



**Re: Review of Drainage Conditions Relative to a Municipally-identified Watercourse Constraint, Haliburton Landscape Supply, 1159 Kennisis Lake Road, Municipality of Dysart et al, County of Haliburton; Our File 1925**

Dear Mr. Hodgson:

Thank you for asking Michalski Nielsen Associates Limited to prepare this report to help resolve a concern of the Municipality of Dysart et al. regarding the installation of a storage build.fog at 1159 Kennisis Lake Road. This property, which is within the community of West Guilford, is operated as Haliburton Landscape Supply's retail and commercial yard. The owner wishes to install a garage/storage building on the property, which is to be constructed using shipping containers as walls, an aluminum roof truss system and a domed fabric roof. Work had commenced on this structure before the Municipality of Dysart et al. raised planning concerns. In this regard, in email correspondence to you of June 20, 2025, from Mr. Jeff Iles, Director of Planning and Land Information for the Municipality, Mr. Iles noted that one of their concerns in regard to compliance with the provisions of the Zoning Bylaw related to the proximity of proposed works to a required 30 m setback from a watercourse. The purpose of the present correspondence is to address that concern.

Background mapping and aerial photography of the subject property is included in **Appendix A**. It is believed that the watercourse being referenced by the Township is to the southwest of the subject property, as I did not see any evidence of drainage features on adjacent lands to the north during my site inspection, and with the small drainage feature to the southwest being the only drainage feature in proximity of the proposed garage/storage building. The subject property also grades to the west, and ultimately towards the small drainage feature to the southwest, making this the only relevant drainage feature to the proposed works.

To complete this assessment, I first reviewed background mapping and aerial photography. I then undertook a site inspection of both the subject property and adjacent lands on June 28, 2025, at a time of the year which was ideally suited for this inspection and which happened to follow two days of periodic but occasionally heavy rainfall. In the pages following I first describe existing conditions, including those associated with the subject property and those associated with the adjacent lands to which this property grades. I then provide brief commentary on the nature of ecological constraints in relation to those adjacent lands. Finally, I provide my summary comments and recommendations in relation to the proposed garage/storage building as it relates to the protection of adjacent natural features.

## **1.0            Existing Conditions**

**Photographs 1** and **2** provide views of the subject property and the partially installed garage/storage building which is the subject of this review. **Photograph 3** provides an additional view of this partially installed structure from the south. As is evident from **Photographs 1** and **2**, as well as the aerial photography included in **Appendix A**, the subject property is largely a level work yard, with fill having been imported in the past to level it out (per my review of older aerial photography, these lands were cleared prior to 2015 and were filled prior to 2022). The proposed garage/storage building, the initially installed components of which can be seen in 2024 Google Earth imagery (final aerial photograph in **Appendix A**), is located towards the southwest corner of the subject property, as also approximately illustrated on **Figure 1** (the rearmost portion of the proposed building on this drawing, aligning with the rear of the one set of shipping containers, accurately reflects that on the 2024 Google Earth imagery). This proposed garage/storage building sits on top of granular fill material, with it being my understanding that the intention of this building is simply to provide a dry storage area for vehicles and equipment that are necessary to this landscape company's operations (i.e., other than providing for a roofed area over such equipment, it will not result in any changes to existing land use activities associated with this landscape company's operations).

**Photograph 4** provides a view of the western-most portion of the level area of fill within the subject property, which terminates approximately 10 m east of that property boundary, and with 1:2 slopes between it and an adjacent area of lowlying woodland/treed swamp that begins very close to the west property limit; that area of natural vegetation is delineated in green on **Figure 1**. **Photograph 5** provides a view of the steep and partially vegetated slopes along the rear of the property, grading down to the adjacent more lowlying area of vegetation.

**Photographs 6 - 8** provide views of the lowlying woodland/treed swamp that begins along the western edge of the subject property. That area is largely shown as unevaluated wetland in the Province's natural heritage map base, as can be seen in the second map included in **Appendix A**. The boundary of that wetland is somewhat accurately depicted on that map and it is located entirely outside of the subject property. Further, the lands immediately adjacent to the subject property include a transitional zone of lowland forest containing Yellow Birch, Balsam Fir and Ash in an area of apparently moderately high water table, grading to an area where the water table is right at surface, where ground conditions are more hummocky, and



Photographs 1 and 2. Partially installed garage/storage building that applicant is seeking approval for (June 28, 2025).





Photograph 3. Additional view of partially installed garage/storage building (June 28, 2025).



Photograph 4. To the rear of proposed garage/storage building, the commercial yard slopes steeply to an area of lowlying woodland/treed swamp (June 28, 2025).



Figure 1. Relationship of Proposed Liage to  
Adjacent Natural Features

Map created: 6/26/2025

Legend

- Assessment Parcel  
ANSI
- Earth Science Provincially Significant/sciences de l'importance provinciale
- Earth Science Regionally Significant/sciences de l'importance régionale
- Lite Science Provincially Significant/sciences de l'importance provinciale
- Lite Science Regionally Significant/sciences de l'importance régionale
- Conservation Reserve
- Provincial Park
- Natural Heritage System



0.0 0 0.02 0.0 Kilometres Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.  
© Copyright for Ontario Parcel data is held by King's Printer for Ontario and its licensors and may not be reproduced without permission. THIS IS NOT A PLAN OF SURVEY.

0  
Imagery Copyright Notices: DRAPE © Aero-Photo (1961) Inc., 2008 - 2009  
GTA 2005 / SWOOP 2006 / Simcoe-Muskoka-Dufferin © FirstBase Solutions, 2005 / 2006 / 2008  
© King's Printer for Ontario, 2025







Photograph 5. View of partially vegetated slopes at western end of yard, and adjacent lowlying woodland/treed swamp (June 28, 2025).



Photograph 6. View of lowlying woodland/treed swamp to the west of the commercial yard (June 28, 2025).





Photographs 7 and 8. Additional views of lowlying woodland/treed swamp (June 28, 2025).

which is best characterized as treed swamp. The transition from lowland forest to treed swamp is somewhat variable but generally occurs  $\pm 15$  m west of the property boundary. For the purposes of this assessment, the exact location of where lowland woodland ends and treed swamp begins is unimportant, as there is little functional difference between these two areas. In this regard, both areas have a high water table but with no evidence of seasonal ponding and with vegetation differences being quite subtle. Drainage conditions within this lowlying area have been modified by past fill placement within both the subject property and adjacent properties, including the residential property to the southwest. This lowlying area grades towards a small drainage course to its southwest, then ultimately to the Gull River, a short distance above the confluence of that river with Green Lake. It receives localized drainage only, which includes minor roadside drainage from Kennisis Lake Road that is conveyed by culvert directly into this woodland area. There is no evidence that high seasonal water levels in either Green Lake or the Gull River have any influence on water levels within this area of lowlying woodland/treed swamp.

As previously noted, the area of lowlying woodland/treed swamp grades towards a small watercourse, the approximate location of which is shown on **Figure 1**. **Photographs 9 and 10** provide views of this drainage feature, which shows clear evidence of having been dredged in connection with the development of a residential lot to its southwest (there is an area of dredge spoils along the northwest side of the drainage feature). This drainage feature is best described as a swale given the clear evidence of past works on it to create positive drainage from the adjacent residential property. That said, it is very likely that those drainage improvements were made to a more poorly defined natural drainage feature. Regardless, the modified channel is  $\pm 0.8$  m wide at its base and had a *very* marginal flow of water through it, visually estimated to be  $< 0.1$  Lis (about half of the flow of a typical garden hose) at the time of my visit. The bottom of this drainage swale is filled with Narrow-leaved Cattail and Arrowhead, species of aquatic vegetation which indicate that it is typically wet. However, it has a water depth of 2 cm or less, lacks any pools and is fully choked with vegetation, eliminating any fish habitat potential. Accordingly, this drainage feature's functions are limited to the conveyance of flows from this area, with its shallow, heavily vegetated character providing for some cleansing of such flows through detention, evapotranspiration, biological uptake and filtration through vegetation prior to that runoff entering the nearby Gull River and downgradient Green Lake. The area of lowlying forest/treed swamp that is to the rear of the subject property grades to this drainage feature and provides complimentary water quality and water quantity benefits through detention, evapotranspiration, biological uptake and filtration of localized runoff.

**Figure 1** provides a good sense of the relationship of the proposed garage/storage building to the adjacent areas of lowlying woodland/treed swamp and the drainage feature. By my calculations, the area of lowlying woodland is a minimum of approximately 18 m away from that proposed structure, whereas the drainage course is over 50 m away. Importantly, with that proposed structure being installed on ground surface on top of an already level area of fill, it will require absolutely no earthworks. The roof design will allow rain to sheet flow to either side of the structure, where it will fall onto a generally permeable yard, allowing for infiltration and diffuse outletting of any surface runoff towards the adjacent area of lowlying woodland/treed swamp, exactly as occurs today (with my having seen no evidence of any concentrated





Photographs 9 and 10. Views of drainage feature along the southwest edge of the lowlying woodland/treed swamp (June 28, 2025).

runoff from this yard). Accordingly, **it is my opinion that the installation of this intended garage/storage building will have no influence whatsoever on the adjacent area of lowlying woodland/treed swamp or the more distant drainage feature, including on existing vegetation conditions, water quality and flow conditions.**

## 2.0 **A Review of Ecological Constraints in Association with the Adjacent Lands**

The proposed garage/storage building will grade to the west, towards the above-described lowlying woodland/treed swamp, and ultimately to the small and further distant drainage feature. As part of my review, I have considered the potential for these adjacent natural areas to support Species at Risk and Significant Wildlife Habitat.

With respect to Species at Risk, the broader environs support Species at Risk turtles, namely Blanding's Turtle (Threatened) and Snapping Turtle (Special Concern). Neither the lowlying woodland/treed swamp or drainage feature provide suitable habitat opportunities for these species, including opportunities for nesting, overwintering or as general habitat. As is true for most naturally vegetated areas in this locale, there are opportunities for turtles to move through these adjacent lands, a function which will not be impacted by the proposed garage/storage building. While there are several Species at Risk birds known to the broader area that may be able to utilize the adjacent lowlying woodland/treed swamp, and with these wooded areas also providing potential habitat for a number of protected bat species, the proposed garage/storage building will not impact those trees and there are no concerns that its installation or use, within an existing landscaper's yard, would impact on such functions.

From a Significant Wildlife habitat perspective, the adjacent natural areas do not provide opportunities for waterfowl nesting or marsh bird breeding habitat. While there is some potential these areas will support woodland amphibian breeding habitat, no evidence was seen of sufficient seasonal ponding to support that function. However, even if this function was supported, there are no concerns that the installation or use of the proposed garage/storage building would impact it.

As previously noted, the small drainage feature to the southwest, to which the subject property ultimately drains, does not provide any potential fish habitat, even on a seasonal basis.

## 3.0 **Summary Comments and Recommendations**

The proposed garage/storage building is to be built within an existing landscaper's yard, which has already been leveled and filled. Its installation and use will not require any tree removals, nor for that matter any earthworks. It will have no fundamental influence on existing uses of this yard, simply providing protection from the elements for existing equipment and vehicles. It will not alter existing site drainage patterns, which generally allow for precipitation to infiltrate into the relatively permeable yard, with flows then outletting diffusely into the lowlying woodland/treed swamp to the west, then ultimately towards the small drainage feature. This proposed building will not negatively impact either hydrologic or water quality



conditions in those adjacent natural features. Those adjacent natural areas do not provide fish habitat and there are no concerns that the proposed installation or use of the garage/storage building, within an existing landscaper's yard, will have any impacts on potential Species at Risk habitat or Significant Wildlife Habitat within adjacent lands.

In consideration of the environmentally-benign nature of the proposed garage/storage building, Michalski Nielsen Associates Limited supports the completion of its installation at its proposed location. We have only one very simple recommendation in relation to this proposal, namely that:

- **the owner monitor conditions adjacent to the structure after its installation. If there is any evidence that sheet flow off the roof is creating any localized erosion or more concentrated runoff across the yard, then a splash pad of cobble-sized stone is to be installed beneath those specific areas where this is identified.**

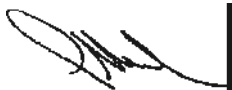
\* \* \* \* \*

In closing, I trust that this letter addresses the Municipality of Dysart et al' s environmental concerns with respect to the proposed garage/storage building. Staff from that municipality are welcome to contact me should they have any questions.

Yours truly,

MICHALSKI NIELSEN ASSOCIATES LIMITED

Per:



Gord Nielsen, M.Sc.  
Ecologist  
President

---










---

APPENDIX A - BACKGROUND MAPPING AND  
AERIAL PHOTOGRAPHY

---

---



-  Assessment Pl:1rcal
-  ANSI
-  Earth Science Provincially Significant/sciences de l'importance provinciale
-  Earth Science Regionally Significant/sciences de l'importance régionale
-  Life Science Provincially Significant/sciences de la diversité provinciale
-  Life Science Regionally Significant/sciences de la diversité régionale
-  Conservation Reserve
-  Provincial Park
-  Natural Heritage System

0.6 0 0.32 0.6 Kilometres

Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources(OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

© Copyright for Ontario Parcel data is held by King's Printer for Ontario and its licensors and may not be reproduced without permission. THIS IS NOT A PLAN OF SURVEY.

0

Imagery Copyright Notices: DRAPE© Aero-Photo (1961) Inc., 2008 - 2009  
GTA 2005 / SWOOP 2006 / Simcoe-Muskoka-Dufferin © FirstBase Solutions, 2005 / 2006 / 2008  
© King's Printer for Ontario, 2025

- Assessment Parcel
- ANSI
- Earth Science Pm,inc-1DIY Sit,prifficant/sci8nces. de d'Importf1ncc: p.ovfnciale
- Earth Science Regionally Significant/sciences de le d'Importaice: re,giDI"Site
- Life Science Pmilit,icilally Significant,tiscic:ncC"-s de la i-l'importance pm vlnale
- Life Science Regionally Signitrt(../tlnl/sr:ien s de lct1,
- d'impe,u,nu rogionale
- Conservation Reserve
- Provind2il Park
- Natur.al Heritage System



0.2 0 0.08 0.2 Kilometres Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources(OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.  
© Copyright for Ontario Parcel data is held by King's Printer for Ontario and its licensors and may not be reproduced without permission. THIS IS NOT A PLAN OF SURVEY.

Imaqery Copyright Notices: DRAPE© Aero-Photo (1961) Inc.. 2008 - 2009  
GTA 2005 / SWOOP 2006 I Simcoe-Muskoka-Dufferin I fl FirstBase Solutions, 2005 / 2006 / 2008  
© King's Printer for Ontario, 2025





Legend

- D

Assessment Parcel  
ANSI
- Earth Science Provincially Significant Natural Heritage Areas of  
Provincial Importance
- Earth Science Regionally Significant Natural Heritage Areas of  
Regional Importance
- Life Science Provincially Significant Natural Heritage Areas of  
Provincial Importance
- Life Science Regionally Significant Natural Heritage Areas of  
Regional Importance
- Conservation Reserve
- Provincial Park
- Natural Heritage System

Notes

0.100.040.1 Kilometres

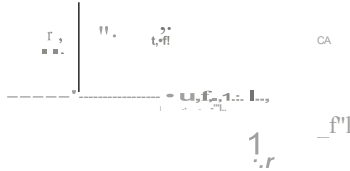
Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

© Copyright for Ontario Parcel data is held by King's Printer for Ontario and its licensors and may not be reproduced without permission. THIS IS NOT A PLAN OF SURVEY.

0

Imagery Copyright Notices: DRAPE© Aero-Photo (1961) Inc., 2008 - 2009  
GTA 2005 / SWOOP 2006 / Simcoe-Muskoka-Dufferin © FirstBase Solutions, 2005 / 2006 / 2008  
© King's Printer for Ontario, 2025





Legend

- Assessment Parcel
- ANSI
- Earth Science Provincially Significant / Sciences de l'importance provinciale
- Earth Science Regionally Significant / Sciences de l'importance régionale
- Life Science Provincially Significant / Sciences de l'importance provinciale
- Life Science Regionally Significant / Sciences de l'importance régionale
- Conservation Reserve
- Provincial Park
- Natural Heritage System



Notes:

0.0 0 0.02 0.0 Kilometres Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources(OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.  
© Copyright for Ontario Parcel data is held by King's Printer for Ontario and its licensors and may not be reproduced without permission. THIS IS NOT A PLAN OF SURVEY.

0  
Imagery Copyright Notices: DRAPE© Aero-Photo {1961} Inc., 2008 - 2009  
GTA 2005 / SWOOP 2006 / Simcoe-Muskoka-Dufferin© FirstBase Solutions. 2005 / 2006 / 2008  
© King's Printer for Ontario, 2025





© 2024

Google

Earth

2024 Imagery

Legend

- Haliburton



Google Earth

Image © 2025 Airbus