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Natural Environment Assessment of the Innovation Drive Extension, St. Lawrence Business Park

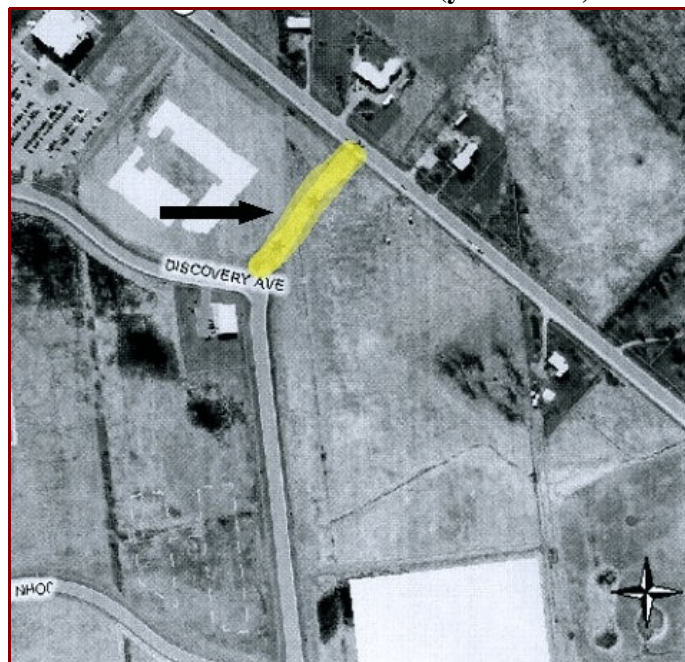
A natural environment assessment was undertaken of the area within and adjacent to the Innovation Drive Right-of-Way (ROW) in the St. Lawrence Business Park, Kingston. This was conducted in support of the Environmental Assessment of the extension of Innovation Drive from Discovery Avenue to Highway 15.

The purposes of the investigation were 1) to evaluate natural environment conditions and their ecological significance, 2) to identify potential impacts of the proposed roadway extension on the apparent and potential natural environment values within and/or adjacent to the ROW, and 3) to identify ecologically appropriate mitigation opportunities.

On-site field investigations were conducted on 30 September 2008 by Daniel F. Brunton during cool, overcast conditions. These investigations involved visual inspection and on-foot transects of the site in order to assess the character and significance of native biodiversity. Particular attention was paid to the presence or potential occurrence of designated Species At Risk (Ontario 2007). Written and photographic records of observations were taken.

The mid autumn date is late in the field season and would normally be inadequate to provide a confident assessment of the native biodiversity of more complex, fully developed natural habitats. The absence of forest cover or standing water and the advanced state of disturbance of the Innovation Drive ROW study area indicates, however, indicate that a severely limited potential exists for the occurrence of significant natural features and functions. Accordingly, reliable conclusions on the significance of natural environment features and

Innovation Drive extension ROW (yellow line)



functions can be confidently determined at this date in such a site.

Site Context and Natural Features

The Innovation Drive ROW study area is an open, level upland area from which naturally occurring habitats have been removed. This reflects a long history of agricultural activity and subsequent commercial development. No woodlands or standing water remain, nor are any outcroppings of the underlying limestone bedrock evident. The site is dominated by non-native herbaceous plants of agricultural origin. Dominants include pasture species such as Brome (*Bromus inermis*) and Blue grass (*Poa pratensis*) with conspicuous herbs such as Panicked Aster (*Symphotrichum lanceolatum*), Yarrow (*Achillea millefolium*), New England Aster (*Symphotrichum novae-angliae*) and Tall Goldenrod (*Solidago altissimum*).

In the northernmost 20 % of this artificial (Cultural Meadow) habitat, substantial earth fill (construction and agricultural debris) has been deposited. It is overgrown, with weedy species such as Ragweed (*Ambrosia artemisiifolia*), Alfalfa (*Medicago sativa*), Barnyard Grass (*Echinochloa muricata*) and Yarrow (*Achillea millefolium*).

Native woody plants typical of forest edges occur along the abandoned agricultural fence row, dominated by Silky Dogwood (*Cornus foemina*) and saplings of trees Green Ash (*Fraxinus*

Innovation Drive ROW easterly from Highway 15 with cluster of young Shagbark Hickory immediately to south



Weedy earth-fill at east end of undeveloped Innovation Drive ROW (Highway 15 by pole in distance)



pennsylvanica) and White Elm (*Ulmus americana*).

A small cluster of young Shagbark Hickory (*Carya ovata*) trees occurs along the eastern side of Highway 15 ca. 5 m south of the Innovation drive ROW. Although undoubtedly of native origin themselves, the four hickory tree grow over transformed (non-natural) meadow vegetation.

Natural Environment Significance

The entire landscape along the Innovation Drive ROW study area has been long transformed from a native condition and supports no significant natural features or functions. No significant natural features or functions are evident adjacent or close to the ROW. Similarly there appears to be virtually no potential for the occurrence of locally or provincially significant natural environment features or functions in this artificial landscape in the future.

The small Shagbark Hickory grove near Highway 15 constitute the only native natural feature of the study area. While not of even local ecological significance, it does offer aesthetic benefits and presumable could also provide a measure of shelter and food for some native wildlife.

Impact Implications and mitigation opportunities

Development of the Innovation Drive will have no significant natural environment impacts. No mitigation of impacts beyond normal stormwater management actions are required. No opportunities for habitat enhancement are indicated.

Protection of the adjacent hickory grove from incidental damage during construction of the roadway would be appropriate, however, to ensure the continuation of this aesthetic asset.

Daniel F. Brunton
November 21, 2008