

**Proposed Residential Land Development
234 Exeter Road & 1160 Wharncliffe Road, South, London, ON**

Official Plan Amendment and Rezoning Planning Act Applications' review comments for the submitted Preliminary Stormwater Management (SWM) Strategy-September 17, 2021, Geotechnical Investigation & Preliminary Hydrogeological Assessment for 234 Exeter Road-December 10, 2020, Hydrogeological Assessment Report-August 4, 2021, and Scoped EIS-October 2021

Received by EEPAC in February 2022. Reviewers: Sandy Levin and Berta B. Krichker

Submitted to EEPAC meeting of March 17, 2022

Overview - EEPAC Review Comments for the proposed Official Plan Amendment and Rezoning Planning Act Applications to Minimize and Mitigate Potential Environmental/Ecological Adverse Impacts and Specifically related to Water Resources Management Protection of Existing Conditions that Associated with Proposed Residential Land Development at 234 Exeter & 1160 Wharncliffe Road, for 234 Exeter & 1160 Wharncliffe Road properties as follows:

1. Ensure that the proposed design of relocation/realignment of a portion of the existing Dingman Creek drain-(White Oak Drain)/tributary, which crosses through the site, will include all applicable existing external sub-catchment areas that needs to be drained under the existing conditions; will try to replicate the existing fluvial morphological conditions to preserve and maintain the existing water quality and volumes supply; will make a maximum effort to preserve and minimize potential adverse impacts of the proposed development on the existing environmental/ecological features, functions; and will maintain the existing baseline conditions, which were identified in the above noted studies for the subject lands. EIS shall include all required references for the proposed changes and justifications that will be implemented.
2. The proposed Rezoning Application for the subject properties should include the special provisions, which will request that the proposed detailed design of a portion of the drain/tributary relocation/realignment, including the detailed fluvial morphological design and confirmation of the proposed size of meandering belt, buffer sizes and technical/scientific justifications, as well as the detailed design of storm/drainage utilities and SWM services to deal with the water quality, quantity control and erosion protection control that will be in compliance with the Dingman Creek

Subwatershed requirements, MECP, UTRCA and City's standards and requirements for this system.

3. The buffer/setbacks need to be identified and be sufficient. The technical justifications need to be provided to support the proposed setback recommendations for this development and the proposed buffers/setbacks need to be identified between the proposed development and a new portion of the tributary/drain, Flood, Erosion Hazard lines (UTRCA requested an Erosion Hazard Assessment of the drain portion which crosses through the site) and be consistent with EIS proposed recommendations.
4. Monitor the water quality drainage/stormwater (surface) discharges from the subject site to the Dingman Creek tributary under the baseline-pre, post and during construction conditions.
5. Provide required erosion control mitigation measures for the proposed post-construction storm/drainage flow discharges, eliminate the existing erosion and slope stability deficiencies and to minimize and mitigate any potential adverse impacts on both eroded and vulnerable Dingman Creek tributary banks along the subject properties.
6. Provide more detailed evaluations/calculations on the pre and post-development water balance assessment and support detailed information on the proposed SWM water quality, quantity and additional considered infiltration LID system (s), as well as the potentially substantial dewatering during the construction activity, due to the identified shallow groundwater locations and correlation with the surface water, as well as directions of the groundwater gradient in relation to the existing drain location.

Item #1-Proposed Relocation/Realignment of a portion of the existing Dingman Creek Tributary-White Oak Drain

The proposed development plans includes an open block along easterly limits of the site for a realignment/relocation of a portion of the drain which crosses through the site. However, the presented preliminary Stormwater Management (SWM) Strategy and Hydrogeological Assessment Report has not identify any external subcatchment areas that are discharging to this tributary and if there are external subcatchment areas, they should be included in the evaluation of this portion of the drain relocation/realignment and be a part of the water resources system evaluations for this tributary.

The proposed drain corridor will be bordered with an additional open space block, the existing wooded area, marshland area. **EEPAC notes additional data collection is needed to support shallow groundwater interaction**

with the surface water, as well as the baseline conditions to maintain and protect the existing wooded, marshland areas and additional open area.

Therefore, the proposed land development planning needs to include all design components that will address and incorporate all required measures to protect the existing ecological, water resources and environmental conditions and health of the subject and surrounded lands.

Item # 2-Rezoning Application' Special provisions for the subject properties

EEPAC recommends that the proposed Rezoning Application for the subject properties should include the special provisions, which will request that the proposed detailed design of a portion of the drain/tributary relocation/realignment, including the fluvial morphological design and confirmation of the proposed size of meandering belt, buffer sizes and justifications, as well as the detailed design of storm/drainage utilities and SWM services to address the water quality, quantity control and erosion protection control, as well as possible substantial dewatering process and water discharges that will be in compliance with the Dingman Creek Subwatershed requirements, MECP, UTRCA and City's standards and requirements for this system. **EEPAC asks to review the requested design.**

Item # 3-Buffers Setbacks from Relocated drain, Wooded and Marshland Areas

Based on the presented information in the Hydrogeological report and supported information in Geotechnical report, it established a strong correlation and connections between the shallow groundwater and existing surface/drainage water. The report suggests that the surface water contributed from runoff together with a shallow groundwater contributions in a south portion of these lands provide a base flow, which support existing major water resources functions and the existing environmental/ecological features. Also, the Hydrogeological report identified that in deeper groundwater wells there exists a strong vertical gradient that suggests that the deeper groundwater may also under some weather periods contribute to the baseline conditions for these features and the base flow in this portion of the tributary/drain.

EEPAC recommends the proposed buffers/setbacks will be identified and be sufficient. The technical justifications need to be provided to support the setback recommendations for this development and the proposed buffers/setback need to be identified between the proposed development the new

portion of the tributary/drain Flood, Erosion Hazard lines and to address the UTRCA requested an Erosion Hazard Assessment of the drain portion which crosses through the site) and be consistent with EIS recommendations.

The recommended buffers/setback requirements shall be consistent with the City's London Plan Policies and requirements, completed and accepted by the City Council Subwatershed and Municipal Class EA studies for the subject area, MOECP and UTRCA Acts, Regulations and requirements. In accordance with the OWRA definitions, storm drainage and SWM systems, including the SWM Facilities, are considered to be a sewer system.

Item #4-Monitor the pre (baseline), post and during construction water quality conditions for drainage/stormwater (surface) discharges

The Water Quality Monitoring Program (WQMP) for drainage/stormwater (surface) discharges during the construction activities will be implemented for the subject site. However, once again neither the water quality parameters and methodology/monitoring protocol, nor duration for this WQMP were identified.

EEPAC recommends that prior to development approval, WQMPs be undertaken for the subject site for existing and proposed drainage/stormwater (surface) discharges from the subject site into the Dingman Creek system under the (baseline)-pre, post and during construction conditions that will include, but will not be limited to, the water quality parameters and methodology/monitoring protocol and WQMPs durations for all identified conditions. These WQMPs will be required to comply with MECP's Provincial Water Quality Objectives (PWQO) under OWRA, the City's Environmental Management Guidelines (EMG), By-Laws, policies to ensure that existing ecological/environmental conditions, including, but not limited to base flow, banks slope stability and erosion, water quality, as well as fishery, aquatic habitat will not be adversely impacted by the proposed site plan development.

Item #5-Implement maintenance and mitigation measures and design requirements to improve the existing Dingman Creek tributary banks erosion and slope stability deficiencies and provide requirements for the storm flows discharges (s)

The preliminary SWM strategy identifies the preliminary design requirements of water quality and water quantity, but does not identify the required erosion storage requirements that are needed to mitigate potential erosive adverse impacts of the increased post-construction flows and velocities and

to address, mitigate and improve existing erosion and slope stability deficiencies of the Dingman Creek tributary.

The UTRCA requested an Erosion Hazard Assessment of the drain portion which crosses through the site.

EEPAC recommends that the applicable maintenance, mitigation measures and design requirements will be incorporated in this site plan with approval requirements to include:

a) address, mitigate and eliminate the existing erosion and slope stability deficiencies on both banks of the Dingman Creek tributary at the subject site;

b) effective erosion control mitigation measures for the proposed post-construction storm/drainage flow discharges, eliminate the existing erosion and slope stability deficiencies and to minimize and mitigate any potential adverse impacts on both eroded and vulnerable Dingman Creek tributary banks along the subject properties.

Item #6-Provide more detailed evaluations/calculations on the pre and post-development water balance assessment and support detailed information on the proposed SWM water quality, quantity system.

The provided Water Balance included in the Hydrogeological Report EEPAC reviewed provides a preliminary calculations for the subject site and due to the identified shallow groundwater conditions and limited infiltration capacities, the final SWM report will need to incorporate a more detail information in the recommended selection of SWM measures and facilities.

EEPAC recommends that detailed design of the storm/drainage include more detailed evaluations/calculations on the pre and post-development water balance assessment to meet 80% of the pre-development water balance conditions. The required water balance calculations be developed in a final SWM report and be submitted for further review by EEPAC.

EEPAC notes on page 32 of the EIS that onsite controls are proposed for the medium density blocks.

EEPAC recommends minimizing onsite controls as we are unaware of private lands being able to manage on site SWM in particular, the use of salt for winter maintenance.

Item #6 – Natural Heritage Issues

- Lands to the East of this site:

The proposed road thru the Significant Woodland to the east of the subject site as shown on Map 4 of the EIS is unacceptable and should not be permitted as it is contrary to the Official Plan sections 1395-1398. As noted on pages 2, 16 and 17 of the EIS:

"The lands to the immediate east are also identified as 'Unevaluated Veg Patch', with a 'Potential Upland Corridor' and 'Unevaluated Corridor' in the Southwest Area Plan (2019a). The London Plan (2019b) identifies that area as 'Woodlands' with 'Valleylands', 'Unevaluated Wetlands', and a 'Potential Naturalization Area'."

It is also noted on page 2 of the EIS that:

"The natural feature to the east is identified as an unevaluated vegetation patch and is being considered for designation as an Environmentally Significant Area as indicated during the scoping meeting with agency staff (MacKay pers. comm. 2018)."

And it is further noted on page 21 of the EIS:

*"NRSI biologists documented approximately 9 Western Chorus Frogs (*Pseudacris triseriata*) calling from wetlands within the property to the east on April 26, 2018. This species is considered threatened federally (COSEWIC 2020), but is not considered at risk provincially (MNR 2020a). As noted in Section 1.2, species which are considered threatened federally but are not listed provincially are considered a Species of Conservation Concern which is protected as SWH under the Provincial Policy Statement (OMMAH 2020)."*

As noted on page 30 of the EIS, issues of buffering of this part of the Natural Heritage System are in flux as the property to the east is going through the development process. Based on the information provided, this issue must be decided first, as it will have an impact on the design of the development on this site and the adjacent site.

EEPAC recommends that approvals be subject to the determination of the extent of the Natural Heritage System and its buffers as well as the completion of the complete corridor.

- **Species at Risk and Significant Wildlife Habitat:**

The EIS, page 3, notes that two tree inventories have been conducted in 2018 and 2020 (well after these lands were unfortunately subject to a clear cut) and will be considered at detail design.

This part of the EIS notes that a formal grading plan has not yet been developed, therefore a retention analysis, tree protection measures and recommended compensation are not included.

EEPAC recommends that a retention analysis, tree protection measures, and required compensation be conditions of development approval and/or prior to the construction of the complete corridor.

Page 8 of the EIS notes:

"Regulated SAR were identified as having the potential to occur within the study area based on the habitats present. Field surveys determined that two cavity trees are present in the hedgerow which may constitute habitat for roosting SAR bats. The removal of these trees would require that bat acoustic surveys be conducted in June of any given year, prior to removal."

EEPAC recommends that bat acoustic surveys prior to cavity tree removal be required as part of the conditions of development and/or the construction of the complete corridor. As this portion of the applicant's lands appear to be slated for development later but are perhaps part of the complete corridor, it is important that this condition not be lost.

The EIS (p. 8 and 21) also notes SAR grassland birds (Eastern Meadowlark and Bobolink) were documented off property. The EIS notes on page 21, that habitat was graded and removed off site in 2018.

EEPAC would appreciate knowing from staff how does such habitat get removed without a permit and without consequences? The following is from the Ontario government's ESA site <https://www.ontario.ca/page/species-risk> under the government response to the recovery strategy for these species:

"The Bobolink and Eastern Meadowlark are both listed as threatened species under the ESA, which protects both the animals and their habitat. The ESA prohibits harm or harassment of the species and damage or destruction of their habitat without authorization. Such authorization would require that conditions established by the Ministry be met."

EEPAC reiterates its previous many comments on the overall loss of SAR grassland habitat in the southwest part of the City due to development and deliberate changes to cropping of lands. This piecemeal loss of habitat is "death by a thousand cuts."

EEPAC again recommends that the City develop a strategy for identifying and retaining SAR grassland habitat through land acquisition and assembly without more delay.

Page 17 of the EIS notes the presence of terrestrial crayfish in the southern MAM eco site.

As this is therefore Significant Wildlife Habitat, **EEPAC recommends** that this ecosite should either be protected in the creation of the complete corridor and/or development, or a plan for relocation and monitoring must be required as part of the complete corridor creation and/or future development.

- **Invasive Species Removal and Management**

EEPAC recommends that the Environmental Management Plan for this development and for the creation of the complete corridor include an invasive species removal and management plan. The responsibility for these be determined prior to the creation of the corridor.

- **Complete Corridor**

EEPAC notes that the Significant Woodland identified in the NW corner of the site as well as the wetlands are to be removed in the construction of the complete corridor (EIS page 32). It is unclear at this time what the required compensation will be required, where it will occur and when. It is assumed that the project will be undertaken by the city as part of an EA. EEPAC looks forward to reviewing the work.

EEPAC notes on page 34 that two significant species (Carolina Rose and Rock Elm) are to be relocated during the construction of the complete corridor. It is important for trees such as the Rock Elm that proper tree care before and after transplantation makes the most difference. When transplanting a tree, its survival rate increases or decreases in proportion with how well it's taken care of. When a tree is moved, it naturally goes into shock and needs intensive care to ensure it emerges from this transplant shock unscathed. Sufficient advance watering, which could be a few days or as long as a month or more before the move, proper root pruning in advance (sometimes up to one year in advance, depending on tree size and job

parameters), and proper rootball sizing will help to ensure a smooth adaptation to the tree's new environment. Paying attention to soil types in both the original location and the new location, and making any changes necessary to replicate the tree's familiar environment, can aid survival as well. Irrigation after the move is essential once the tree is planted in its final location, and the addition of a drainage system and site tubes to monitor the subsurface water is also recommended. Lastly, moving the tree at the right time of year for the species and location—usually early spring or fall—is also important, particularly in an urban environment. In cities, trees are usually susceptible to more heat and traffic, so extra measures focused on proper care can ensure trees best adapt to their new homes.

EEPAC recommends that the SWM unit be informed of this concern and it be noted by the consultants retained to do the detailed design of the complete corridor.

EEPAC concurs with the recommendation on page 36 of the EIS that educational signage be posted within the complete corridor to educate residents on the corridor and natural heritage. This signage must be installed when construction of the corridor is complete. As suggested by the EIS, sign topics may include: complete corridor design and purpose, along with wetlands and best management practices for residents.

EEPAC recommends the city review the signage placed in the Medway Valley Heritage Forest ESA from Sunningdale Road south for ideas for content and photos.

- **Environmental Management and Monitoring Plan (EIS page 37 and Section 8 of the Hydrogeological Assessment (LDS 2021).)**

It is unclear at this time who will be responsible for the EMP and the Monitoring Plan. It is assumed that the City will construct the complete corridor. However, the natural heritage features in a subdivision do not usually come into city ownership until late in the build out of the subdivision.

EEPAC recommends that the responsibilities for the development of the EMP, Compensation Plan (page 40 of the EIS), and the development and follow through of the Monitoring Plan be clearly laid out well in advance of construction of the corridor (perhaps as part of the EA process) and well in advance of development of the subdivision.

EEPAC notes that page 40 of the EIS recommends only two years of monitoring for native species plantings in the complete corridor and buffer areas (where applicable) at the end of two years following the planting to

determine success. It is silent on the monitoring of the relocation of crayfish from the SE MAM ecosite.

EEPAC recommends based on the experience of 905 Sarnia Road, a three year monitoring program should be the minimum period for wetland re-creations.

EEPAC recommends that the standard three year monitoring period for plantings and the clock start after construction of the corridor is considered complete by the City and UTRCA.

For plantings on lands outside city owned lands, **EEPAC recommends** that the three year monitoring period start when the subdivision is 70% complete as defined by the number of units built and occupied.