



Niblett Environmental Associates Inc.
Biological Consultants

November 11, 2013

PN 13-089

Mr. Murray Davenport, P. Eng.
M.J. DAVENPORT & ASSOCIATES LTD.
169 Lansdowne St. East, Suite 101
Peterborough, ON K9J 7P7

Subject:

**Kennedy Drive development
Lot 14, Concession XIII
Cavan Township
Twp. of Cavan-Monaghan**

Species at Risk Assessment

Dear Mr. Davenport:

1.0 Introduction

Niblett Environmental Associates Inc. (NEA) was retained by M.J. Davenport & Associates Limited to complete a biological inventory of a property located in the Township of Cavan-Monaghan, described as Part of Lot 14, Concession 13, for Species at Risk that may be found within the project area (Kennedy Drive area, Mount Pleasant).

The study was requested by Otonabee Region Conservation Authority (ORCA) to determine the presence or absence of six Species at Risk, the milksnake (*Lampropeltis triangulum*), eastern meadowlark (*Sturnella magna*), bobolink (*Dolichonyx oryzivorus*), barn swallow (*Hirundo rustica*), Henslow's sparrow (*Ammodramus henslowii*) and butternut (*Juglans cinerea*). There are no requirements for an EIS or other assessments.

As the surveys were conducted late in the season and past the peak breeding bird season, visual surveys were conducted by experienced biologists to assess the habitat characteristics and the potential for suitable nesting habitat for these species.

Species at Risk are protected under section 2.1.3 of the Provincial Policy Statement and under the Ontario Endangered Species Act (2007). Habitat includes nesting, feeding, resting and migratory areas.

2.0 Methodology

NEA completed a background review of the records for these species on the Natural Heritage Information Centre's database (MNR-NHIC, 2007), Ministry of Natural Resources GIS data layers (2011), aerial photography and our own natural heritage GIS database. Prior to the site walks, recent colour aerial photography and GIS mapping was reviewed to determine the best habitats to field-check while on site.

A site visit was conducted by NEA biologists on October 2nd, 2013. The survey for milk snakes involved 2 biologists intensively and actively searching the entire property including brush piles, fence lines and looking under any rocks

and debris that was found. Surveys were timed to occur during moderate temperatures (approximately 8 – 23°C), during the mid-day and sunny weather to maximize chances of detection. Weather conditions during the site visit were optimal with sunny skies and a temperature of 22°C.

The entire property was searched for the presence of butternut trees, especially along the forested edges and hedgerows. As the majority of the property consisted of open meadows with scattered shrubs throughout, no butternut trees were found.

The entire property was also walked and assessed for the potential for barn swallow, bobolink, eastern meadowlark and Henslow's sparrow habitat. As it was late in the season, none of these species was observed in the area during the site investigations.

3.0 Resource Inventory

3.1 Property Description

The proposed development is located just south of Mount Pleasant Road, extending south off Kennedy Drive. The property is surrounded by a small subdivision to the northwest and open meadows and hedgerow areas to the east and south. The property is found on the upper slopes of a large drumlin with development being proposed along the crest of the drumlin feature.

3.2 Vegetation

The majority of the property is successional meadow with shrubs scattered throughout the area. Shrubs consisted of staghorn sumac (*Rhus typhina*), hawthorn (*Crataegus spp*), wild apple (*Malus domestica*) and European buckthorn (*Rhamnus cathartica*). A few hedgerows were found in the area suggesting the open areas were once used for agricultural purposes. Trees regenerating in these hedgerows included American basswood (*Tilia americana*), American white elm (*Ulmus americana*), sugar maple (*Acer saccharum*), white ash (*Fraxinus americana*), trembling aspen (*Populus tremuloides*) and eastern white cedar (*Thuja occidentalis*). Two fairly open meadows were located in the most southern portion of the property and consisted mainly of grasses and goldenrod species. Dog strangling vine (*Cynanchum rossicum*), a highly invasive species, was also found throughout the area.

The central portion of the property was highly disturbed with open and exposed areas of sand and gravel. Overall the topography was flat to slightly rolling with sandy soils.



View of shubby open areas looking west.



View of open goldenrod meadows at southern portion of property looking southwest.



View of open meadows in southern portion of property, looking east.



View of rocky fencerow looking north to crest of drumlin.



View of shrubby open areas looking east from crest of drumlin.



View of exposed areas on western slope of drumlin, near end of Kennedy Drive.

3.3 Milksnake surveys

The milksnake (*Lampropeltis triangulum*) has been listed as a provincial Special Concern species by SARO, Feb. 2009. This species is found in a wide variety of habitats including in and around houses and farm buildings, fencerows, forest edges, fields and overgrown meadows. There are records of milksnake in the area of the subject property. According to NHIC records, milksnake were last observed in 1993.

No milksnakes were seen during our surveys, although suitable habitat may be found in the larger area given this species rather broad habitat requirements and records in developed rural areas. The current condition of the subject property does not provide suitable habitat for milksnake, except possibly in the rocky fencerows. The habitat on site is predominantly open field with scrubby shrubs regenerating in northern sections with no natural or man-made cover. There were a few rocky fencerows that could provide cover. This rocky fencerow was examined extensively however no snakes were observed during our site visit. At that time of year snakes are moving towards their winter hibernaculums, increasing chances of detection by biologists.

Adjacent farm and rural properties to the west may be providing cover in the form of wood piles, debris and outbuildings. The habitat on site was also not ideal being mostly shrubby open meadow. The prey base on this type of habitat would be limited. Milksnakes feed on a wide variety of prey from small mammals to other snakes.

3.4 Butternut surveys

Butternut trees (*Juglans cinerea*) were listed as endangered in 2009 and MNR has developed a manual on how to evaluate trees and their health. Training in the procedure has been completed by NEA staff and we are certified by MNR to complete these assessments. Butternuts are a native tree to southern Ontario that are found in deciduous and mixed forests in Central and Eastern Ontario. The tree is listed by the Province of Ontario as endangered and is regulated under the Ontario Endangered Species Act (2007). As such butternuts are protected from harm or removal and approval is required from MNR to remove a tree. An assessment is conducted to determine the health of the tree using a number of criteria.

Trees are deemed to be either “retainable” or “non-retainable” using an MNR assessment table. Retainable trees are protected under the Endangered Species Act and cannot be cut or harmed without MNR approval of the assessment and preparation of a planting plan.

No butternut trees were found in the study area. The few trees found along the hedgerows were dominated by American basswood, white ash and sugar maple with young regenerating American elm, white ash and trembling aspen.

3.5 Bird surveys

The bobolink (*Dolichonyx oryzivorus*) listed as threatened on a provincial and national level (COSSARO, 2013; COSEWIC, 2012) prefers tall, grassy meadows hayfields and some croplands. The subject property would not support habitat for the bobolink. No bobolinks were heard or seen during our surveys. Bobolinks live in contiguous patches of open grassland typically dominated by grassland. The dominance of goldenrod in the fields and the size of the non-shrub portions would preclude use by bobolinks.

The eastern meadowlark (*Sturnella magna*) has been recently added to the national list as a threatened species (COSEWIC, 2012). This species prefers grassy meadows and pastures; also some croplands, weedy fields, grassy roadsides and old orchards. There is suitable habitat for this species on the southern portion of the property where due to the disturbed nature and early successional vegetation, and scattered shrubs for perches. No meadowlarks were heard or seen during our surveys.

Henslow’s sparrow (*Ammodramus henslowii*) is considered endangered both Provincially (COSSARO) and Nationally (COSEWIC). This species breeds only in old fields, pastures and wet meadows that have not been extensively invaded by shrubs. As a ground nester, it requires dense, tall grasses, and thatch, or decaying plant material, for cover. (ROM, 2008) As well as being extremely rare, this species would not find suitable habitat on this property.

The barn swallow (*Hirundo rustica*) has recently been listed as a threatened species nationally (COSEWIC, 2012). This species prefers open rural and urban areas where they nest on man made structures such as bridges, culverts and buildings usually in proximity to foraging habitat such rivers, lakes, marshes, ponds and open fields. There is no suitable nesting habitat for this species on the property.

4.0 Impact of Proposed development

The proposed development is for the creation of 13 lots with access being from the extension of Kennedy Drive. As this development is on a drumlin, cut and fill activities will be required to allow for the establishment of relatively flat areas for building envelopes and the Kennedy Drive extension.

The proposed development is not within suitable habitat for barn swallow, Henslow’s sparrow or bobolink.

There may be suitable cover or hibernacula for milksnake along the rocky fencerows however there is no habitat for this species in terms of downed woody debris or man-made habitats through farm outbuildings, waste piles and other construction materials. The construction of the site could potentially impact on this species. There are mitigation measures that are utilized to limit impacts. This includes maintaining rock piles on the edge of the development envelope, carefully removing the existing fence piles outside of the peak summer months (May-July) when the snakes are active and making contractors aware of the possible presence of snakes during site grading. If milk snakes are found they should contact the MNR for advice.

There may also be suitable habitat available for eastern meadowlark in the southern portion of the property where the open area has scattered shrubs. In order to definitively determine whether these open areas are suitable for meadowlark, further studies during the breeding season (May-June) will be required to confirm if the habitat is occupied by eastern meadowlark. The alternative is to assume it is and begin the Endangered Species Act permit process. This is a long process with an initial step of trying to avoid an impact on habitat area, by changing the layout or leaving the most suitable habitat vacant or looking at off-site properties to compensate on. If possible, it is best to conduct a survey in the breeding season and confirm the presence or absence of eastern meadowlarks using this field area. That way a permit process can be avoided if the field is not currently used by meadowlarks. It also assists in determining exactly how many pairs are present, the nesting location and the extent of the habitat if meadowlarks are on the site.

No butternut trees were found during site investigations.

5.0 Conclusion

There is potentially suitable habitat for the eastern meadowlark and limited habitat for the milksnake on the subject property. No additional rare species were observed during our surveys. As initial field visits were conducted late in the season, further surveys will be required to complete an impact analysis for these species and the proposed works.

If you require further details on my findings or recommendations, please feel free to contact me.

Sincerely,



Chris Ellingwood
President and Sr. Terrestrial and Wetland Biologist