

FLA 93198 Upper Harbour Lake Cutblocks SB8D1 and SB8DD Final Visual Assessment and Recommendations



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Table 10. Predicting VQOs for Partial Cuts

Tree Height (Meters)

15 20 25 Volume (Stems) 40 Removed in % M. M M

Note: There is a 90% or better chance of achieving the VQO shown, within 10-40 m tree height

Note: This table is derived from forest stands within the following parameters. Any extrapolation outside these parameters should be used with caution.

SLOPE	3 -
DBH	17.
TREE HEIGHT	11 -
PRE-HARVEST VOLUME	70
PRE-HARVEST BASAL AREA	21
PRE-HARVEST STEMS	136

RDI ran simulations of the visual effect of just having the dispersed retention without any additional full reserves. RDI concluded that, at the 50tph level of retention, the dispersed retention alone would have a satisfactory effect in SB8DD without additional leave areas. However, the general openness above the road as seen in the simulations from the Middle Viewpoint would likely display a very wide opening without breaks. There would also be greater apparency through the deciduous trees in winter. RDI concludes that SB8D1 requires the minimized reserve units as indicated in the key map to provide structure and strengthen visual force in SB8D1. These were simulated and presented in this document along with the renderings without RDI leave areas from each of three viewpoints – North, Middle and South.

Percent Alteration from the Middle Viewpoint with the RDI leave is 4.8% while without the leave it is 5.8%. Both are within Partial Retention guidelines, though it reaches near the upper limit of 7% without the RDI leave. Percent Alteration from the North and South Viewpoints is predicted to be negligible.

To conclude, the structure offered by the RDI minimized leave areas as predicted from the Middle Viewpoint is desirable as a design attribute for structure, and reduces percent alteration by 1% within Partial Retention visual quality.

Ka B. Jan Junot

Ken B. Fairhurst, PhD, RPF **RDI** Resource Design Inc March 22, 2016

Discussion

This report is the visual assessment incorporating the fourth and final RDI Resource Design Inc ("RDI") reserve area suggestions ("RDI4") for recommended leave areas in FL A93198, within cutblocks SB8D1 and SB8DD. The previous scenarios were address in earlier reports, the latest dated 151208. The landform defined by RDI is the area within Visual Sensitivity Unit ("VSU") 992 on the west side of Upper Harbour Lake directly adjacent to, and behind, the Harbour Dudgeon Lakes Provincial Park. The Park encompasses the Lakes (Dudgeon, Upper and Lower Harbour Lakes) and adjacent shore areas. The Visual Quality Objective ("VQO") for the west viewshed in VSU 992 is Partial Retention ("PR"). Although the VSU map unit included the park, it was not included in this assessment as it does not contribute to the Timber Harvest Landbase.

KDC, the consulting harvest layout contractor, suggested there could be 50 trees per hectare (stems per hectare) of 25-30m height left within the cutblocks with the hope that the dispersed leave trees would offset any need for additional full reserve areas within the cutblocks, other than those previously indicated by KDC. In his e-mail of March 9, 2016, Kurt Dodd stated:

"....at present there are 6-800 stems/ha including deciduous. Timber type is roughly 20% each of Hemlock, Douglas Fir, Cedar, Spruce and Aspen. Heights are 25-30m tall. We would plan to do the retention of stems within the entire block, not just the additional reserves if say 50 stems per ha would meet visuals. The public sensitivity at this lake is very low. There is no road access to the lake and it is mainly used by one family that has a cabin on the lake that they access with their float plan. There is the odd person that might walk in occasionally, but those numbers would be very low as it is a 2.5 hour drive from Clearwater to get there."

The Ministry document "Visual Impacts of Partial Cutting" provides a table for calculating achievable Visual Quality Class based on tree height and percent of stems removed. Given the reported 600-800sph and 30m tree height, achieving Partial Retention would require a limit of up to 50% removal, or 300sph. However, the research document appears to ignore the shape and size of the cutblocks relative to the landform, and actual slopes relative to the viewpoints (apparency), therefore site-specific assessment is required.

The 50 tph appear to add significant visual screening below the main road, but much less above the road as seen from the Middle Viewpoint. Given the likelihood of random leave tree scatter and very light retention as seen above the road, RDI must encourage having two minimized leave areas in addition to those previously delineated by KDC. Exposure from the other two viewpoints is predicted to be negligible.

Visual Impacts of Partial Cutting

30	35	40	45	50
R	R	R	PR	PR
R	PR	PR	PR	PR
PR	PR	PR	PR	PR
PR	PR	PR	PR	M
PR	PR	M	M	M
М	M	M	M	M
M	M	M	M	M
M	M	M	М	M
М	M	M	М	M

47%	
5 - 86.3 cm	
- 39 m	
- 844 m³/ha	
- 68 m²/ha	
6-1150 /ha	





no RDI Leave - no visible difference



Photos from east shore near North Viewpoint by KDC Panorama by RDI

Upper Harbour - North Viewpoint Round 4 - 50tph and with and without RDI leave



6284



with RDI Leave -strengthened structure and visual force linkage through cutblock SB8D1



Upper Harbour - Middle Viewpoint (Round 4) 50tph and with and without RDI leave 6284



Upper Harbour - Middle Viewpoint (Round 4) 50tph and with and without RDI leave - Percent Alteration With RDI Leave - 4.8% Alteration in perspective view

With no RDI Leave - 5.8% Alteration in perspective view



with RDI Leave



no RDI Leave - no difference

Upper Harbour - South Viewpoint Round 4 - 50tph and with and without RDI Leave 1178+6284

RDI Resource Design Inc December 11, 2015