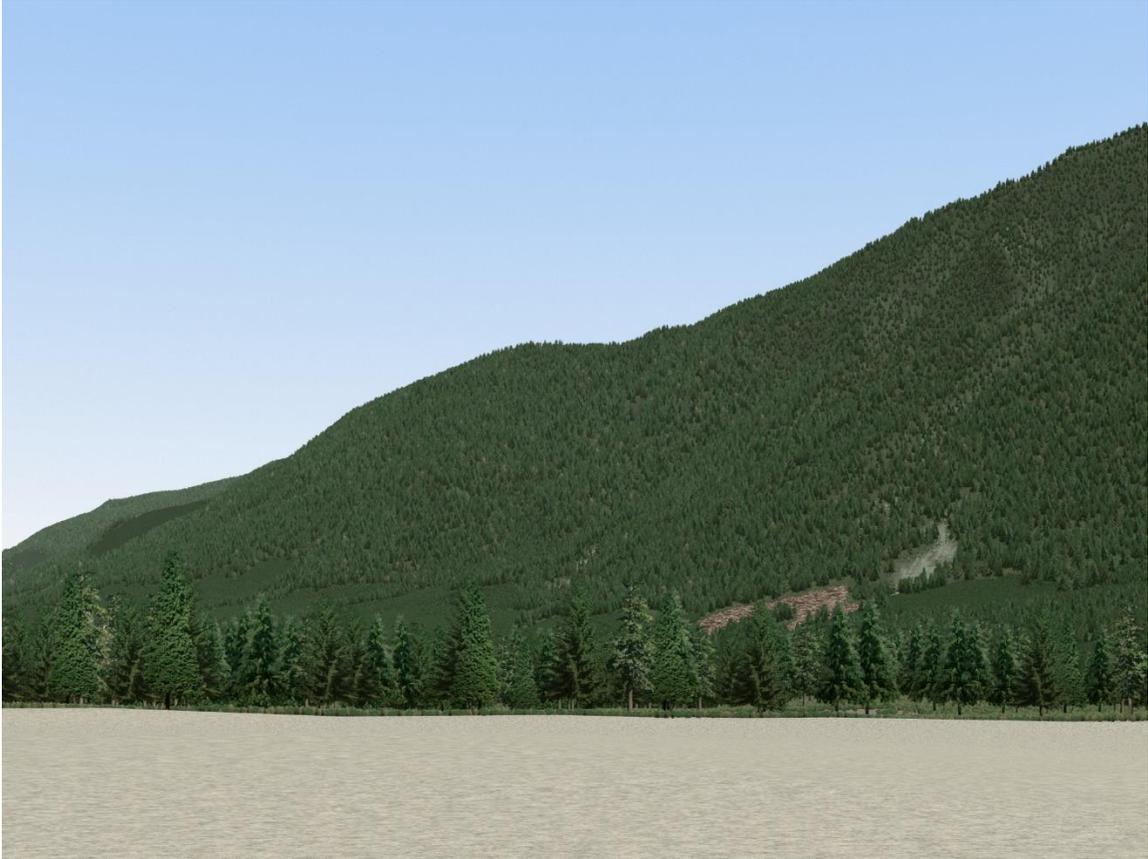
**VP 5 Actual View:** Block GR1000, 1001, 1001A as seen from Viewpoint 5 (VP5). The view represents the actual pre-harvest view. This view illustrates that the block locations will be screened from view by foreground vegetation

**VP 5 Assessment:** The visual simulation of the expected view looking Southwest from VP5 illustrates that the post-harvest view of blocks GR1000, 1001, 1001A meet the FRPA definition for “Partial Retention” assigned to VLI polygon #152. The blocks are not expected to be visible from this location due to screening from foreground vegetation. The general surrounding area of these cutblocks are a mosaic of forest types / land cover and the harvested blocks are expected to blend with the existing patterns, further decreasing the overall visual impact expected from these blocks.

### VP8 – View 3



**Visual Simulation #4:** Block GR1000, 1001 and 1001A as viewed looking SouthEast from viewpoint #8 (Fairway of Sunstone Golf course) at VLI polygon #152. The view represents the actual expected post-harvest view. This view highlights the portions of planned blocks with the potential to be visible from VP8 (green highlight). The planned 5-10sph retention distributed across the harvest areas as individual retention trees and as small clumps are not represented in the model. The simulation does not account for the foreground screening effect from mature stands along the Green and Lillooet rivers.



**Visual Simulation #5:** Block GR1000, 1001 and 1001A as viewed looking SouthEast from viewpoint #8 (Fairway of Sunstone Golf course) at VLI polygon #152. The view represents the actual expected post-harvest view. The planned 5-10sph retention distributed across the harvest areas as individual retention trees and as small clumps are not represented in the model. The simulation does not account for the foreground screening effect from mature stands along the Green and Lillooet rivers.



**VP 8 Actual View:** Block GR1000, 1001 and 1001A as viewed looking SouthEast from viewpoint #8 (Fairway of Sunstone Golf course) at VLI polygon #152. The photograph illustrates that the existing tall cottonwood tree cover lining the banks of the Green River will provide effective screening for these blocks and no visual impact is expected.

## VP10 – View 4



**Visual Simulation #6:** Block GR1000, 1001 and 1001A as viewed looking South from Pemberton Airport at VLI polygon #152. The green highlight illustrates the potential area which could be visible from this location, the model does not account for the visual screening effects which will result from the presence of foreground forest cover.



**Visual Simulation #6:** Block GR1000, 1001 and 1001A as viewed looking South from Pemberton Airport at VLI polygon #152. This view illustrates the potential post harvest view that could be expected from the Pemberton airport. Foreground vegetation which will serve as an effective screen is not accounted for in the model.



**VP 10 Actual View:** Block GR1000, 1001 and 1001A as viewed looking South from viewpoint #10 (Pemberton Airport) at VLI polygon #152. The photograph illustrates that the existing tall cottonwood tree cover lining the banks of the Green River will provide effective screening for these blocks and no visual impact is expected.

### Summary of Visual Impact Consistency with FRPA definitions

To summarize, all of the above visual simulation models demonstrate that all blocks assessed in this analysis within visual polygons #151, #157 and #159 are consistent with the FPPR definition of “partial retention” in that they are easy to see, small in size and non-geometric in shape.

Viewpoint / View	Polygon #	Blocks Visible	VQO	Pre-logging analysis post-harvest condition
VP 8 / View 3 VP 10 / View 4	152	GR1000, 1001, 1001A (potential visible)	PR	PR

### Numerical Assessment

A numerical assessment of the percent alteration to the visible landform (total percentage of visual impact to a defined viewscape), has been completed from VP8 and VP10. These VPs were selected as they represent the locations from which the blocks have the most potential to be visible. The percent alteration calculations represent the worst case scenario as the models used to calculate the expected alteration do not account for the significant visual screening provided by the mature deciduous forest cover that exists along the Green River. The actual percent alteration expected is less than the values presented below.

The numerical assessment was completed using digital mapping in the perspective view. The assessment identified the visible landform (by total number of pixels) and then calculated the number of pixels within the altered visual landscape within the visual landform. The alteration to the visual landscape was calculated as the percent of the visible landform which would be expected to be visually altered by the planned harvest or from existing currently non-greened up cutblocks.

Perspective Viewpoint Analysis #1 and #2, provided in Appendix B, indicate that the percent alteration to the visible landform from blocks both non-greened up and proposed for harvest is:

- VP #8 (VSU polygon 152) = 0.84%
- VP #10 (VSU polygon 152) = 1.18%

1. The numerical assessment of percent alteration to the visual landscape was completed for VSU polygon 152 from VP8. The assessment is provided with the perspective viewpoint analysis 1 (Appendix B). The analysis shows that the total percentage of alteration in the VSU, as viewed from VP1 is less than 1% (0.84%). The alteration to the view scape is an alteration that is small in scale. The alteration is within the definition of “retention” which suggests that the more stringent visual criteria of Retention will be met when percent alteration is between 0% and 1.5% alteration. The

blocks will easily achieve the Partial Retention (PR) objective assigned to the polygon.

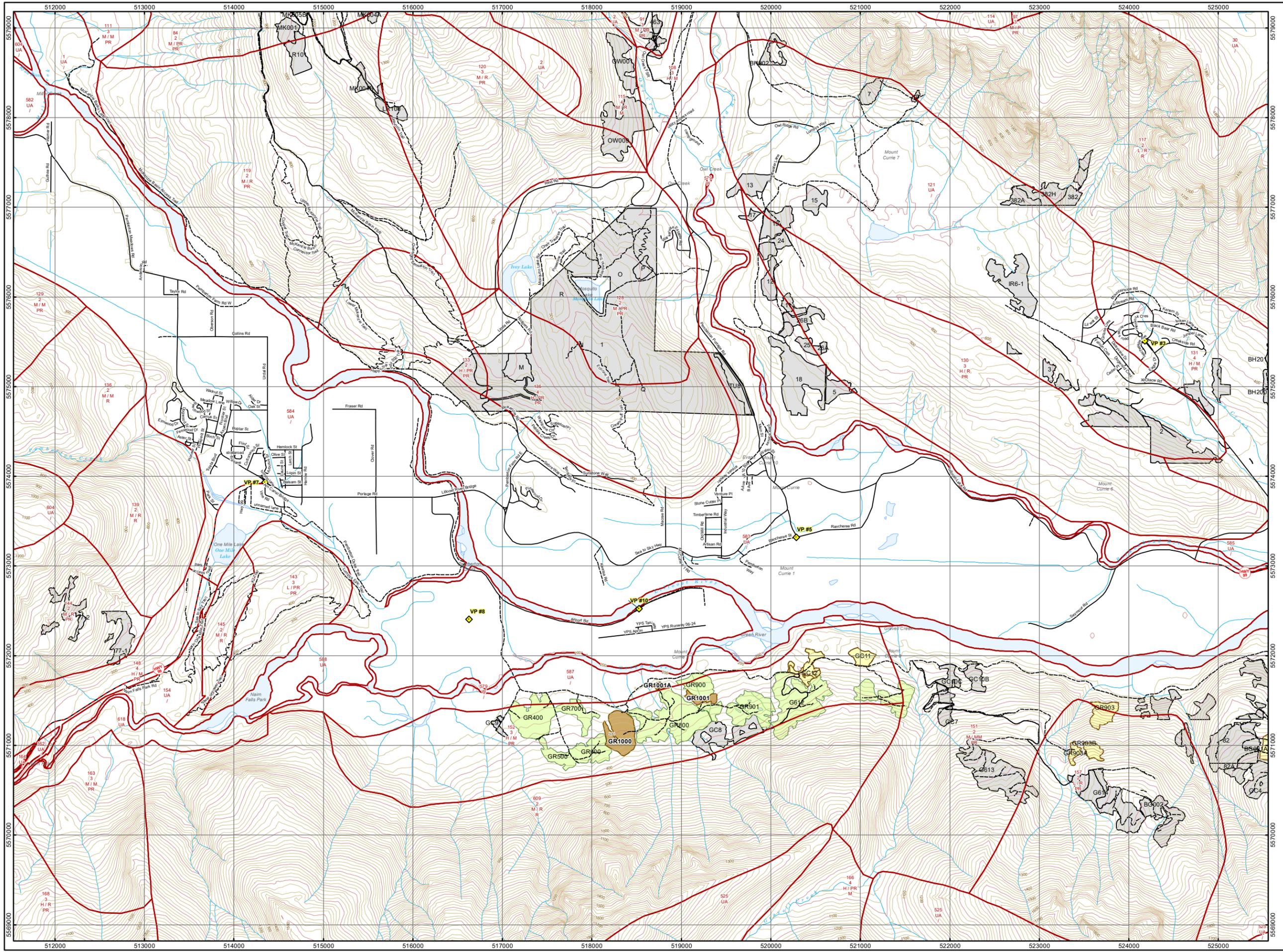
2. The numerical assessment of percent alteration to the visual landscape was completed for VSU polygon 152 from VP10 (Appendix B). The assessment is provided with the perspective viewpoint analysis 1 (Appendix B). The analysis shows that the total percentage of alteration in the VSU, as viewed from VP10 is 1.18%. The to the view scape is an alteration that is small in scale. The alteration is within the definition of “retention” which suggests that the more stringent visual criteria of Retention will be met when percent alteration is between 0% and 1.5% alteration. The blocks will easily achieve the Partial Retention (PR) objective assigned to the polygon.

### **Conclusion**

The analysis of the visual impact of the blocks from the identified viewpoints suggests that the blocks will not be visible or will have significant screening so only small portions of the openings will be visible from any identified VP. The disturbance and alteration to the visual landscape from these blocks will be small in scale and subordinate in the landscape with some natural appearing characteristics, especially when assessed in the overall context of the variable visual landscape such as found in the VSU where harvesting is proposed. Based on the expected amount and type of visual alteration from these proposed blocks it is concluded that the visual impact from these blocks will be consistent with FPPR definition for Partial Retention, assigned to the area.

The numerical analysis of the expected alteration of the visible landscape from the viewpoints analyzed suggest that the blocks will be consistent with the alteration levels of a “Partial Retention” landscape (1.6% - 7.0%) as defined by the Visual Impact Assessment Guidebook (January 2001, BC Ministry of Forests).

**Appendix A: Viewpoint map.**



# Visual Impact Assessment

## Gravel Creek

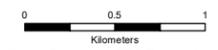
### Legend

- ◆ Project Assigned Viewpoints
  - ◆ Government Assigned Viewpoints
  - Visual Sensitivity Unit (VSU)
  - Proposed Blocks
  - NonVEG
  - Greened Up Block
  - Existing Blocks
  - Retention
- Roads**
- Highway
  - Paved
  - Rough
  - Proposed Lake / River / Ocean
- Water**
- Water
  - Stream

**Visual Polygon Label Key:**  
 Polygon #  
 VSC  
 VAC/EVC  
 VQO

**Visual Sensitivity Unit Label Key:**  
 VSU Visual Sensitivity Unit  
 VSC Visual Sensitivity Class  
 VAC/EVC Visual Absorption Capacity/Existing Visual Condition  
 VQO Visual Quality Objective

**Blocks:** GR1000, GR1001 and GR1001A



Coordinate System: UTM Zone 10  
 Datum: NAD 83  
 Scale: 1:40,000  
 Date: Nov 7, 2022  
 BCGS Map Reference: 92H034, 92H024

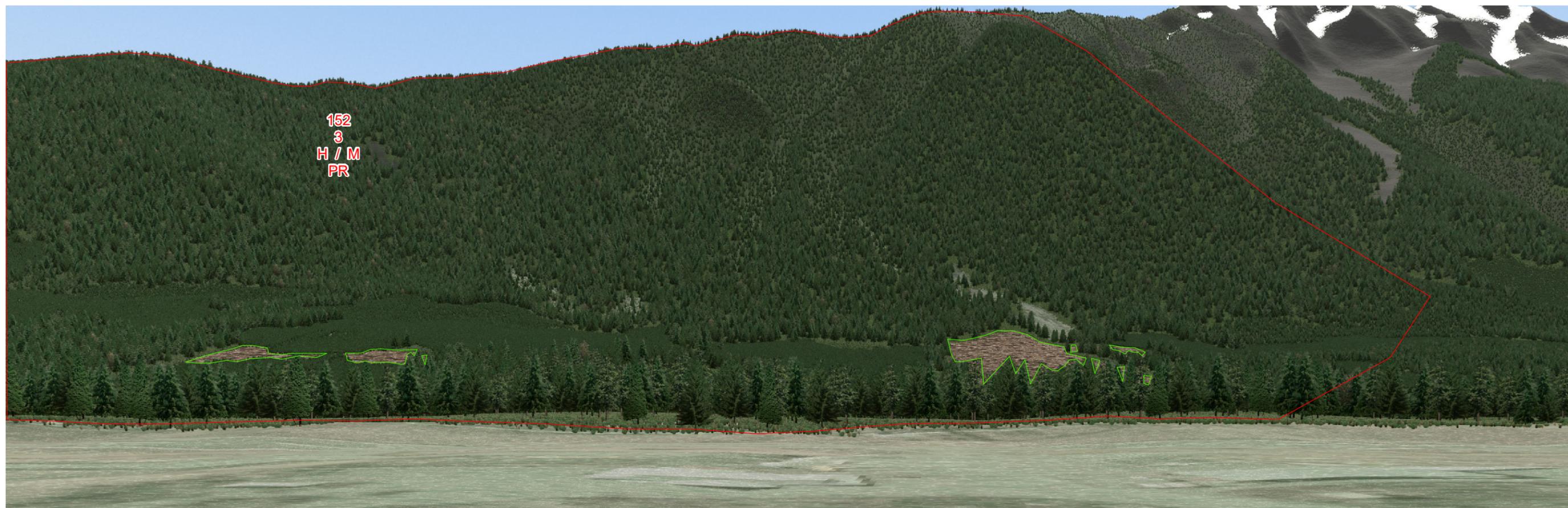


## Viewpoint Map

**Appendix B: Perspective Analyses for:  
VP8, and VP10**

# Visual Impact Assessment

## Perspective Viewpoint Analysis Gravell Creek



**Proposed Blocks: GR1000, GR1001, GR1001A**

**Viewpoint No: 10**

### Visual Inventory Legend



VSU - Visual Sensitivity Unit  
VAC - Visual Absorbption Capability  
EVC - Existing Visual Condition  
VQO - Visual Quality Objective

### Percent Alteration Calculation

Area of VSU = 2142685  
Area of NonVEG Blocks = 0 (0.0%)  
Area of Proposed Blocks = 25285

**Total % Alteration:**  
**(NonVEG + Proposed Blocks) / VSU = 1.18%\***

\*Units of area measured in pixels

### Viewpoint Information

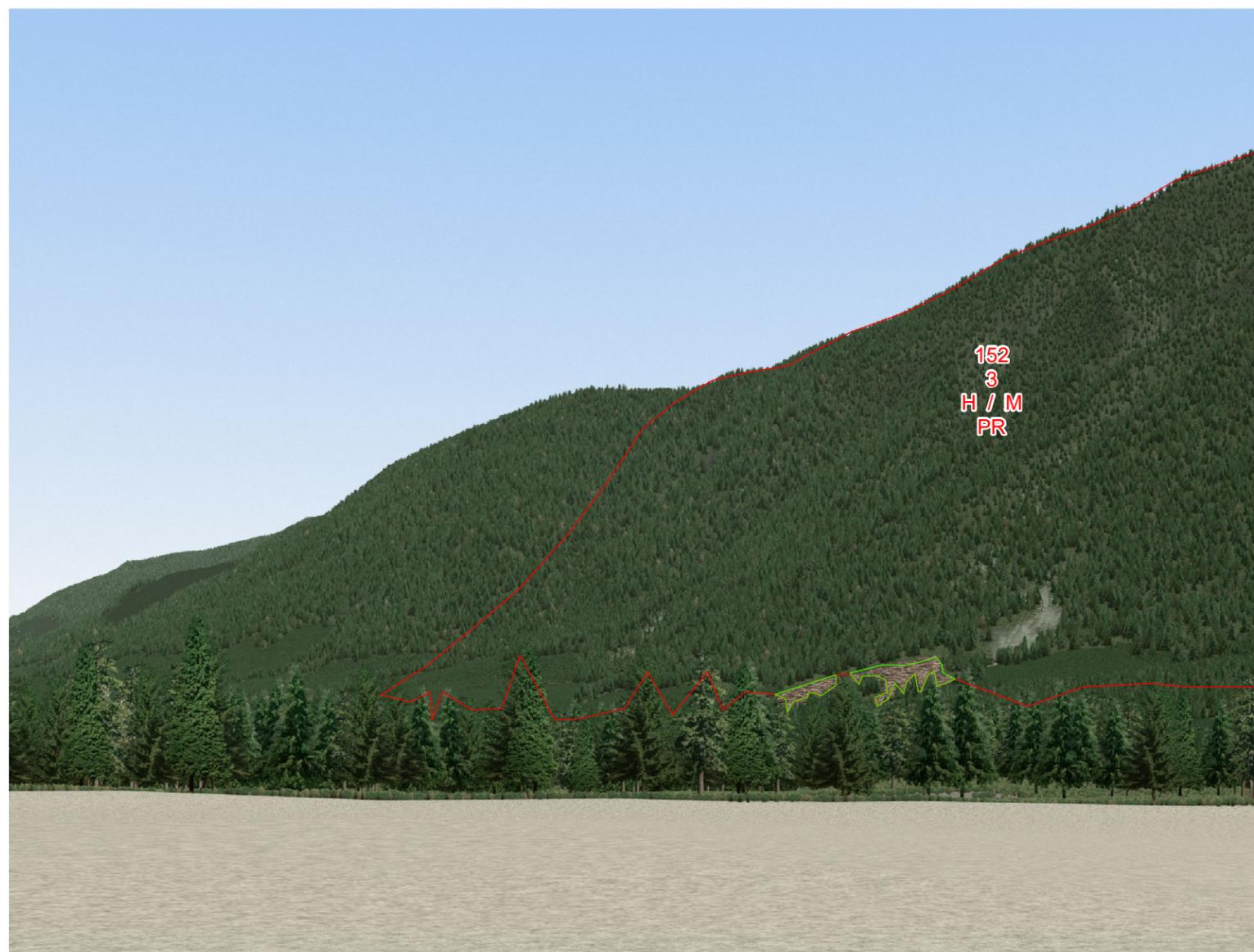
Viewpoint No: 10  
Project Assigned  
Coordinates: 50.3045° 122.7398°

### Legend

- Proposed Block
- NonV.E.G.
- VSU

# Visual Impact Assessment

## Perspective Viewpoint Analysis Gravell Creek



**Proposed Blocks: GR1000, GR1001, GR1001A**

**Viewpoint No: 8**

**Visual Inventory Legend**



VSU - Visual Sensitivity Unit  
VAC - Visual Absorbtion Capability  
EVC - Existing Visual Condition  
VQO - Visual Quality Objective

**Percent Alteration Calculation**

Area of VSU = 716389  
Area of NonVEG Blocks = 0 (0.0%)  
Area of Proposed Blocks = 6009

**Total % Alteration:**  
**(NonVEG + Proposed Blocks) / VSU = 0.84%\***

\*Units of area measured in pixels

**Viewpoint Information**

Viewpoint No: 8  
Project Assigned  
Coordinates: 50.3035° 122.7665°

**Legend**

- Proposed Block
- NonV.E.G.
- VSU