Memo

To: EEPAC

From: Environmental & Parks Planning (E&PP)

Date: April 8, 2015

RE: Westminster Ponds / Pond Mills Environmentally Significant Area (ESA) NSE Vol. 1 & 2 Report, Responses to EEPAC's Comments of November 2014.

E&PP and North South Environmental (NSE) thank EEPAC for their detailed review of the September 2014, Westminster Ponds/Pond Mills ESA: Ecological Inventory & Management Zone Report, Volume 1 & 2 by NSE (with support from Schollen, Hutchinson and Woerns). This memo provides detailed responses to all of EEPAC's comments on Volume 1.

With respect to Volume 2, and in particular the Hydrogeological Investigation, Water Quality Monitoring and Paleolimnology, this work was done to fulfill the Recommendations in Objective Six: Develop Program For Monitoring Water Quantity and Quality from the 2005 WMP ESA Conservation Master Plan (CMP). While staff circulated the TOR for this work to EEPAC in January of 2013, EEPAC did not provide comments on the scope or project parameters at that time. Much of the scope of Objective 6 is beyond what we can do at this time. EEPAC's Volume 2 hydrology, hydrogeology and paleolimnology comments are very useful and we are grateful for the level of detail provided and we will certainly keep them on file for any future work.

EEPAC also provided comments on an earlier version of the Volume 1 report for the north portion of the ESA entitled: Westminster Ponds ESA Ecological Inventory and Management Zone Report for Community Connections in January 2014 and Staff and NSE provided a detailed response letter addressing all of EEPAC's previous comments dated June 5, 2014, which appeared on EEPAC's July 2014 agenda.

EEPAC GENERAL COMMENTS (Shown in italics)

It would be helpful to have a map that overlays the trails both managed and unmanaged, on top of the ELCs.

NSE/Staff Response: The Terms of Reference for the study was scoped to addressing only the inventory and recommendations for management zones. We were following the Trail Standards process: trails are reviewed with the management zones.

There is no explanation for why the hospital lands were not included in the study.

NSE/Staff Response: They were generally included except for the buildings and manicured areas. It should be noted that more hospital lands are now inside the ESA Boundary.

EEPAC hopes that sightings of Ontario SAR species were reported to the Natural Heritage Information Centre as requested by the MNR.

NSE Response: agreed: All SAR data from recent NSE studies in WMP and Coves have been shared with NHIC by the City's request.

For the sake of digital mapping, and future applications, are there any longitude and altitude measurements for the ecosites?

NSE/Staff Response: we are not familiar with these measurements, and the requirement was not in the TOR reviewed by EEPAC. The City will have all GIS files for future use.

There appears to be no mention of herbicides and larvicides within the catchment area. Surely this is of concern considering the site hydrology.

Staff Response: Herbicides are carefully applied by UTRCA staff who are licenced pesticide applicators to control invasive species in our ESAs.

Bacillus thuringiensis israelensis (B.t.i.) is the larvicide used by the Middlesex London Health Unit (MLHU) and it is not a chemical - it is a bacteria. The 2013 Vector-Borne Disease Report available online from the MLHU describes: "This larvicide is biologically safe and target specific, meaning that it only affects mosquito larvae when applied to standing water for a treatment. B.t.i. contains an acidic bacterium that causes a lethal reaction in the alkaline environment of the mosquito larva's gut."

The 2005 Plan Update made several detailed recommendations, i.e. Table 2 on Pgs 33-35 (City of London, 2005). Should they not be included/addressed here?

Staff Response: As the majority of the 2005 recommendations are in progress or completed these were not included in the report.

METHODS

The methods used for ecological inventory are generally in accordance with Terms of Reference (TOR) 4.1 Task 1 and with City of London's Environmental Management Guidelines. This review acknowledges there is a cause for some confusion within the TOR, which under Task 1 specifies some inventory requirements, and, also requires the City's standard monitoring protocols be followed, which differ in some areas. The Draft Report does an adequate job of reconciling these two sets of requirements. The following notes describe a few areas of concern regarding survey items that seem to have been overlooked.

Staff/NSE Response: The TOR asked that City data collection standards be followed and that consultants check for various SWH which is a provincial standard with Criteria for Ecoregion 7E. We complied with this. Additional text has been added to provide further explanation of site visits.

Recommendation 1: *EEPAC requests that it be given an opportunity to provide comments and suggestions in future for RFPs. It would have made the work done, particularly of Volume 2, much more focused.*

Staff Response: EEPAC was provided with the TOR for this study on the January 17, 2013 EEPAC agenda and the Medway ESA CMP phase 1 TOR on February 21, 2013 and the

Meadowlily ESA CMP Phase 1 TOR on March 21, 2013. No comments were received on any of the TOR at that time.

In the City's EMG, p. 44, North South (2003) is noted that a five season inventory should be done to account for all wildlife, especially those that are only observed in a narrow temporal window. It appears from p. 5 and 6 of the Westminster Ponds/Pond Mills Volume 1, that the mid July to early August season was missed. It is unclear if the May surveys did or did not look for migratory birds. It seems the July 9 and 10 surveys would be too late for breeding birds. And no work was done to identify migratory birds in late fall.

NSE Response: To complete the Ecological Resources Inventory, a number of surveys were completed between (March 27th and October 20th) to cover the required inventory and followed (and in many cases exceeded) both the City's Environmental Management Guideline 2.0 Data Collection Standard for Ecological Inventory and other provincially accepted protocols. As noted on Volume 1, Section 3.1, we scanned the ponds for migrants on all visits. Visits were conducted at a time to ensure that spring, summer and fall flora were most identifiable, and we in fact exceeded the number of visits required by the guidelines. The mid-summer visit was on July 10th. The October visit was conducted at a time when fall flora was still readily identifiable.

Re TOR 4.1 Task 1 b) and c) Migratory bird use of Saunders Pond during fall survey seems to have been missed. According to Draft Report Table 1, there is just a 1 Sept site visit, and no mention of birds. Likewise, there appears to be no mention of migratory birds during the fall in later text of report. Section 4.3.6 Breeding Waterfowl on South Pond on Pg 38 in fact states that "...the surveys were not focused on migrants so larger concentrations may occur."

NSE Response: the ponds were checked for migrant waterfowl during all visits, as noted in the report. The statement quoted referred to the fact that migrating birds tend to be unpredictable, corresponding with the weather or other factors that change on a day-to-day basis, so that larger concentrations may occur from time to time, though none were seen during the field visits. However, a dedicated migration study, which would have to include visits two or three times a week during the migration, was beyond the scope of the study.

Recommendation 2: *Text should be added to the report that justifies the exclusion of migratory bird surveying during the fall. Or, migratory birds should be surveyed in the fall of 2015.*

NSE Response: this has been clarified

Re TOR 4.1 Task 1 d) A June summer plants survey is required. This seems to be missing from Table 1. Also, "late summer to fall species (Aug – Sept)" was not done, but instead a 20 Oct survey. It is unclear if this change of survey time was intentional or well justified.

NSE Response: All three seasons were included in the survey, as required by the Data Collection Standards in the EMG. Though the third survey was in October, rather than September, it was conducted at a time when fall-flowering species would have been identifiable.

Recommendation 3: *The consultants should clarify this to city staff and include the reasons in the final report.*

Re TOR 4.1 Task 1 g)Butterflies and Odonata (dragonflies) surveys are required according to the EMG. According to Table 1, Odonata were surveyed 9 and 10 July, but butterflies are missing from the table. However, butterflies are in fact found later in results Section 4.3.1.

Recommendation 4: *Butterflies be added to Table 1 survey list for added clarity, as they have in fact been surveyed.*

NSE Response: These additional surveys have been added to the report

The observations about changes to the species inventory are made throughout text sections of the report. The addition of tables would have made it much easier to read and quickly understand.

RESULTS OF TERRESTRIAL SURVEYS

The Draft Report contains well detailed inventories of species surveyed. On a general note, the City now has several highly detailed ecological inventories (IE. 1981, 2013) of this ESA. There is an opportunity to learn from this data, which can hopefully be used to look back at what didn't work, and inform successful management strategies for the future. Observations about changes to the species inventory are made throughout text sections of the report, however the addition of tables would be much easier to read and quickly understand.

NSE Response: the addition of 750 flora species and a number of fauna species to the database will require considerable effort, for which budget was not allocated. We acknowledge the information would be valuable. NSE will try to enter this data in the next few weeks on a volunteer basis so it can be incorporated into the final appendix.

Recommendation 5: *Add a chart that lists all species from each and every inventory available. And/or create a chart showing species all that disappeared between each inventory period.*

3.1.1 Salamander Surveys (p. 6)
The first surveys of the area consisted of surveys to inventory mole (Ambystomatid) salamanders, which breed in early spring in vernal pools but are largely undetectable for the rest of the year as they live underground in forest habitats. These surveys were conducted during the first rainy nights during the spring thaw, when salamander movement had begun to be widely reported in southern Ontario. Ponds were surveyed at night by walking around and within selected ponds (i.e. those that appeared to provide the best habitat) searching for evidence of salamanders (adult salamanders, spermatophores and egg masses) with a flashlight.

COMMENTS

Were the ponds surveyed or did the report mean the vernal pools? Overall, it is not well demonstrated how the species sampling took place, nor the sampling method used, nor if the sampling was done once or in a temporal series.

NSE Response: additional text has been provided in the report.

It is unfortunate that the following observations in the Report do not generate comment in the Conclusions and Recommendations section of the Report.

4.3.2 Amphibians
The Report notes on Pg 23 the disappearance of Spotted Salamanders from the pond West of Highbury Road since the 1981 survey, "probably because the pond is now surrounded by subdivisions, and receives heavy flow in the early spring".

The decline of other amphibian species, i.e. Redback Salamander, is also merely noted by the Report. p. 29 The abundance and diversity of amphibians is highly unusual for an urban area (personal observation). Despite this, the number of species and abundance of some species appears to have declined in Westminster Ponds/Pond Mills since 1981, when in addition to the species found in 2013, Western Chorus Frog, Wood Frog, Blue-spotted Salamander/Jefferson's Salamander polyploid1, Redback Salamander and Eastern Newt were also noted more commonly within the ESA. In the past, Redback Salamander were noted in Polygon 5 (the area around Spettigue Pond; McLeod 1981) but this species was not found despite extensive searches of debris in this area. These species may still be present (there is the potential to miss some individuals if there are only a few), but appear to be lower in abundance and distribution.

COMMENT
There is no comparative weather data provided to indicate if the change in diversity was related to the harsh winter weather or precipitation differences.

NSE Response: Additional text has been provided in the report but it is almost impossible to determine the cause for changes in populations of amphibians, because of the limited data. Amphibian populations tend to go through "boom and bust" cycles: in some years there may be very few (for example if the weather is harsh or very dry) and in some years with optimal conditions amphibians may be much more abundant. In addition, there may be a time lag: for example abundant calling frogs in 2013 may have been a result of a "boom" year in 2012. "Boom" years are thought to be important in maintaining amphibian populations where "bust" cycles may be experienced. We can only provide a snapshot of the populations in one year, but these still provide valuable information on what persists.

Recommendation 6: *The City discuss with the Health Unit a reduction in larviciding in the vernal pools in the Ponds which may have an impact on amphibian populations.*

Staff Response: Staff consulted with Dr. Janice Gilbert, Wetland Ecologist who has no concerns with Bacillus thuringiensis israelensis (B.t.i.) being used, as it is not a chemical, it is a bacteria (personal communication).

4.3.1 Insects
A provincially significant species (Giant Swallowtail) was observed, and the Report merely notes that its larval food plant, the Hackberry tree (Celtis occidentalis), is only found in one place in the ESA.

Staff/NSE Response: Giant Swallowtail was incorrectly ranked as S3. The status has been changed by NHIC to S4 - Common and apparently secure in Ontario. Fortunately, Hackberry trees are protected inside the ESA, in all zones, and are relatively common in London and the City's UFORE report identifies that Hackberry trees provide nearly 10% of the city's leaf cover. Giant Swallowtail has been removed from Figure 5 and the status has been revised throughout the report.

4.3.4 Reptiles
The Report notes that three Species at Risk have apparently disappeared from the ESA: Butler's Gartersnake, Massasauga and Blanding's Turtle. But it appears from the text that no surveys outside of the meadow were conducted. Therefore, it is unclear what and where the reptile populations might be. Clearly the Snapping Turtles killed on the road did not inhabit the landfill meadow. Therefore, it is difficult to accept the conclusions provided.

NSE Response: Additional text has been provided in the report. Searches for basking reptiles and reptiles under debris were conducted in all surveys. Some reptile species were noted during incidental surveys, for example Painted Turtle and Eastern Gartersnake. Other species have been reported by naturalists, for example Dekay's Brownsnake. Dedicated searches for reptiles were conducted in the landfill meadow per instructions in the TOR. Roadkill surveys were also conducted near ponds on a night when reptiles were certainly moving. The SAR in question have not been reported in many years and so though it is correct to say (as was stated in the report) they could have been overlooked as they are highly cryptic, we felt there was enough evidence to indicate it was possible these species may have been extirpated in the Westminster Ponds ESA.

4.3.5 Sixteen of the bird species noted are considered significant, including federally and/or provincially significant species, forest area-sensitive/forest-interior indicator species, thicket habitat indicators and meadow habitat indicators (Appendix 4). The locations for significant species are shown in Figure 5.

p 37., A few singing Black-throated Green Warblers (which are more highly area-sensitive than other species noted in the ESA) were noted in the large forest area and in the vicinity of the South Pond in early breeding bird surveys. These may have been late migrants as other forest area-sensitive species such as Swainson's Thrush, which do not breed south of the Canadian Shield, were noted on the same day. However they should be considered possible breeders.

Unfortunately, there is no Figure that overlays Figure 5 with Figure 7 to provide comment on the appropriateness of the management zone for these significant bird species. Large enough habitat must be protected as birds do not, of course, stay in one area nor do all bird species nest in the exact same site each year. And not all significant species would necessarily nest in the ESA but the ESA would provide foraging habitat (e.g. Chimney Swifts and Barn Swallows noted on page 37).

NSE Response: as noted in the report, Black-throated Green Warbler and Swainson's Thrush were likely late migrants. They were only noted once, early in the season, and they are usually only found in rural landscapes. Nonetheless, they are high canopy nesters and the trees their habitat areas are protected inside the ESA. Chimney Swifts and Barn Swallows would likely not use the same habitat as they forage over fields and ponds. With regard to other "probable" breeding species, the habitat preserved is sufficient for them. They are found in natural areas in urban environments and are not particularly sensitive to the presence of people.

***Recommendation 7**: The Management Zoning be reviewed to ensure there are sufficient NR zones to protect the significant species that are sensitive to disturbance.*

NSE Response: Sufficient NR zones have been identified. This was considered in detail in applying the management zones; additional rationale and explanation has been provided throughout the sections on zoning. It should be noted that the NR zoning is applied only to the most sensitive and most significant areas, where the presence of any trail would be inadvisable. For the most part, however, most significant features in the ESA would not need that level of protection. Though there are some areas of the ESA that are more sensitive than others, most of the significant fauna and flora features are found in urban settings and are frequently found in areas with existing trails denoting high tolerance of human presence.

***Recommendation 8:** Add a section to the report that summarizes lessons learned. What changes have occurred since the last Ecological Inventory, and why? Which management decisions have been effective and which have not? Of course answering all these questions may go beyond the*

scope of this report, but observations and management questions which arise from the inventories should at least be summarized.

NSE/Staff Response: The Trail Standards describes the adaptive management approach that the City uses for ESAs and there are limitations in drawing conclusions from limited data. Budget constraints limit additional work here as not part of TOR.

3.1.5 – ECOLOGICAL LAND CLASSIFICATION AND FLORA - P. 8

…primarily within woodland communities, with searches focused on spring ephemeral species that would die back after flowering and be undetectable in later surveys. During the summer surveys, more comprehensive species lists were obtained for each community. The surveys generally focused on obtaining species information that would inform vegetation quality assessments (per the RFP), rather than on finding significant species (EEPAC highlight). Soil samples were not conducted (except to determine if wetland communities were mineral or organic) as the focus was on refining boundaries and updating species diversity.

One final visit was conducted in 2014 to provide ELC for the area south of Bradley Avenue, as this area was initially omitted from the 2013 studies.

COMMENT
Since part of the determination of the management zones is "the presence of significant species (such as Criterion 7), this seems to be a glaring omission of data for the determination of the Management Zones.

NSE Response: we did not mean to imply we did not look for significant species: we certainly did, on every visit, whether this was the primary purpose or not. Additional text has been provided in the report as further explanation. We did not **focus** on finding significant species previously reported as this is very time consuming and was not the task required by the RFP. In addition, if an area was already deemed to be of the highest significance, we focused on other areas; rather than continuing to acquire information. This was especially true of seepage and other wetland areas susceptible to trampling.

p*. 15 Table 2*

SWD4-1 is missing from the Table 2 on page 15. This community is South of Bradley and is highlighted as Nature Reserve as 5a. The entire area (Box F on Figure 10 of Volume 1) is also missing from the new ESA boundary.

All communities identified as having a high FQI over 30 (and in the case of two ELCs over 40) are only classified as NA1. The report highlights that this is unusual for habitat in urban landscapes and noted these as the most diverse communities in the study. Yet they are only classified as NA1.

NSE/Staff Response: The FQI in these communities was high relative to other areas in the ESA but it in most cases is not so high that it warrants NR zoning. As stated by the Environmental Management guidelines, zoning of NA1 or NR can be applied where Coefficients of Conservatism are 8-10. There are very few areas where plants with CCs this high are found, the exception being the fringe of swamp around the edge of Spettigue Pond and the seepage slopes to the pond (which have indeed been zoned NR). The mean CC even in this community, where it was highest in the Westminster Ponds, was 5.

It should be noted that the current and historical level of use and management in these polygons was effectively an NA1 zoning, allowing for or including managed or unmanaged natural surface trails and boardwalks. This level of use and protection has been effective in protecting these areas and maintaining these areas with a high FQI and the NA1 zoning is in keeping with the Trail Standards as the polygons do not meet the description of a "Nature Reserve Zone – For the protection of areas of highest sensitivity which sustain important ecological features and functions that meet the minimum standard of significance for one or more ESA criteria (O.P. 15.4.1.3.). The delineation of Nature Reserve Zones depends not only on the significance of the feature, but also on its sensitivity. Nature Reserve Zones include the most sensitive Species at Risk habitat; provincially rare communities; communities with unique species assemblages; critical wildlife habitat areas; areas of forest interior; special features within evaluated wetlands; groundwater discharge and seepage areas; areas of unique regional geology; aboriginal burial grounds or spiritual sites that are considered highly sensitive to disturbance in which access and recreational uses are not permitted."

Recommendation 9:

- *ELC communities FOD5 (FQI 45), SWD3 (FQI 41) and SWD6 (FQI 37.9) be NR or a clearer explanation be given as to why they do not fit this higher level of protection.*
- *All locations of significant species as noted on page 16 of the report should have the NR management zone, it being noted that there are probably other significant species as the surveys did not focus on identifying them as noted on page 8 and 23 of the Report.*
- *Box 7 on Figure 10 be included in the ESA boundary. We assume it has been left out in error as it is included in Table 21 on page 97.*

NSE Response: additional explanatory text added. The boundary has been revised to include this area south of Bradley Avenue, which was left out in error.

MANAGEMENT ZONE DETERMINATION (p. 74)

How were the boundary and uniformity of ecosites justified?

NSE Response: further explanation has been provided in the report. We have reviewed all management zones and made some revisions as can be seen in the March 2015 draft.

Table 19 provides the matrix of features that are used to determine which zones apply within an ESA as defined in the Planning and Design Standards for Trails in Environmentally Significant Areas (London 2012). The matrix provides a summary of significant features that contribute to zoning categories present within each of the numbered polygons shown on Figure 7 to assist in the determination of appropriate zoning.

It is the first time the Trail Standards have been applied to the entire site.The application of the Standards by North South highlights the need to review and refine the Standard so that using them is more uniform. EEPAC disagrees with a number of the zoning recommendations because of both misapplications and the lack of guidance in the Standards. The Standards have been used by two consultants to determine Management Zones (Dillon in the Medway and now North South in the Ponds). Both have used the Standards differently to determine the Zones. This is not defensible.

Staff Response: We would note that while an update will be made, the Trail Standards were developed with a great deal of involvement from EEPAC over a two-year period. As noted above, upon their adoption by Council in mid- 2012, Dean Sheppard, on behalf of the Environmental and

Ecological Planning Advisory Committee (EEPAC) - advising “that EEPAC has been involved in this process for over two years; commending the Parks Planning staff for keeping this project moving forward; advising that this is an excellent best practice standard that Londoner's can be proud of; advising that it clarifies and strengthens London's approach; advising that the new standards are more transparent and play an important role in keeping people engaged; expressing concern with respect to trail closures; and noting that some trails will be closed, some trails will be rerouted; however, there will always be trails in environmentally significant areas.”

Recommendation 10:

- *EPP staff meet with the Trail Standards Group to develop a common approach to Zones so that a consistent approach is adopted for their use.*

- *Staff proceed in implementing the June 26 2012 Council resolution (see bold, below) regarding the Standards as shown below. The Coves Plan is done and the Meadowlily CMP is in development. Meanwhile, staff have used the Standards for both this study, the Medway CMP, Kain’s Woods and Sifton Bog:*

e. the Planning and Design Standards for Trails in Environmentally Significant Areas BE REVIEWED by the ESA Trails Advisory Group after further application in finalizing the Coves ESA Conservation Master Plan (CMP) and developing the Meadowlily CMP, in order to provide any technical changes that would result in greater clarity of intent and purpose of the Standards, it being noted that the Standards should conform to Provincial and National standards;

Staff Response: City Staff are implementing the Council Resolution, and would note that page 3 of the Council approved Planning and Design Standards for Trails in Environmentally Significant Areas identifies that: “This document relies on the City of London Official Plan and the best practice guidelines for developing recreational facilities within national and provincial parks (Gray et. al. 2009). It is consistent with and generally exceeds best practices surveyed from other urban municipalities in Canada and the United States (see references)”.

The Staff report presented to the Planning and Environment Committee on September 24, 2012 regarding the Implementation of New Trail Standards in ESAs advised Council (implementing Clause 13. f) of the Council Resolution) that the Trail Standards are being applied to current and proposed ESA planning projects including Medway (north), Coves, this study (Westminster Ponds), the Medway CMP, Kains Woods and Sifton Bog. Staff would note that the June 27, 2012 Council Resolution recommended a total of 8 actions labelled as Clauses 13. a) through h) and the first Clause 13. a) describes Council’s direction to staff: “13. a) the Planning and Design Standards for Trails in Environmentally Significant Areas, dated June 4, 2012, as submitted by Parks Planning and Design with Schollen & Company Inc. and North-South Environmental, BE APPROVED as a planning and design tool for use in the development of trail master plans and/or Conservation Master Plans for ESAs; it being noted that the word "may" be amended to read "shall" on page 5 of the Standards relating to "Process - public consultation";

Sandy Levin the current Chair of EEPAC and Dean Sheppard the past Chair of EEPAC provided the following communications which were noted in the June 27, 2012 Council Resolution:

Sandy Levin, 59 Longbow Road - advising that not everyone was at the table which leads to some misinterpretation of the work the Civic Administration is proposing; indicating that work should be completed to protect environmentally significant areas and to avoid negative impacts and degradation; advising that it is a step in the right direction to protect the environmentally significant

areas; noting that this approach is consistent with the Official Plan; enquiring as to what will happen when environmentally significant areas become public lands; recommending that the Civic Administration take the appropriate planning measures to ensure that inappropriate development does not occur; requesting that a part h) be added to the Civic Administration's recommendation, which would read "the Civic Administration be requested to bring back trail standards in five years"; and recommending the budgeting of sufficient funds for implementing signage, by-law enforcement, ongoing public consultation and monitoring.

Dean Sheppard, on behalf of the Environmental and Ecological Planning Advisory Committee (EEPAC) – advising that EEPAC has been involved in this process for over two years; commending the Parks Planning staff for keeping this project moving forward; advising that this is an excellent best practice standard that Londoners can be proud of; advising that it clarifies and strengthens London's approach; advising that the new standards are more transparent and play an important role in keeping people engaged; expressing concern with respect to trail closures; and noting that some trails will be closed, some trails will be rerouted; however, there will always be trails it environmentally significant areas.

SPECIFIC CONCERNS WITH THE APPLICATION OF THE STANDARDS IN THE NORTH SOUTH REPORT

There are a variety of confusing decisions in the study that will be noted below.

A. It is troubling to see that Open Water is not included in the Standards (for obvious reasons, walking on water is usually), however, the consultants in this work have used NA2. This is unacceptable.

NSE Response: the Trail Standards were used to assess the zoning for these open water areas, treating them as "communities" under the ELC. Information on fauna was also incorporated into the assessment. Additional text has been added to describe the rationale.

Recommendation 11: *An Open Water Zone should be used for this ESA and added to the Trail Standards.*

B. It is also troubling to see that in most cases, where the consultants had a choice to use NR or NA1, NA1 was used in almost all cases. For example, "Zone 5" under Criteria 2. The Standards allows for a PSW to be either a NR or NA1. The explanation of NA1 is not clear in document (see p. 79 where the words say NR, but then conclude NA1). According to the Standards, page 16-17, "Decisions to define the extent of each zone and to distinguish between Natural Area Zone 1 and 2 are made for each ESA based on ecological and scientifically supported decision making.

But, nowhere in the Standards does it provide guidance to distinguish between Nature Reserve and Natural Area 1. This is a deficit in the document. Until resolved, the default zone should be Nature Reserve over Natural Area 1.

EEPAC does not support the position put forth on page 84 that individual wetlands within the PSW (Polygon 5) should be zoned as NA1. The consultant has referenced page 21 of the Trail Standards as justification.

NSE/Staff Response: The wording on page 21 that describes Nature Reserves provides differentiation between the two. "Nature Reserve Zone – For the protection of areas of highest sensitivity which sustain important ecological features and functions that meet the minimum

standard of significance for one or more ESA criteria" (O.P. 15.4.1.3.). Nature Reserve Zoning includes Species at Risk habitat; provincially rare communities; communities with unique species assemblages; critical wildlife habitat areas; areas of forest interior; special features within evaluated wetlands; groundwater discharge and seepage areas; areas of unique regional geology; aboriginal burial grounds or spiritual sites that are considered highly sensitive to disturbance in which access and recreational uses are not permitted.

Secondly the chart on page 18 and 19 should be consulted noting the features with a check mark only in Nature Reserve column provide the distinction. These would include: Areas more than 200 m from any edge or any area with documented F-I or A-S breeding birds, Groundwater discharge or seepage zones, Unique species assemblages: e.g. boreal, fen, bog, prairie, Carolinian, communities with rare plants abundant or dominant in one or more strata, Habitat areas for Species at Risk Federal or Provincial. However, other criteria need to be taken into consideration. For example, though Area 9 supported Wood Thrush and Eastern Wood-pewee, which have recently been designated species of Special Concern, this was only one criterion met – the other criteria indicated that Area 9 would be zoned NA1. The weight of the analysis of significance and sensitivity indicated that Area 9 should be zoned NA1. The rationale for this is that Wood Thrush and Eastern Wood-pewee are still extremely common birds in Ontario. Though populations have been documented in decline (hence the designation as Special Concern), this does not appear to be related to sensitivity to the presence of people, as these species occur in the appropriate woodland habitat in urban areas which people frequent. They would however be affected by development, for example in the form of housing.

Polygon 5 (PSW). It is recommended that individual wetlands within the PSW be given a zoning of Natural Area 1 unless they support features that make them unusually sensitive. Provincially Significant Wetlands are evaluated in a provincially standardized evaluation process as the "best" in the province. They are recommended for primarily a Natural Area 1 zoning with areas of Nature Reserve applied based on the location of the special features in the evaluated wetlands, consistent with page 21 of the Trail Standards document which specifically describes this as the criterion for delineating Nature Reserve zones in evaluated wetlands.

There is nothing on page 21 of the Trail Standards that supports this conclusion. The wetlands are a Critical Function Zone.

NSE/Staff Response: Nature Reserve zoning is to be applied to "special features within evaluated wetlands" as described on page 21 of the trail standards. The evaluation of a wetland as a PSW does not necessarily mean that each wetland would qualify as a PSW on its own, but that all wetlands considered together are provincially significant. The hydrological, social, biological and special features that contribute to the wetland score do not necessarily occur in each wetland, though it is assumed that all wetlands perform a supporting function.

Recommendation 12: *Assuming Zone 5 refers to the "zones" on Figure 7, this zone, it should be NR in order to better protect potential populations of salamanders.*

NSE/Staff Response: NA1 zoning would permit boardwalks over wetlands which would protect salamanders.

C. Table 20 on page 82 of the document is an incorrect application of the Standards. Nowhere in the Standards does it say to count up the number of check marks in the Matrix (in this case, Table 19), to determine the zone to use. Three of the people involved in the development of the Standards agree that this was not an agreed to method of making zoning decisions. Management

*Zone determination was to be based on the Criteria and **not** the number of Indicators, just like the City's Environmental Management Guidelines (EMG) are used for determining if an area meets the requirements for being designated an ESA.*

For example, on p. 82, for Polygon 3, the consultants have done the following:

Number of Criteria Satisfied (Table 19)			*Proposed Management Zone Polygon 3*
Nature Reserve	*Natural Area 1*	*Natural Area 2*	
	2	*3*	*NA2*

EEPAC argues that just counting up the check marks is not how the Standards were meant to work. The more appropriate approach would be the following:

Criteria Satisfied (Table 19)			*Proposed Management Zone Polygon 3*
Nature Reserve	*Natural Area 1*	*Natural Area 2*	
	Criteria 1 Criteria 2	*Criteria 6*	*NA1*

The seven criteria in the Standards are taken from the EMG in place for determining if an area is ESA. An area is ESA when it meets two of the seven criteria NOT by counting up parts/indicators of a criteria. The same approach should be used in applying the Standards.

A scientific and ecologically argued case must be built for deciding between NA1 and NA2 as per the Standards and the consultants have not done so. Another example from p. 82 is for Polygon 2 where the consultants have concluded it is NA2 by "counting check marks":

Number of Criteria Satisfied (Table 19)			*Proposed Management Zone Polygon 2*
Nature Reserve	*Natural Area 1*	*Natural Area 2*	
	1	*3*	*NA2*

EEPACs position is that the appropriate way to complete the table would be as follows:

Criteria Satisfied (Table 19)			*Proposed Management Zone Polygon 2*
Nature Reserve	*Natural Area 1*	*Natural Area 2*	
	Criteria 2	*Criteria 6*	*To be determined with a scientific and ecologically argued case as per the Standards*

Recommendation 13: *The City use a consistent methodology to apply the Trail Standards.*

NSE/Staff Response: The standards are being applied consistently by consultants and staff in that polygons are not assigned a management zone based on counting the number of checkmarks. Consultants weigh the science presented with the Trail Standards document and delineate

management zones using the charts on page 18 &19 and text on pages 20 to 28 as a guideline. The check marks were an attempt to represent that weighting but the table has been revised to better reflect this process.

D. We also notice errors in transposing the information to Figure 7. In Table 20 on page 82, the consultants have shown Polygon 1a as Nature Reserve. However, in Figure 7, there is a large area of 1a in the Northwest part of the ESA shown as NA1. Is the error in the labelling of the Polygon (perhaps the consultants meant Polygon 1) or should the area be NR as per the Table? Polygon 6 is also missing from Figure 7.

NSE Response: The zoning has been revised to NR.

Recommendation 14: The consultants be asked to clarify the zoning of Polygon 1 and 1a.

NSE Response: Additional explanation has been provided in the text.

Recommendation 15: The Figures in the Report be reviewed to ensure all zoning information is shown correctly.

F. EEPAC believes that there are misapplications of the Standards starting on page 79 of the report.

F.1 Under Criterion 1, the consultants' state:

"Other provincially rare wetland communities (Buttonbush swamp at the north end of Saunders Pond and Gray Dogwood thicket swamp west of Saunders Pond) are zoned as Natural Area 1 as they are less sensitive. "

According to the Standards, Provincially rare (S1-S3) meets Criterion 1 and can only have an NR Zone.

Recommendation 16: The Provincially rare wetland communities as noted above must be zoned Nature Reserve.

NSE Response: Zoning has been changed to NR for these areas where NR zoning was not applied previously – Gray Dogwood thicket was already zoned NR.

Page 79 of the report also states for Criterion 1:

Two communities at the south end of Thompson Pond, classified as Black Walnut lowland forest (8a), are considered provincially rare. These are highly disturbed remnants of this community and they are recommended for Natural Area 1 zoning meeting the criterion for Natural Area 1.Although uncommon natural communities to the London area can be NA1 or even NA2, the Standards do not say disturbed provincially rare communities are zoned other than NR.

Recommendation 17: The 8a Communities be zoned NR in accordance with the Standards.

NSE Response: these two communities are very small and their origin is in question: Black Walnut is often planted and all other vegetation layers are non-native. We still feel that zoning these two communities would not serve a useful purpose as it would be unlikely they could be restored to native communities.

F.2 For Criterion 2, the report states on page 79:

Wetlands around Spettigue Pond (area 8), as well as other PSW communities (Area 5), are high quality, distinctive, and sensitive to disturbance. They are recommended for primarily a Natural Area 1 zoning with areas of Nature Reserve applied based on the location of the special features and seepage in the evaluated wetlands, as page 21 of the Trail Standards document specifically describe this as the criterion for delineating Nature Reserve zones in evaluated wetlands. Other wetlands (Polygon 7) are considered locally significant wetlands and are generally dominated by non-native species. They are also recommended for Natural Area 1 zoning in accordance with the Trail Standards.

It makes no sense to EEPAC that an area of high quality; that is distinctive and sensitive to disturbance can be deemed Natural Area 1. EEPAC also disagrees that page 21 of the Trail Standards in any way relates to the criteria for zoning. 'Area 5,' which according to the Report is a PSW and could be either NR or NA1 under Criterion 2 on page 18 of the Standards. As pointed out earlier, the Standards provide no guidance in reconciling between an NR and NA1 (while it does for NA1 and NA2).

NSE/Staff Response: The guidance is provided in terms of sensitivity. The Trail Standards text phrases it as follows: "*Natural Area Zone 1 – For the protection of areas of moderate to high sensitivity which sustain important ecological features and functions that meet the minimum standard of significance for one or more ESA criteria" while NR zones are described as follows: NR Zone: for the protection of areas of highest sensitivity which sustain important ecological features and functions…"* While NSE agrees that areas zoned NA1 are significant, they are not so sensitive that a carefully-placed trail or boardwalk must be prohibited. It should be noted that the NR zone does extend throughout the most sensitive areas of Spettigue Pond, while NA1 zoning applies only to the higher slopes at a distance from the pond. This is the correct application of MZs based on page 21 of the Trail Standards. Application of this trail standard does make sense as, for example, boardwalks are permitted in PSWs in a NA1 zone, but only permitted in the NR portion of PSW if a Special Feature overlay is applied. This is consistent with how boardwalks are placed in National Parks, Provincial Parks to allow access and education in PSW wetlands in a sustainable way.

This same point of view applies to Polygons 6 and 9. They include PIC BCR 13 species of conservation concern. This could be NR yet the consultant decides, <u>without explanation</u>, to zone them NA 1. Further to Polygon 6, page 84 of the report indicates that it should be NR due to the presence of Eastern Flowering Dogwood (whereas the table and text on page 82 says NA1). In any case, as noted earlier, Polygon 6 appears to be missing from Figures 7 and 8. It is important to protect this part of the ESA as this is also where the Acadian Flycatcher was sighted. According to the MNR web site, the Acadian Flycatcher only spends about four months of the year in Canada. The rest of the time, it is migrating or wintering in the tropical forests of Central America and northern South America. It is typically found in mature, shady forests with ravines, or in forested swamps with lots of maple and beech trees. Therefore, it is likely to be using other areas of the ESA as well.

NSE/Staff Response: Additional text has been provided to further explain the zoning in this area. It should be noted that all wetlands around Spettigue Pond are zoned NR. As noted previously, the species classified as Priority Landbirds in PIF 2008 are frequently found in southern Ontario in areas surrounded by urban development, so most areas would not require NR zoning to protect these species.

To reiterate the zoning criteria: Natural Area Zone 1 – For the protection of areas of moderate to high sensitivity which sustain important ecological features and functions that meet the minimum standard of significance for one or more ESA criteria (O.P. 15.4.1.3.). Natural Area Zones include natural terrestrial, wetland and aquatic landscapes and waterscapes with moderate to high sensitivity in which a minimum level of trail development is permitted in support of low-intensity nature-based recreation.

The following trails are permitted in NA1: p. 33 Level 1 Hiking Trail, Purpose: These are natural surface hiking trails (0.5 to 1.5 m wide) or narrow boardwalks that provide access to site features of natural or cultural significance. They are designed and managed for maximum protection of the natural setting and minimum maintenance to create and maintain the feeling of being in "the wilderness".

The SAM1 and SWT3-4 that are also shown as a Polygon 7, should also be NR because it is completely surrounded by Polygon 8 which is NR.

NSE Response: SWT 3-4 is already zoned NR. We have used the trail standards to apply the zoning so the zoning for SAM1 is appropriate for this community.

Recommendation 18: *Polygons 5, 6, and 9 be zoned NR in accordance with the Standards.*

NSE Response: Portions of these communities have been reviewed and zoning has been changed.

Recommendation 19: *The SAM1 and SWT3-4 communities that are shown as Polygon 7, with a NA1 zone must be NR.*

EEPAC also disagrees with the consultant's position regarding Criterion 2 for Polygons 2, 3, and 4. These areas, on page 79, are noted for supporting PIF BCR 13 bird species. The options for this are only NR or NA1. The Standard does not distinguish between species that are or not sensitive to disturbance which is the Report's argument for a NA2 zone. Even by the "count the checkmarks" method used, the consultants picked NA2 for Polygon 4 over NA1, even though both had the same number of check marks.

In regards to Polygon 2, p. 83 provides no rationale at all for the decision. As noted earlier, using the "count the checkmarks" method, there is one check mark for Criterion 2 as NA1 and one check mark for Criterion 6 as NA2. This begs the question – "why was NA2 selected?" If the Standards do not provide direction, an ecological and scientifically supported rationale must be given (Trail Standards, page 17). There is no such explanation in the Report.

NSE/Staff Response: further explanation has been provided; some of the zoning has been reviewed and changed to reflect breeding areas for Priority Landbirds where appropriate. Other cultural communities have been left as NR2 because this fits directly with the description in the Trail Standards for NA2: "For the protection of supporting habitat areas such as shrub thickets, old fields, younger woodlands, and plantations that contribute to diversity, connectivity, internal linkages, visual and spatial buffers, restoration opportunities and ecological integrity of the whole ESA. In general, supporting habitat areas may be expected to have lower sensitivity than Nature Reserve or Natural Area Zone 1. Supporting habitat areas, when directly adjacent to an Access Zone may provide an opportunity for introduction of trails that permit use by persons with disabilities."

Recommendation 20: *A budget be determined to carry out the restoration of Polygon 2 as recommended by the consultants on page 91.*

Staff Response: Agree noting that invasive, Japanese Knotweed was managed in Polygon 2 in 2014, and will be monitored in 2015.

In regards to Polygon 3, p. 83 indicates that this Polygon should be split into three. One (3a) is NR for the coyote den. In the table on page 78, the report indicates that hawthorn species exist in 3b (meeting Criterion 7) and should be zoned NA1. However, the mapping in Figures 7 and 8 is NA2. This must be corrected.

EEPAC also disagrees with the decision regarding Polygon 4. There is no clear explanation for why NA2 was picked over NA1. Even using the count the checkmarks method, there was a "tie" in the table on page 82.

Recommendation 21*: Polygons 2, 3b, and 4 be zoned NA1 as they meet criteria 2 and 6 and in the case of 3b, also Criterion 7.*

NSE/Staff Response: Zoning has been revised where PIF Priority Landbirds are nesting, and further explanation has been provided. For the northern Polygon 3b, where Frosted Hawthorn was noted, the zoning was left unchanged because the most recent Middlesex flora status update (Bowles 2002) did not list this species as rare. This zoning fits with the description in the Trail Standards for NA2: "For the protection of supporting habitat areas such as shrub thickets, old fields, younger woodlands, and plantations that contribute to diversity, connectivity, internal linkages, visual and spatial buffers, restoration opportunities and ecological integrity of the whole ESA.

F.3 – Criterion 3 (p. 80) It is troubling that the ESA size criteria of 40 ha or larger is used to segment the City's largest ESA into smaller areas. The entire ESA meets this criteria. The criteria is large size OR presence of area sensitive or forest interior birds. It is not AND nor is it forest size only.

It is also incorrect at best to say: "Though the total area of forest is >40 ha, there are no areas of that size without gaps greater than 40 m (as required by this criterion)…" Nowhere in the Standards is this limitation included. It appears in the EMG as one of three tests (only one of three is required to meet this criterion for ESA designation (EMG, page 65).

NSE Response: the criterion reads as follows: "area of forest > 40 ha (not fragmented by gaps > 40 m wide)".

There is also confusion and lack of clarity in the concluding paragraph of this section on Criterion 3 on page 80: "The landfill meadow (Area 1) and the forests and swamps around Spettigue Pond (5, 8 and 9) contained habitat more than 100 m from the edge, meeting the criterion for Natural Area 1. Area-sensitive species do occur within the landfill meadow; however, the criterion does not allow a ranking of Nature Reserve for non-forest species." Criterion 3 requires NR for area sensitive species more than 200 m from any edge. It is not limited to forest species. We assume that is why the landfill meadow section called 1a is NR. The EMG state on page 65 that this ESA Criterion can be met if "there is confirmed presence of one or more "breeding birds" which are either forest-interior species or area-sensitive species." This brings us to question what species were identified in Polygons 5, 8 and 9. Area 5a has been created around the heron nest. The report has recognized that the risk of disturbance is greater with larger birds (such as herons) that are generally less tolerant than songbirds (such as robins or sparrows). The Environment Canada

Migratory Birds, Technical Information publication has suggestions for setbacks (see Appendix to this document) meaning Area 5a should be larger than shown on Figure 7

NSE Response: the landfill meadow is acknowledged as habitat for area-sensitive birds of meadow habitat so this contributes to the NR zoning of this area. This will be changed on the criteria table in the report.

Recommendation 22: *Area 5a where the heron nests should be larger based on the information in the Environment Canada Migratory Birds, Technical Information document.*

NSE Response: The guidelines for Ontario colonies (Bowman and Siderius 1984) note that all colonies which contribute significantly to regional populations of heron species should be given full protection, and managed, if necessary, to ensure their continuance, and to minimize disturbances. It further notes that larger, denser colonies tend to supply more young to the population than do smaller, less dense colonies. We have zoned the entire polygon where the heron nest was found as Nature Reserve (in accordance with the MNR direction to protect the entire ecosite supporting the colony) as well as the polygons to the west and east, but do not feel that zoning of additional habitat would be necessary. This colony is small (one nest) and likely does not contribute significantly to regional populations. The swamp containing the heron nest is bounded by a road and an agricultural drain, which currently form barriers to the habitat. The nest site was partially shielded from the area to the west of the drain by a fringe of trees, and there is evidence of human presence in the forest to the west. Additional explanation has been provided in the report.

MEADOW HABITAT

London is fortunate to have a meadow habitat that is unlikely to change due to the cap on the former landfill. (EEPAC is therefore somewhat puzzled by the consultant's comments on page 86 regarding the need to remove woody species). The most important issue is determining the best way to protect the nesting Bobolink and Eastern Meadowlark habitat so that these SAR birds continue to return to this site.

NSE/Staff Response: Our comment referred to the fact that, should additional trees and shrubs colonize the landfill (which in our experience can happen over time despite the clay cap) the habitat will become less and less suitable for grassland birds. Invasive woody species are particularly likely to invade landfills (for example Black Locust and Common Buckthorn) but native species can also invade, such as Trembling Aspen. Invasive Japanese Knotweed was managed in this area in 2014, and will be monitored in 2015.

It is important to minimize disturbance of nesting birds. Consideration should be given to closing trails during nesting time. As these birds do not use the exact same site for nesting year over year, EEPAC is unclear if sufficient area has been identified as Nature Reserve in the landfill meadow. The MNR's General Habitat Description (GHD) for the Eastern Meadowlark identifies the area between 10 m and 100m of the nest or centre of the approximated defended territory as Category 2 and is considered to a have moderate level of ***tolerance to alteration*** *(10 m to 60 m for the Bobolink). According to the GHD, in order to maintain breeding habitat function for the Bobolink, the entire continuous grassy patch up to 300 m from the nest or approximated centre of the defended territory is important habitat for this species.*

Unfortunately, the GHD for these birds does not indicate the distance for which there is a tolerance to ***compatible uses*** *(hikers, joggers, non-motorized vehicles) where the birds are not harassed (dogs off leash for example). The difficulty is that while an occasional hiker, jogger or even biker*

would likely not disturb the nesting birds, we have no current information on how many people use the nearby trails nor an estimate of the increase in use if a more substantial path is created.

Bobolinks might not even nest in the same field. They are very opportunistic. They are adapted to finding nesting sites that are ephemeral from year to year. Bobolinks in particular are considered to be area sensitive. That is, they prefer a minimum of about 40 ha of habitat. If there is plenty of habitat in the general area, some might use a 10 ha patch but they would not use an isolated 10 ha patch on a long term basis.

A greater area of the landfill meadow should be zoned as Nature Reserve. The rationale given for the NA1 Zone by North-South is not supported by EEPAC. It seems that the meadow near the hospital (east and not west as stated on page 83?), was not zoned NR because a long standing trail is there (p. 83). This is not one of the criteria in the Trail Standards. The consultants indicated that the Eastern Meadowlark was singing there and was a probable nester. As noted earlier, as their nests are hard to identify, more rather than less caution is necessary. We also note that this area is labeled 1a and the other 1a area to the east is NR.

NSE/Staff Response: it is unusual for Bobolinks to nest in this area but as long as it provides suitable grassland habitat it is reasonable to assume that they will nest, despite its small size. Polygon 2 has been re-zoned NA1, as shown by the revised map.

Eastern Meadowlark is relatively tolerant of disturbance – this can be seen at The Coves, for example, where Eastern Meadowlark raise broods on a landfill where many walkers use mowed trails throughout the landfill. The tolerance of meadowlarks to the presence of people is also borne out by the General Habitat Description for the Eastern Meadowlark published by MNR 2013, which states: ”The area of continuous suitable habitat between 100 m and 300 m of a nest or centre of approximated defended territory is included in Category 3 and will be considered to have a high level of tolerance to alteration. Eastern Meadowlarks depend on this area for feeding, rearing of young, resting, dispersal and concealment from predators. This area also helps maintain the function of both Category 1 and 2 habitat. Suitable habitat for this species includes but is not limited to pastures, hayfields, old or abandoned fields, and native prairies and savannahs (McCracken et al. 2013)….

Bobolink were noted only toward the south end of the landfill, and this area should remain as undisturbed as possible.

Activities in general habitat can continue as long as the function of these areas for the species is maintained and individuals of the species are not killed, harmed, or harassed. Generally compatible:

- Continuation of existing agricultural practices and planned management activities such as annual harvest, mowing, and rotational cattle grazing.
- Hiking and non-motorized vehicle use on existing recreational trails.
- General yard work such as lawn care and gardening.

It is certainly agreed that meadowlarks are sensitive to off-leash dogs and that dogs should remain on leash within this habitat in accordance with ESA rules and by-laws, as enforced by UTRCA staff.

Recommendation 23: *The meadow to the east of the hospital be zoned NR as it is habitat for a SAR species. This is because it is unlikely the City will be able to effectively close the long standing trail for breeding season.*

NSE/Staff Response: Agreed that this area should be zoned NR: see revised zoning map. The Western Counties Road is identified with a Utility Overlay as a water main runs underneath.

REQUEST TO THE HOSPITAL
Another recommendation to address comes page 39 of Volume 1:

The area just outside this thicket (Polygon 10?) is used for dumping debris from hospital landscaping maintenance, and this may have caused sufficient disturbance for the Coyote to relocate its denning site.

Recommendation 24: *The city ask the hospital to stop dumping debris from landscaping into this area.*

Staff Response: A City Ecologist met with Hospital staff in 2014 and Clintar has now cleaned up the area and will cease dumping yard waste on hospital lands. Reforest London will naturalize.

ESA BOUNDARY "RECONCILIATION" (EAST)
It is noted that no ELC data was recorded (perhaps not even collected) for the areas recommended to be excluded from the ESA. This is unfortunate. EEPAC also notes that the boundary delineation portion of the EMG was intended to be used for the boundary delineation for new applications for development or site alteration, not to redefine boundaries of existing ESAs. Clearly, ESA lands have been altered by previous development, and/or current or previous owners, however, changing the boundaries to recognize these inappropriate actions is tantamount to condoning it. It will be very difficult now to say no to any other property owner (such as the one on Agincourt) when they ask to have the line redrawn because they have mowed lands within the ESA or built a pool (such as at 1169 Pond View Place). It also appears that if the recommendations of the study are adopted, the "lower" ponds would be cut off from the rest of the ESA. Adjacent land suffering from anthropogenic uses can at least serve as a buffer zone. And the only way to protect a buffer is by retaining it in the ESA. EEPAC recommendations were the City retain lands as part of the ESA are found in the following pages.

NSE/Staff Response: the ESA south of Bradley Avenue was excluded because of a mapping error, which has been corrected: this area has been included in the ESA. NSE did not visit lands to the east of Highbury Ave. as they were not within the scope of the RFQ. The boundaries of ESAs are re-assessed as part of the general TOR for a CMP Phase 1 as they change over time. EEPAC was provided with the TOR for this study on the January 17, 2013 EEPAC agenda and the Medway ESA CMP phase 1 TOR on February 21, 2013 and the Meadowlily ESA CMP Phase 1 TOR on March 21, 2013. No comments on the TOR were received at that time.

Recommendation 25:
- *Adjacent lands suffering from anthropogenic uses should be retained in the ESA to serve as buffer zones.*
- *Regardless of the action taken by the City to change the ESA boundary as result of this Report, all abutting properties to the ESA, in particular the Ponds themselves, should receive the Living With Natural Areas brochure, with priority given to the addresses included in this section of this review.*

NSE/Staff Response: agreed

If the City acts to remove lands from the ESA despite EEPACs concerns, we offer the following advice: AREA A EEPAC is puzzled how permission was given to build such that the homes on

Worthington Avenue have part of the ESA included in their backyards. Using the air photos for this area from the City's web site, the backyards appear to be part of the SWD3-2C ELC shown in Figure 4 – East. Given that there are other areas of the City where the decision has been made to include ESA lands in backyards (most recently, Southside Construction in the Bilyea Property along Dingman Creek), these lands should not be removed from the ESA. The same position applies to the homes on North Pond Crescent which the Report also recommends for removal.

Recommendation 26: *There be no change to the ESA boundary in the Worthington Avenue or North Pond Crescent areas.*

Staff Response: Homes on Worthington Avenue were built in the 1980s before current OP policies and Environmental Management Guidelines (EMG) were in effect. The new and previous boundary is generally the same on Worthington however the homes on Lysanda Crt. were built in 1989 prior to Council adopting the 1997 ESA Boundary Guidelines in the EMG and are now excluded from the ESA based on Guideline 10.

Recommendation 27: *Although it is recommended for removal from the ESA, (though not in any of the "boxes" (it is between A and C), the property at 1139 Pond View Road should remove the dock from the water as it is encroaching.*

Staff Response: The water is owned by the Province/Crown (not the City) and is UTRCA regulated.

AREA B Recommendations 28: *EEPAC does not support the removal of the SWT areas behind the homes on Pond View Road.*

NSE/Staff Response: This area was marked "private" on the map that accompanied the RFQ, so was not mapped. However, it is agreed that this area should be included in the ESA.

Recommendation 29: *The owners at 1085 and 1095 Pond View Road, and 566 Pond Mills Road should be told to remove their docks from the ESA.*

Staff Response: The water is owned by the Province/Crown (not the City) and is UTRCA regulated.

Recommendation 30: *The property at 624 Southdale Road East and the field on the north side of Southdale Road East be given high priority for acquisition to be added to the ESA. The field on the north side would be a good reforestation site given its location next to Polygon 8a (Black Walnut lowland forest).*

NSE Response: As noted in a previous comment, the Black Walnut Lowland Forest was so disturbed that its origins were questionable (all or some of it could have resulted from planting, whether by landowners or by squirrels, as is frequently the case). The field is surrounded by roads, a railway and residential development, and we feel a NR zoning would not provide added benefits.

AREA C Recommendation 31: *The only part of this area that EEPAC agrees to the removal is the section along Bradley and the interchange with Highbury that has been altered significantly by construction.*

NSE Response: The guidelines for boundary delineation in ESAs were followed (Guideline 9: *Existing heavily managed or manicured features that are surrounded on at least three sides by a*

patch or that form "islands" in patch are included in the patch if they are less than one hectare (1 ha) in total area (Figure 9). Such features include, but are not limited to agricultural croplands, untreed active pasture, golf courses, lawns, ornamental treed lots, gardens, nurseries, orchards and Christmas tree plantations. Subsequent permanent abandonment or rehabilitation of "islands" larger than one hectare may qualify such areas for inclusion in the patch.a) Existing heavily managed or manicured features adjacent to a patch are not included in a patch.

Recommendation 32: *The property owner at 1169 Pond View Place be required to remove the outbuilding from the ESA. (Even the consultant's recommendation does not delete this section of the SWD3-2F ELC from the ESA.)*

Staff Response: Will refer to UTRCA staff for follow-up thank you.

AREA D Recommendation 33*: EEPAC concurs with the removal of the strip between the buildings.*

Staff Response: Yes These areas are too narrow for inclusion in the ESA based on Guideline 3: it is a projection less than 30m wide, not a ravine, does not connect to another patch. However, City does own this 25m strip that extends north from Southdale Road East, and UTRCA manages it for City and it is an existing access to the ESA over a Union Gas Pipeline so should be identified as an Access Zone and Utility Overlay. This will be changed in the mapping.

It appears the properties to the east of the strip were deforested prior to 1998 (this is as far back as the air photos go on the City's web site).

Recommendation 34: *Before these lands are removed from the ESA, the reason for the tree cutting be determined through a review of older air photos of the area.*

Staff Response: A major Union Gas pipeline runs underneath this area and needs to be accessed for maintenance and repairs.

AREA E The properties on Winship Close receive the Living with Natural Areas brochure.

Staff Response: agreed, thank you.

TRAIL MANAGEMENT

Recommendation 35: *The City move quickly to re-route trail users away from the NR area 8 between the Ponds (see Figure 8 of the Report).*

NSE/Staff Response: Existing boardwalks on managed trails through NR are protecting the sensitive habitat from impacts and should remain to continue providing protection.

Recommendation 36: *The City should close and sign trails near the landfill meadow during nesting time of the SAR species identified in the study. Eastern Meadowlark and Bobolink nests are hard to identify (source: General Habitat Description) and the closure should be made based on the calendar or by the calls if the city is willing to monitor the location.*

NSE/Staff Response: Thanks for comment and this suggestion is being reviewed. Eastern Meadowlark is relatively tolerant of human presence, as shown at The Coves where Meadowlarks raise their broods in between very frequently used trails. Off-leash use by dogs is not permitted in

an ESA (and enforced by UTRCA ESA team to the extent possible) as nests are placed in grassy areas where off-leash dogs may run. The Bobolink was near the south end of the landfill. It was at a sufficient distance from the main trail to Spettigue Pond and there was no evidence of disturbance (for example ad hoc trails) in this location.

Section 12 of the Report contains important content: 12.2 – Amphibians, The report mentions "The connections between uplands and vernal pools that allow amphibians to travel between habitats without being predated, trampled or dried out are critical to these species' persistence." An excellent observation.

Recommendation 37: *The special needs of amphibians for connectivity must be reflected in trail management within the ESA.*

NSE Response: We agree, and note that in no instance would connectivity be threatened by trails. It should be noted that amphibians move between breeding ponds and upland habitat on rainy nights when very few people would be using the trails. Predators patrol wetland edges in search of amphibians so there is little likelihood that the probably of predation is increased by trails.

INVASIVE SPECIES MANAGEMENT

While it is not clear how the priority areas were arrived at, EEPAC encourages the attack on the invasion to begin in earnest.

Recommendation 38: *Regarding the 'least first approach'..... the group agreed that this approach may gain the most bang for the buck allotted. Nature Reserve zones should be a priority. The work should not be assigned to volunteer crews but dedicated trained, (and paid) staff.*

Staff/Schollen/NSE Response: Agreed. The approach of using volunteers was suggested in order to increase the amount of work that could be done under the recommended budget (this suggested budget was established by the City prior to the study).

- *Volume 1, Pages 46-47 : The rank value and priority ranking concepts are very vague and confusing with not enough explanation.*

- *In general, the plan, which seems to be generic and not locally focused, is far too complex and probably too difficult (and more expensive than $10,000 per year for ten years), to be helpful to those involved in ESA management.*

Staff Response: This suggested budget was established by the City prior to the study (in the RFP).

- *Ultimately, the City will have to decide what it wants this area to be in 50 years. Should it be 'micro-managing' every polygon? Is it the goal to have this ESA to look actually the same 50 years from now? Or should this ESA become a mature 'climax' community (deciduous beech/sugar maple forest)? Clearly, without controlling the buckthorn, an undesirable outcome is likely.*

Staff/NSE Response: Agreed, and the City is working with UTRCA to increase buckthorn control and with local restoration experts to develop a long term plan to protect the ecological integrity of WMP. The text has been revised to increase clarity. Some of the text was clipped from descriptions of Best Management Practices, which were requested by the RFP. Extraneous (non-applicable) text has been removed but best management practices are by nature somewhat generic

and so though not all this text was original, it has been left in where it contributes to the understanding of the issue. The source has been clarified.

5.1.1 Adaptive Management Approach p. 45, Given the nature of the site and the wide extent of non-native invasive species present, an adaptive management approach is recommended for use in the ESA as the basis for any non-native invasive species management plan. Adaptive management incorporates trial and error into restoration action by integrating design, management, and monitoring to systematically refine and adapt restoration techniques to reflect local conditions and management requirements. Non-native invasive species are widespread throughout and likely beyond the ESA. Therefore, the adaptive non-native invasive species management plan should be coordinated with the preparation of similar plans for other areas within the City or in fact a City – wide management plan.

Recommendation 39:

The City identify funds to begin a city wide management plan for invasive species.

City Response: Agreed, and a City Wide Invasive Species Strategy is being developed in cooperation with the Ontario Invasive Plant Council.

p. 47.,
Each ELC priority site is further broken down to establish sub-priorities for each individual year where sites either side of existing trails are ranked highest priority and slopes >25% the lowest priority within the ELC management unit (Table 7). The rationale is two-fold. Trail sites are easiest to access with equipment and steep slope sites least accessible. Trail sites, once management and restored, can be fenced off to encourage trail use and mitigate further access to areas beyond the trails (EEPAC highlighting).

Is the intent for this section to say "Trails sites, once management activities end and the sites restored, trails sites can be fenced off to discourage trail use and mitigate further access to areas beyond the trails?

Recommendation 40: *The consultant be asked to clarify the intent of this paragraph.*

Schollen/NSE Response: This paragraph has been revised. The intent is to fence off the restoration sites on either side of the trail and then leave the fences intact for a while as a mitigation technique to keep people on the trail and out of the restoration areas. Once semi-mature, the fencing can be removed and the restoration areas can be opened up again. This technique was used at Sherwood Park in Toronto and it successfully curbed the behaviour of the public while engendering a new respect for the environment.

p. 48
The exception to this is that areas that are situated adjacent to disturbed sites and/or are traversed by trails would be high priority. It is advantageous to control non-native invasive species in these areas, followed by fencing and aggressive restoration in order to provide a barrier to further access areas beyond the trail thereby reducing the potential pathway for continued spread of the species by animal or human carrier.

Edges should also be prioritized for management in order to control the entry points of the non-native invasive species. Edges tend to offer more available light to enhance the opportunities for non-native invasive species to establish. Edges where the ESA interfaces with residential properties

exhibit disturbances in the form of garden clippings and/ or trail use and are therefore non-native invasive species pathways. On a practical level edges and disturbed sites also may afford easier access for small equipment for mechanical control measures and therefore could enable larger scale active management at less cost.

Recommendation 41: *The invasive species plan needs to be mapped vs existing trail system. If these areas will be cut off, they should be cut off NOW even if a NA2. It is known that buckthorn is most aggressive along trails.*

Schollen/NSE Response: The overlay of the trails on the plan was shown in the Invasive Species report (Volume 2: Schollen et al. 2013). The focus was on the main trail alignments for invasive species purposes but the secondary and tertiary ones were also mapped (as shown by the thin black lines). These most often coincided with invasive species monitoring sites. The buckthorn invasion in WMP ESA as shown on Figures 6&7 is severe and now primarily increasing in relative density rather than representing a new invasion. Buckthorn is aggressive throughout the ESA and near many of the edges as well as along trails. The focus on trails and edges was to highlight the fact that edges could provide opportunities for re-invasion following non-native species removal if not carefully monitored.

- *The city begin implementation with a meeting with the Ward councillor to prepare public notice and awareness of the plan.*

- *Budget be included starting in 2015 for the implementation of the plan. Ideally, the work should be compressed to a shorter period and sufficient budget allocated so that Council can more quickly implement these recommendations. Time is certainly of the essence.*

Staff Response: Agreed, and this work has already begun with Buckthorn treatment happening in 2014 and 2015.

Criteria To Assess Priority Management Areas (Westminster Ponds/Pond Mills Zone Report, V. 1

The management zones priority ranking is based on criteria formed from 4 categories of the Management Unit.

1. *Management units containing trails and Management units within 50m of an edge or adjacent landowner*
2. *Percentage of common and glossy buckthorn*
   - *Ranking from 1-5*
   - *Areas with the greatest infestations are ranked 1 (lowest priority) while lowest infestations are ranked as high as 5.*
3. *Terrain and Slope*
4. *Management Zone*

The example in Vol. 1., pg. 46, 2.3.1 the criteria ranking system has no value is assigned to the Edge/Adjacent Landowner category and the final score of "5" does not correspond with the Total score displayed in Table 6., pg. 47, Priority Rankings for non-native species management or the total score assigned in Table 7. Priority Non-Native Invasive Species Management Areas by Implementation)

In the example provided on pg. 46, there is no value provided for "Contains Trails" category, however, Figure 9 on pg. 89 depicts a URTCA trail within the polygon while Figure 8 on pg. 87 does not show the trail.

Schollen/NSE Response: "Invasive species management areas" were labelled differently from management zones in order to ensure they were distinct from the terms used in the zoning map. The zoning map will be provided in an appendix in Volume 1 of the final report.
We apologise that there appears to have been an error in Table 6 that added to the confusion. However, the example on page 46 was intended to provide a schematic conceptual response to illustrate the methods. Clarification has been provided.

Recommendation 42: *The consultant provide clarification on the mapping discrepancy, and clarification on the matrix/method for evaluating values for the identification of management areas.*

p. 56
It is unclear if the following was a cut and paste or a recommendation for the City of London. It seems unattainable for the present City budget and it is unclear if Regional EDRR contacts is cribbed from a previous report to a different municipality.

Formulation of the following working groups is recommended for this component of the management plan:

- *Alert network of invasive plant 'spotters';*
- *Invasive Plant Risk Assessment Panel;*
- *EDRR Program Coordinator; and*
- *Regional EDRR Contacts.*

The role of the invasive plant 'spotters' (municipal or UTRCA staff) is to carry out invasive plant surveillance and structured reporting (early detection) of information on potential new incursions. The information is filtered through the EDRR Program Coordinator to Regional Contacts and entered into a database. When a new invasive plant incursion is discovered, the species will undergo a risk and threat assessment by an Invasive Plant Assessment Panel. The Panel will recommend to the City the appropriate level of response (high, medium or low) and the appropriate response measures to be put into action. The database is accessed regularly and monitored by the Risk Assessment team to inform decision making related to allocation of funding, identification of priority management and restoration sites, tracking success rates and identifying adaptive management models that could be utilized if current methods are unsuccessful.

Schollen/NSE Response: we were asked to look at Best Practices (as required by the RFP) and this is a common approach we researched in North America and in Australia. We have clarified where this information came from. It is a valid approach given the likelihood of new species invading as well as the high probability that the current invasive species could start to invade new areas.

Recommendation 43: *City staff should seek sufficient funds from City Council to develop and carry out an effective invasive species removal plan that can succeed without reliance on volunteers.*

Staff Response: The recommendations for volunteer assistance have been deleted from the report.

p. 63

The implementation plan will rely on coordination with federal, provincial, and local government agencies, universities, homeowners, and public groups. Recognizing that research and public education are critical to environmentally and economically sound invasive plant management programs, it is recommended that the City of London capitalize **on provincially run non-native** *invasive species programs in order to attract or at least offset costs for invasive plant management (EEPAC's highlight), research and outreach. The cost of management, monitoring, research and outreach need to be considered in addition to action items for the control of the plants. These initiatives are important to develop better cost effective methods of controlling invasive plant invasions.*

Recommendations 44:

- *EEPAC urges the city to seek funding from provincially run programs to help offset costs.*

- *The City should also apply to the London Community Foundation for a Community Vitality Grant for multi-year funding for invasive species management here, and in other ESAs.*

Staff Response: Agreed on both points.