



September 5th, 2025

Forbes Symon, MCIP RPP
Senior Planner
Jp2g Consultants Inc.
12 International Drive
Pembroke, ON K8A 0A7

Dear Forbes Symon:

**RE: Cavanagh Proposed Highland Line Pit - Visual Assessment for Barbers Lake
OUR FILE 0851E**

In response to the Cavanagh Highland Line Pit application, comments have been received through the application review process about the potential for visual impacts on Barbers Lake. MHBC has completed a visual assessment in order to provide additional information on the potential views of the proposed pit during site operation and of the final rehabilitated landform from several viewpoints along Barbers Lake.

To assist with the visual assessment, photos from a drone flight were taken in July 2025 from several viewpoints along Barbers Lake towards the site (**Attachment 1**). Photos were taken at a height of 4 m above the water level. The approximate location of the site is identified on the photos.

The visual assessment was conducted in ArcGIS Pro with 3D Analyst Tools. Six observation locations were selected throughout Barbers Lake. Based on an assumed observation height of 1.5 m above the lake's surface, a viewshed analysis was undertaken to determine potential visible areas from each observation location.

Several operating scenarios were assessed as it relates to the Highland Line Pit:

- **Figure 1:** Extraction at full-depth (rehabilitated landform of above water pit floor and elevation of pit lakes)
- **Figure 2:** Processing plant operating at the maximum permitted elevation of 188 masl with 12 m aggregate stockpiles with the top of the stockpile at an elevation of 200 masl.
- **Figure 3:** Processing plant operating at the maximum permitted elevation of 188 masl with 15 m aggregate stockpiles with the top of the stockpile at an elevation of 203 masl.

Figures 2 & 3 represent worst-case conditions in that they were assumed that stockpiles would be located throughout both extraction areas in their entirety. However, this would not occur in the operation of the pit due to several factors including that stockpiles would be limited to locations near

the processing plant and that the pit would be subject to a maximum disturbed area. It also does not take into account the phasing of the pit including locating operating equipment and stockpiles behind working pit faces.

The results of the visual assessment as presented in **Figures 1 to 3** are that no views of the Highland Line Pit site under the assumed operating scenarios are visible from the six observer locations on the lake.

The surface elevation of Barbers Lake is 182 masl. The extraction limit closest to Barbers Lake ranges in elevation from 186 masl to 192 masl. The separation distance between the proposed pit and Barbers Lake is approximately 100 m at its closest point.

Figure 4 overlays the licence boundary and extraction limit on an updated airphoto of the site. This figure illustrates the vegetation between the lake and site which will not be disturbed by the pit operation. The vegetation communities within this area including White Pine-Sugar Maple Mixed Forest, White Cedar Organic Swamp, and Cattail Organic Shallow Marsh.

Yours truly,

MHBC



Neal DeRuyter, BES, MCIP, RPP

Encl. Attachment 1

Figure 1

Figure 2

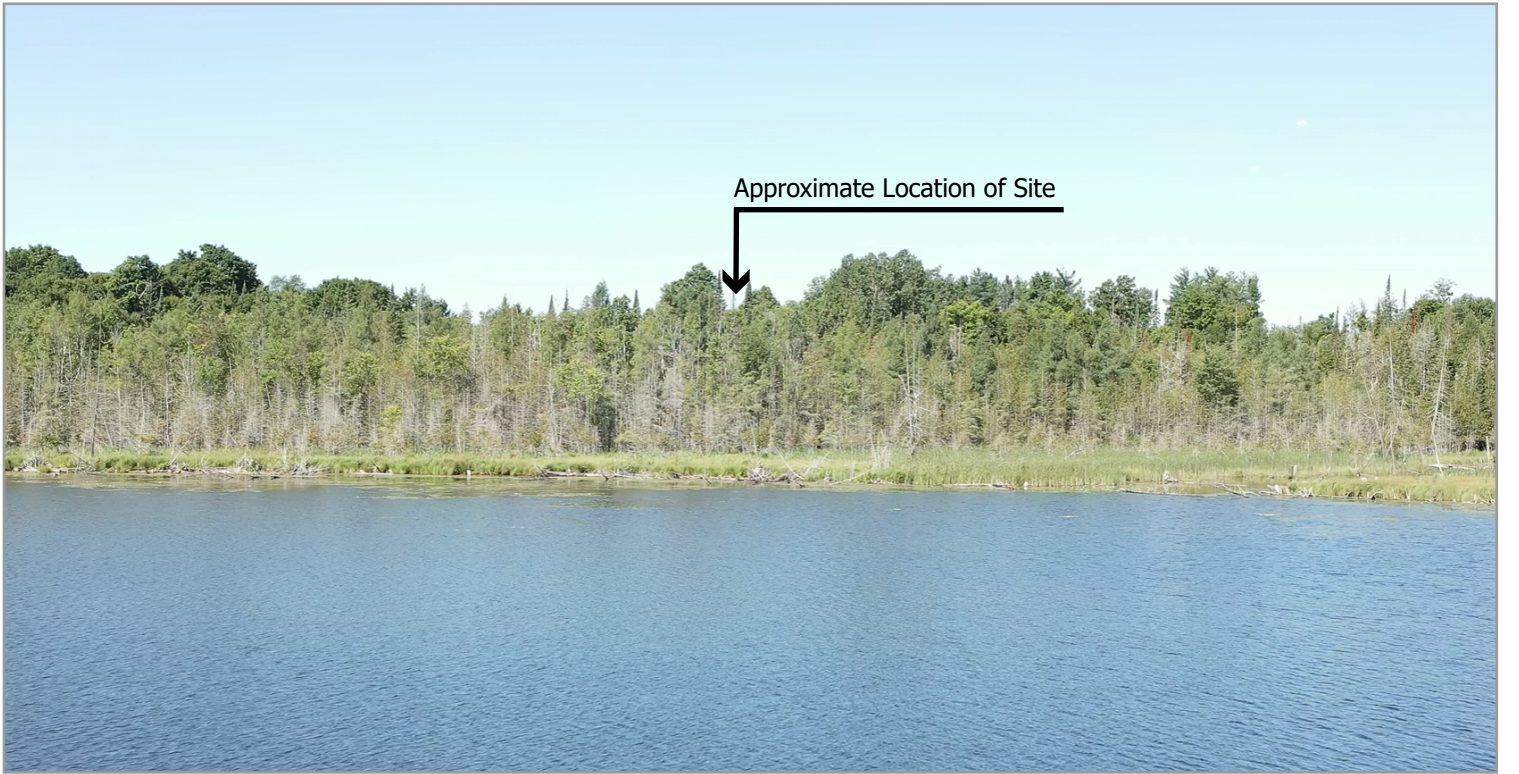
Figure 3

Figure 4

cc. Phil White, Cavanagh
Kris Marentette / Brian Henderson, WSP
Chelsea Brooks, MHBC



Attachment 1 - Photos from Barbers Lake towards Site



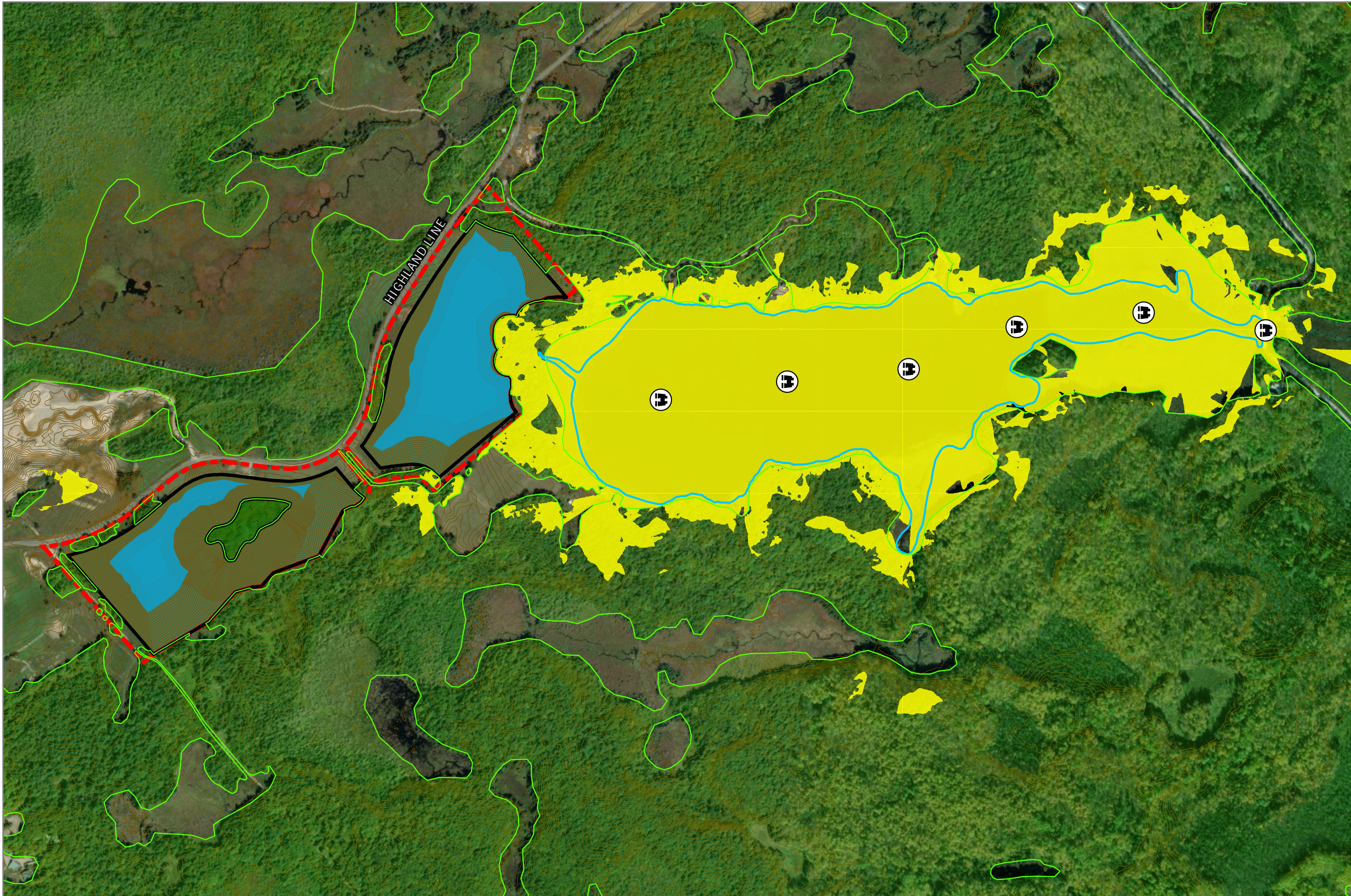




Figure 1 - Visibility Analysis:
Full-Depth Extraction

Legend

-  Site Boundary
-  Extraction Area
-  Treed Areas
-  Barbers Lake
-  Pit Lakes
-  Final Pit Contours

Viewshed Analysis

-  Potential Visible Area from All Observer Locations
-  Observation Locations

Parameters of Analysis

- Observer height: 1.5 m
- Height of all treed areas: 15 m
- No existing buildings are accounted for in this analysis

Sources of Information

- Digital Elevation Model created with topographic information provided by WSP
- Contains information licensed under the Open Government License - Ontario
- Aerial - Esri Imagery Basemap, 2024
- All measurements are in meters unless otherwise specified
- Projection: NAD 1983 UTM Zone 18N
- Visual Impact Analysis conducted in ArcGIS Pro with 3D Analyst Tools

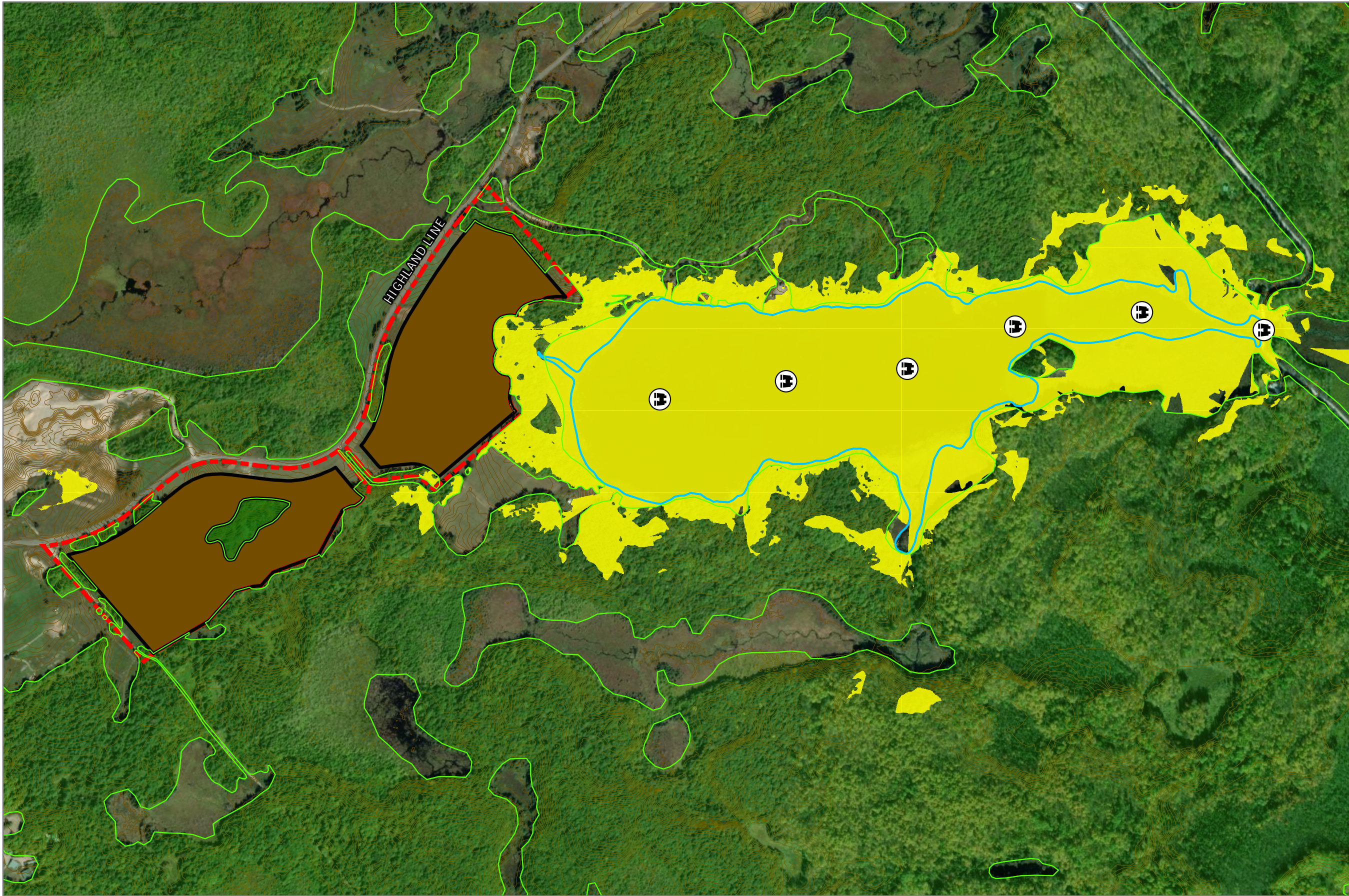


Figure 2 - Visibility Analysis:
Processing Plant at Max
Elevation with 12 m
Stockpiles

- Legend**
- Site Boundary
 - Extraction Area with Processing Plant at Maximum Permitted Elevation of 188 masl with 12 m Stockpiles (200 masl)
 - Treed Areas
 - Barbers Lake
 - Existing Contours
- Viewshed Analysis**
- Potential Visible Area from All Observation Locations
 - Observation Locations

- Parameters of Analysis**
- Observer height: 1.5 m
 - Height of all treed areas: 15 m
 - No existing buildings are accounted for in this analysis

- Sources of Information**
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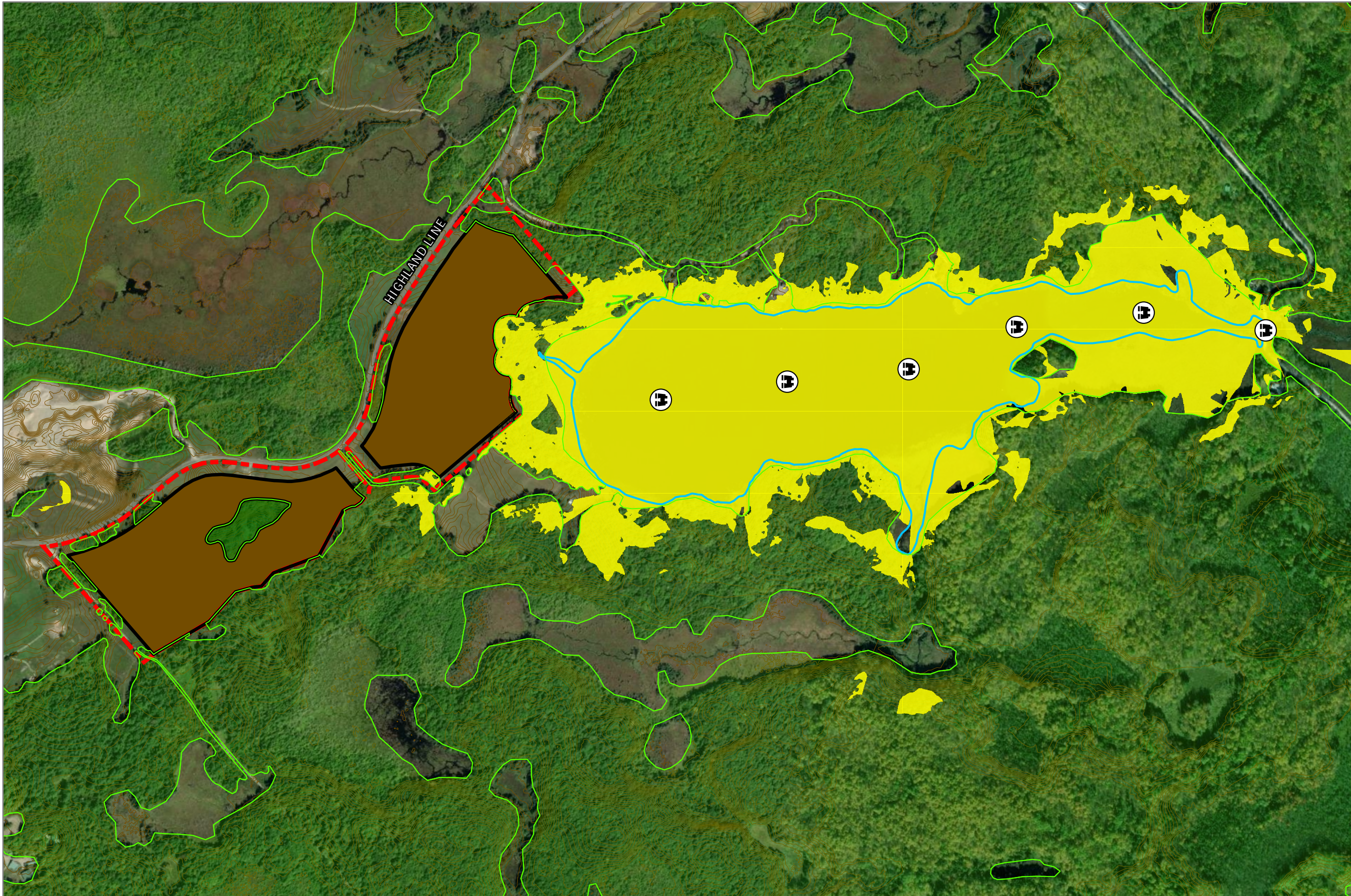









Figure 3 - Visibility Analysis:
Processing Plant at Max
Elevation with 15 m
Stockpiles

Legend

-  Site Boundary
-  Extraction Area with Processing Plant at Maximum Permitted Elevation of 188 masl with 15 m Stockpiles (203 masl)
-  Treed Areas
-  Barbers Lake
-  Existing Contours

Viewshed Analysis

-  Potential Visible Area from All Observation Locations
-  Observation Locations

Parameters of Analysis

- Observer height: 1.5 m
- Height of all treed areas: 15 m
- No existing buildings are accounted for in this analysis

Sources of Information



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Figure 4 - Aerial Imagery 2023

-  Site Boundary
-  Extraction Area

