



19 March 2014

Doug Corbett  
Senior Planner, Community Planning  
Legislative and Planning Services Department  
Regional Municipality of Halton  
1151 Bronte Road  
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Dear Doug,

**RE: Preliminary Peer Review of EIS for Merton Tertiary Planning Study**

North-South Environmental Inc. (NSE) was retained by the Region of Halton to assist with the review of Natural Heritage documents submitted in support of concepts for a Tertiary Plan for the Merton Planning Area. In particular we were asked to:

- attend a start-up meeting to explain the application and its history;
- participate in meetings on an “as needed basis” to discuss natural heritage issues; and
- review and provide comments on the Phase 2 Environmental Impact Study, Merton (QEW/Bronte Road) Tertiary Planning Study (Beacon Environmental, December 2013)

This letter report provides comments on the EIS report prepared by Beacon Environmental (Beacon). General comments summarizing the main issues with the report are provided first, with more detailed comments to follow.

If you have any questions on this report, please do not hesitate to contact me.

Yours very truly,

Mirek Sharp,  
Principal, North-South Environmental Inc.



## General Comments

The EIS was somewhat complicated by having to rely on existing reports for the some of the ownership parcels within the study area, while there was little existing information for others. Thus the level of detail for information was not consistent across the site. Because of this, it is recognized that NHS boundaries and buffers may require minor refinement as part of field staking with agencies at a later date in response to individual applications for development. However, the principal decisions on the NHS boundaries and criteria/guidelines for buffers (which should be included within the NHS), should be determined as part of this Tertiary Plan.

There are, however, several issues where we disagree with the findings and recommendations of the EIS, as noted below.

1. Evaluation of Boundaries for Regional NHS in the area of Fourteen Mile Creek ESA. The analysis in the Beacon report of the boundaries of the Fourteen Mile Creek ESA, and subsequent inclusion in the NHS (Pg 150, s 4.3.12.2), is one area where we disagree with the findings. The Beacon report correctly points out that the boundaries of ESAs are to be refined through the EIS process, which is quite reasonable given that boundaries can be examined with greater detail and field checked. However, there is a distinction to be made between refining the boundaries to better reflect the areas that are captured in an ESA, and revising the ESA boundaries to exclude areas that had been intended to be captured.

The area in question is ELC Unit 12, which is an approximately 8 ha inclusion in the Fourteen Mile Creek woodland on the Saw Whet property. This field has apparently cultivated and left fallow for periods in the past. The Beacon report notes that the 1993 ESA Update Study report does not explicitly identify cultivated fields as areas to be included within ESAs. However, that report does identify the desire to capture inclusions of open (i.e. not woodland) areas when they are surrounded by ESA on three sides (page 6, bullet #2 in Geomatics 1993). The list of communities for Fourteen Mile Creek ESA in the 1993 Update report explicitly identifies both “cultivated fields” and “late successional old fields” as occurring within the ESA, thus there was no intent to exclude cultivated fields from ESAs. Moreover, there is no indication in the 1993 report if the area in question was cultivated or not at the time the analysis was undertaken. We also point out that the boundary refinements recommended in the 1993 update report were reviewed by EEAC, Regional planning staff, HRCA (now Conservation Halton) and the Town of Oakville, with comments being incorporated into the final boundary changes. Thus the decision to incorporate the 8 ha inclusion (ELC area 12) was deliberate, consistent with the intent of the boundary refinements and accepted by the agencies who reviewed the recommendations.

Apart from the historical perspective, the incorporation of this inclusion into the NHS is appropriate for several reasons:

- a) There is a total of 11 area-sensitive forest bird species reported from Fourteen Mile Creek ESA. These species require relatively large areas of forest and would greatly benefit from the restoration of this area to woodland, especially in view of the intensification of urban uses, and anticipated increase in urban stresses that will result.

- b) The ESA is used by over-wintering birds (section 4.3.5.3) and is identified as a migratory stop-over (Table 11) for bird species. Both these functions could be compromised by the addition impacts to the ESA resulting from the development of the inclusion. Retaining the inclusion in the ESA and restoring it to woodland would assist in mitigating impacts from the proposed development on the balance of the site.
- c) The ESA, including these species noted above, will be subject to increased stress and impacts associated with the change to a more intense form of urban development across the Merton lands (generally golf course to residential). The introduction of a residential land use to an area that is surrounded on three sides by the ESA, will result in increased impacts to the forest community (light, noise, human intrusion, etc.) that are out of proportion to its size (i.e. the magnitude of the impacts will be greater owing to the development being an inclusion in the ESA).
- d) As is noted in section 4.3.12.2, Fourteen Mile Creek ESA is not well connected to other natural features, and opportunities to improve connectivity are limited by the surrounding arterial roads and the QEW, as well as existing development. Because of this, it is important that Fourteen Mile Creek natural area be as self-sustaining as possible. Two general tenets of conservation biology are: 1) that larger areas are less prone to impacts than smaller areas, and 2) that areas with lower perimeter/area ratios are less susceptible to impacts than areas with convoluted boundaries and thus greater perimeter/area ratios. The proposed development of the inclusion (ELC unit 12) will both decrease the overall area of Fourteen Mile Creek ESA and will increase the perimeter/area ratio. In view of the poor connectivity and need to maximize the ecological integrity of this natural area, this inclusion should be retained in the ESA and restored.

With respect to the NHS, we agree with and appreciate mention of the observation (page 150) that impairment of the landscape is often due to major scale land use transformations. Our opinion is that the proposed future land use in the TPA will result in such impairment and that there will be inevitable impacts to the remaining natural features. It is important to mitigate these and the identification of a robust NHS is probably the strongest mitigation measure for doing so. The Beacon report identifies the need for “restoration/enhancement areas”. In looking at the Fourteen Mile Creek “core” area, the open area identified as ELC unit 12 stands out as an obvious candidate for restoration/enhancement. It is a major inclusion into the core area and by virtue of its location its proposed development can be expected to have impacts that are disproportionate to its area. Given the acceptance of the need and value of restoration and enhancement to assist in mitigating impacts from large scale development, we strongly recommend this open area be retained in the NHS and restored, consistent with the Regional NHS and the current ESA boundary.

2. Clarification on the Width of the Connection to Twelve Mile Creek ESA. We agree that the best opportunity for linkage between ESAs 10 and 12 is via the tributary 14W-W1, as shown on Figure 15. However, neither the figure nor the text appear to provide any information on the proposed width of this connection. On Figure 16, the section of the tributary that is identified as reddsides “recovery” habitat appears to have a 30m buffer and the linkage is thus 60m in width in total. However, the section that is reddsides “contributing” habitat does not have the 30m setback and the overall width abruptly reduces to approximately 40 m (the scale of mapping makes the exact width impossible to determine and no widths are provided in the text). Table 23, under “Fish Habitat” does note that for the purpose of identifying constraints, a 30m setback was applied to all watercourses, but this does not seem to be reflected on Figures 16 or 17 for the watercourses 14W-W1-2 and 14W-W1-3, as well as the short stretch between the confluence of those streams and 14W-W1-1. Our opinion is that this linkage should be a minimum 60 m width throughout its length.
3. Buffer Widths. Table 23 discusses Significant Woodlands and associated buffers, recommending 10 m for all Significant Woodlands. Our opinion is that the buffer widths for woodlands should take into consideration the adjacent land use, not just the feature being protected. Some land uses have a greater potential for impact than others. Generally, residential development and schools have a greater impact on adjacent woodlands than do large institutional uses such as hospitals, cemeteries or large corporate properties with “campus” type landscapes. This is in part owing to more encroachment, greater use by humans and larger populations of predatory pets (especially cats). These indirect impacts to woodlands are noted in Table 23, pg 180. Also, buffers serve to allow edge functions to occur, including the natural senescence of edge trees and shedding of major limbs. Where trees and limbs can fall onto private property the Town may assume liability and adjacent homeowners can be expected to demand the pruning back of limbs and removal of edge trees to protect their properties, thus impacting the feature. Ideally, there should be a 30 m wide buffer for all features which comprise the NHS, however this is especially necessary adjacent to residential land uses or schools.
4. Inclusion of Restoration/Enhancement Areas in the NHS. Figure 17 shows the composite constraint line, which should include the NHS. As noted in the detailed comments, the Beacon report indicates that Restoration/Enhancement Areas may be part of the NHS, and in our opinion the areas that the Beacon report identifies as potential Restoration/Enhancement Areas are appropriate (see #1 regarding the inclusion area). However, Figure 17 does not include the Restoration/Enhancement Areas in the NHS. Likewise, buffers should be included within the NHS and show as such on Figure 17.
5. Comments on Land Use Options. The following comments are provided only with regard to preferences for protecting natural features, recognizing that there are planning, transportation, servicing and other issues that must be considered. Also, the following is mainly a comparative analysis which picks the best land uses from the three Options provided. As we note above, the greatest long term impacts to natural features likely occur when residential development is located adjacent to the NHS, thus the more this can be avoided, the fewer the long term indirect impacts.

A combination of land uses from all three options is preferred.

Of the three options, the area on the south side of Upper Middle Road would best be Neighbourhood Commercial, per Option A, however, as pointed out in the detailed comments, from a natural heritage perspective, this area would best be identified as a Restoration/Enhancement Area.

The area on the east side of Fourteen Mile Creek ESA just west of Brays Lane would be best identified as Natural Area, per Option B.

The area adjacent to Third Line would best be Office Employment, per Option A

The area on the bend in the North Service Road by Third Line would best be Office Employment per Option C.

The Neighbourhood Park shown adjacent to the NHS in Option A is preferred over the other two options.

The location of Office Employment adjacent to the NHS in Option A is preferred over the other two options which show more Business Employment in this location.

### Detailed Comments

Pg 39: we note that there were no surveys for ambystomid salamanders. If this is because there was no suitable habitat, then it would be helpful to mention this.

Pg 41: There were no surveys for crepuscular bird species, other than for Enns property. Given that some of these are Threatened or Endangered, it would be helpful to identify them now, however, if left to a later development stage then should at least be noted now and it be made clear that these could offer additional constraints if identified in the future.

Pg 48: s 3.3: we note that the comprehensive constraint line included buffers based on "...ecological sensitivities and/or policy requirements." The Beacon report notes that this was done to identify constraints to future land use and development planning. However, the land use plans were presented to the public in May 2012 and were developed prior to the constraint line being developed. We do recognize that the land uses concepts can be refined, however it would have been preferable to at least have determined the limits of all features prior to developing concepts. Second, the purpose of buffers is primarily to mitigate, and hopefully prevent impacts to features. Since the potential for impacts is partially dependant on the adjacent use, the buffer requirements may vary depending on the land use plan. We thus suggest that the recommended

buffers be considered tentative and be re-visited once the preferred land use is selected, and a more accurate determination of protection needs for various feature edges can be established.

Pg 87 – what is the rationale for the conclusion that black oak and red cedar are considered introduced and planted – the habitat is suitable for them and they are native to Halton.

Significant species (all levels) would benefit from being mapped so their distribution within the study area is clear.

We agree with the evaluation of landscape connectivity, although it would have been helpful to recognize that the lands west of Bronte Road are in the GreenBelt, and thus have limited potential for development. Although there are no features there, it is not developed and thus there is some connectivity to the Bronte Creek valley; a substantial natural heritage feature. Thus the two connections through tributaries 14W1-2 and 14W1-3 are important, albeit they probably don't warrant anything more than the 60m-wide linkage in the Regional NHS.

Pg 98 s 4.3.6.3: It is noted that most observations of snakes were around the edges of the forest, plantation and thicket communities. However, this is where the cover boards were placed (according to text on page 40 as no map showing locations was provided), so the distributions reflects the sampling method, not necessarily where they were most abundant. Although the golf course greens may not provide ideal habitat for snakes, the “roughs” either side of fairways could. Owing to the location of the cover boards, the results only provide presence/absence data and not information on the distribution of snakes.

We note that no bat surveys were undertaken. Given that two bat species are now listed as Endangered, some discussion of bats is warranted.

Pg. 144, s 4.3.11.2 Evaluation of boundaries for Fourteen Mile Creek.

In addition to the discussion provided under “General Comments”, there is an area along the south side of Upper Middle Road that was excluded from the current and proposed ESA boundary that should probably be included, if not entirely then at least in part. This area appears to be in a state of succession and would likely have been far more open in the early 1990s when the ESA updates were done. It currently appears to be largely forested and should probably be included within the boundaries of Significant Woodland, and we well as the ESA and NHS.

We note there has already been one unfortunate development intrusion into the ESA, on the southeast side of tributary 14W-E1.

Pg 158, Table 23: The table indicates that the boundaries of the NHS proposed by Beacon are provided in the EIS. The EIS notes that a NHS is comprised of Core Areas, Linkages and may

also include Restoration/Enhancement Areas. Buffers should also be recognized as a part of the NHS. The NHS would be the sum of these four components. The only figure showing the NHS is Figure 16. Figure 16 shows the proposed limits of the Core Areas, but the Linkages are only shown conceptually by Yellow Arrows, and potential Restoration/Enhancement Areas are generally located by numbers that correspond to descriptions in the text. In order to fully establish the constraints to development, the limits of the Linkages, or at least their dimensions (thus allowing a bit of flexibility for exact location to be determined in site-specific EIAs), as well as the boundaries of the Restoration/Enhancement Areas and buffers, must be provided. Thus at this time, the constraint analysis is not fully complete.

Pg 176, Table 24

Geology: preferably there should be no grading in the buffer zones, other than what may be necessary to accommodate an approved use in the buffer. If 30 m buffers are implemented, the grading restriction could be flexible in the outermost 20 m.

Woodlands (pg 180). Indirect impacts to woodlands adjacent to residential land uses are noted and potential mitigation options are provided. As we noted previously, a wider buffer (30 m), especially for woodlands adjacent to residential areas or schools, is recommended and would assist in mitigating impacts. The Recommended Mitigation in Table 23 notes that the proposed 10 m buffers are minimums. The mitigation measures also note the erection of fencing prior to site preparation. Further to that, we suggest the fencing should be at the limit of buffers, consistent with our earlier recommendation that no grading occur within buffers. Also, permanent, continuous fencing along the rear of residential properties will further reduce encroachment, although over time, owners are likely to install their own gates. Such fencing should be installed prior to house completion so that new owners are under no deception as to the limit of lots and the erection of fencing. Lastly, we suggest the content (text and figures) of the information pamphlet mentioned as a mitigation tool be included in the site-specific EIS reports such that they can be reviewed by approval agencies. We do not agree that the long term residual impacts will be “neutral”. The development of these lands can be expected to degrade the remnant natural features to some extent, even with all the mitigation implemented.

Wetlands (pg 180): The text consistently notes that direct impacts (loss of area) and indirect impacts can be reduced, but no-where is it suggested that they can be avoided. Thus there must be some net impacts and we thus do not agree with the determination that the residual impacts are “neutral”.

Fish Habitat (pg 181): Mitigation measures should include construction timing to avoid impacts during sensitive times for fish (breeding). Construction windows for activities that are within streams or their buffers, or when de-watering activities may be discharging to streams, should be determined in conversation with the CA, and where appropriate, MNR.

Birds (pg 183): Given the displacement of bird species that breed in open habitats, which are becoming scarcer, and replacement with urban-tolerant bird species that are becoming ubiquitous, we do not agree with the assessment of a “neutral” residual effect.

Reptiles and Amphibians (pg 183): We are skeptical about the neutral impact on snakes given the development of the open lands and loss of foraging habitat. Likewise, the ability of the proposed new ponds to mitigate for loss of over-wintering/nesting habitat for turtles is speculative and is dependent on getting the pond design correct, it being sufficiently isolated from humans and pets to be suitable, and for the resident populations to find the new habitat. Overall, the assessment of “neutral” impact is optimistic.

Pg 187, s. 7.1: We agree with the Beacon report that among the three options, “B” has the potential for the fewest impacts. However, as we note in the General Comments, a combination of the options, and preferably a fourth option that incorporates some of the concerns noted above, would be preferred.

Pgs 188-191, s. 8.0 Monitoring: Table 25,

All the proposed monitoring occurs up to, but not past build-out of the development. We suggest that the majority of impacts from development will occur in response to the longer term stresses resulting from the urbanization of these lands. If the effects of the proposed development, especially on vegetation, is to be determined, then monitoring for approximately 20 years after build-out would be required. Birds will likely respond quicker to stresses, but we still feel that some changes may occur past build-out.

Vegetation: the text recommends that ELC be used as a monitoring tool to determine changes in vegetation. Measurement is proposed every 5 years until build-out. We suggest that ELC is too coarse to detect vegetation changes over such a short time period, and most of the changes can be expected after build-out, when monitoring has presumably finished. Likewise with using FQA and invasive species, most changes can be expected after build-out, so we do not think the proposed monitoring will be helpful. Moreover, monitoring “population densities” of invasive species is not an appropriate measure. We suggest that any change in distribution (i.e., the spread of invasive species), be monitored by measuring the total number of patches and the size of patches.

Pg 194, S 9, Policy Compliance

ROPA 38: We suggest that the NHS proposed in the EIS does not automatically confirm compliance with ROPA 38 and that the compliance is pending review and comment of the proposed NHS. As noted previously, we do not agree with the proposed NHS.

ROP 2006: As above, the EIS has proposed modifications to the ESA boundaries which have not been accepted by the Region, thus compliance is pending.