

December 6, 2021

To the Planning and Environment Committee,

Over the past few years, I have helped to coordinate a working group of the Environmental and Ecological Planning Advisory Committee (EEPAC) that participated in updating the City of London's Environmental Management Guidelines. The working group provided detailed questions, comments and recommendations on both the 2020 and current 2021 draft of the guidelines. I want to thank City staff for their leadership of this initiative.

Based on my involvement throughout this lengthy process, and in recognizing the urgent need to protect the Natural Heritage System under climate change, **I urge the Planning and Environment Committee to adopt the current draft of the updated Environmental Management Guidelines.** The updated draft includes many improvements over the 2007 version that is currently in effect. The updated Guidelines will provide necessary protections for the Natural Heritage System.

However, because it is difficult to know how effective certain parts of the updated Guidelines will be prior to applying them (e.g., for setting minimum buffer widths around natural features),

I recommend that the Committee should require staff to regularly report back to Council about the implementation of the updated Guidelines and to allow for recommendations of additional changes that may be needed in the future.

Furthermore, I wish to draw the Committee's attention to an important addition to the updated Guidelines regarding the use of **citizen science data**. In the document before you, Appendix C Data Collection Standards, includes the following text:

"It is recommended that reputable citizen science data sources, such as iNaturalist and the Ontario Reptile & Amphibian Atlas, be reviewed when conducting a background review to supplement data obtained by the consultant team."

However, this does not prescribe how such databases are to be used.

I urge the Planning and Environment Committee to clarify with your staff tonight, whether citizen science databases are expected to be consulted as part of background reviews for environmental studies, or are only optional. I believe they must be consulted. Here's why.

Citizen science is scientific research conducted, in whole or in part, by amateur (or nonprofessional) scientists. Today's technology allows the public to participate in environmental research and monitoring. In London, some of the more popular citizen science tools include [iNaturalist](#) and [eBird](#). I use both of these in [my local research on bird mortality](#) and am seeing mounting public and academic interest in mobile apps and web-based tools for crowd-sourcing data. Citizen science is currently practiced by the [Upper Thames River Conservation Authority](#), [Nature London](#), [Thames Talbot Land Trust](#) and other organizations and residents in London.

By including citizen science databases in background reviews for studies, such as Environmental Impact Studies and Environmental Assessments, the City can greatly expand the scope of monitoring for rare species in a study area that may not otherwise be detected during organized surveys, at no additional cost to the City or to proponents. Consulting citizen science databases

prior to commencing a study could help to ensure that monitoring protocols for detecting species that were historically present are included in the study design, especially where trigger requirements for surveys may not otherwise be met (e.g., due to ongoing habitat degradation and/or local population declines).

I believe it is important for development proponents, environmental consultants and the public to be made aware that citizen science databases **must** be included in background reviews for environmental studies. Ideally, databases should be checked prior to commencing data collection (i.e., survey protocols), and historical records of Species at Risk from databases should be included in final study reports. Where possible, historical records should be verified for accuracy using available photos. Consultants are already required to check with the [Natural Heritage Information Centre \(NHIC\)](#) for historical records of Species at Risk, but these records (which are not listed publicly) may not include relevant observations from citizen science databases. Staff and Council should have access to *all* of the best available data pertinent to environmental impacts, rather than a mere snapshot captured in a consultant's report.

As a member of EEPAC, I have reviewed environmental studies that I felt could be improved upon if consultants had included citizen science in their background research. Consider a hypothetical example: a study is designed to assess natural heritage on urban land intended for development. The site contains minimal natural heritage features and is surrounded by residential subdivisions and commercial buildings. The extent and composition of remaining natural heritage at the site, and distance from other natural heritage features, may limit the scope of required monitoring under the Environmental Management Guidelines. Now, suppose the consultant finds a citizen science record [posted on iNaturalist](#) of a bird Species at Risk at the site with photographic documentation of breeding activity outside the prescribed window for breeding bird surveys. I believe that in this case, the consultant undertaking the study should be expected to conduct surveys to check for evidence of the Species at Risk at the site, and to include the historical record from iNaturalist in the final study report. This way, Staff and Council can review all available information and take measures to minimize negative impacts to habitat for Species at Risk.

I believe that Londoners are growing increasingly concerned about the impacts of development on the Natural Heritage System. Meanwhile, London's Environmentally Significant Areas and other features face continuous threats associated with human activities, invasive species, biodiversity loss and changing environmental conditions. By incorporating citizen science into how the City plans, builds and manages the Natural Heritage System, we can encourage the public to participate in monitoring and stewardship of nature, and improve available evidence to support conservation measures.

It has been a tremendous privilege for me to support the City's work on updating the Environmental Management Guidelines. I am looking forward to seeing the updated Guidelines put into action.

Regards,

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