

June 27, 2022

Peer Review of Environmental Impact Study for 3852 Ganaraska Road, Garden Hill, Ontario

Prepared for

Municipality of Port Hope



north-south
ENVIRONMENTAL

Introduction

The Municipality of Port Hope (MPH) is currently reviewing an application for a Draft Plan of Subdivision and Zoning By-law Amendment for 3852 Ganaraska Road in the rural settlement area of Garden Hill Hamlet. The MPH Official Plan designates the subject property as a 'Hamlet', 'General Agriculture', 'Natural Environment' and 'Floodplain' on Schedule C (Land Use). Schedule B of the Official Plan identifies the following 'Development Constraints' on the subject property:

- Wetland (unevaluated)
- Significant Woodlands
- Area of Natural and Scientific Interest

The subject property is also identified as 'low' constraint Significant Groundwater Recharge Area on Schedule B-3 (Drinking Water Source Protection Vulnerable Areas) of the Official Plan.

Policy C5.2.2 of the MPH Official Plan requires that a proponent complete an Environmental Impact Study (EIS) in accordance with Section C20.3 of the Official Plan. As part of the application an EIS was prepared by Cambium Inc. (dated April 14, 2022), on behalf of Mistral Land Development Inc., along with supporting documents.

Scope of Peer Review

This peer review of the EIS submitted by Cambium Inc. (April 14, 2022) (herein referred to as the 'Cambium EIS') was undertaken in consideration of the standards by which an EIS should fulfill certain requirements to ensure that a development application will conform with applicable natural heritage policies and legislation. General guidance for undertaking an EIS to determine if a development proposal is consistent with the Provincial Policy Statement can be found in Section 13.0 of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition (Ontario Ministry of Natural Resources 2010) [NHRM 2010]. The Municipality of Port Hope provides specific direction for completing an EIS in Port Hope, as outlined in the Official Plan under Section C20.3. This policy identifies that the purpose of the EIS is to "determine whether a proposed development or infrastructure undertaken within or adjacent to lands identified as Natural Heritage on Schedules B or B1 or Natural Hazards on Schedules B2 or B1 will result in negative impacts to the feature or its ecological function and to determine whether a particular development is appropriate and to recommend necessary mitigation measures where development is deemed to be appropriate in accordance to the policies of this Plan".

The scope of an EIS is in part based on the scale of the proposed development and potential for impacts, as determined in consultation with the GRCA. The peer review of the Cambium EIS has been undertaken with consideration of the "matters to address" and the purpose of an EIS as outlined in

Section C20.3 of the Port Hope OP, to determine if the Cambium EIS prepared for Mistral Land Development Inc. is adequate to assess conformity and consistency with relevant natural environment policies and legislation.

In order to support the peer review, a site visit was conducted on May 31st, 2022, with Sal Spitale of North-South Environmental Inc. (external peer reviewer with the Municipality of Port Hope), Cody Oram from Monument Geomatics and Estimating Inc., Andrea Coppins from Cambium Inc., Cody Woodcock and Ken Thajer from the Ganaraska Region Conservation Authority (GRCA), and Theodhora Merepeza, Vanessa Lightle and Sagar Babbar from the Municipality of Port Hope.

In addition to the Cambium EIS, the following documents were reviewed:

- Memo from GHD regarding "Evaluation of ANSI Pitted Outwash Plain in Proposed Rural Subdivision, Garden Hill, Cobourg, Ontario" prepared for JMCD Holdings Inc., dated 13 December 2021.
- Geotechnical Report, prepared by Terraspec Engineering Inc., dated May 6, 2021.

Please contact the undersigned if you have any questions or require clarification on the comments.

Sincerely,



Sal Spitale

Principal, Senior Ecologist, North-South Environmental Inc

Comments

Wetland Delineation

1. Section 3.2.2 describes the approach to delineate wetland boundaries. Please confirm with the GRCA that wetland boundaries were formally delineated and staked with GRCA staff present. Please indicate on Figure 2 within the legend the date when wetland boundaries were delineated.

Breeding Bird Surveys - Barn Swallow

2. The breeding bird survey locations shown on Figure 2 are at the furthest distance recommended for completing surveys within forested habitats (i.e., 250 m). In addition, point count stations BBS2 and BBS3 are located on the edge of forest units rather than within the forested habitats. Moreover, given the proposed development includes the removal of an area of woodland, a point count station should have been located within this portion of the woodland to ensure habitat for breeding birds within that part of the woodland was thoroughly assessed. The need for a more complete survey of breeding birds became apparent during the site visit on May 31st, 2022, where bird species calling from the eastern portion of the southern woodland such as Eastern Wood-pewee, or Winter Wren heard from the central portion of the northern woodland, could not be heard from the area of BBS2 or BBS3.
3. Section 3.2.4 notes that “confirmatory field investigations are planned for breeding season in 2022 to determine the number of active nests, to guide compensation requirements under the ESA and its Regulations”. Please note that the direction provided by the Province is that “you must replace any nests that you remove, damage or destroy with a nest cup” (source: <https://www.ontario.ca/page/alter-structure-habitat-barn-swallow>). Therefore, the field investigations should document the total number of nests within the barn, regardless of activity/use, to inform compensatory requirements. This should be updated in Section 3.2.4 and Section 7.2 of the EIS.

Amphibian Breeding Surveys

Please note that there are records of Spotted Salamanders within the Ontario Reptile and Amphibian Atlas square that overlap the subject property (square ID 17QJ08). Due to these records and the subject property containing vernal pools and woodland habitat that could support Spotted Salamander (an indicator species for Significant Wildlife Habitat for Woodland Amphibian Breeding Habitat - see comment #11 below), salamander surveys

should have been undertaken. It is recommended that salamander surveys be undertaken as part of thoroughly characterizing and assessing the natural features and areas and their ecological functions.

Vegetation Communities

4. Section 4.2 provides a table of each vegetation community. A detailed description of each vegetation community will permit the reviewer to assess the natural features and functions more thoroughly as part of the review of the EIS. Please provide a description of each vegetation community, noting the dominant and subdominant species within each vegetation layer, and percent cover and height within each stratum.
5. During the site walk completed on May 31st, 2022, with representatives from the proponent, the GRCA and the Municipality of Port Hope, a wetland was observed adjacent to the southern watercourse. This wetland is currently classified as a Mineral Cultural Meadow and should be reclassified as a meadow marsh. This wetland also has a hydrologic connection via a tile drain/pipe to the southern watercourse. The implications of this wetland having a connection with a surface watercourse via a tile drain/pipe should be discussed with the GRCA to determine if this wetland should be treated as a regulated feature in accordance with Conservation Authority regulations.

Significant Woodlands

6. The assessment of Significant Woodlands should consider proximity to other woodlands or other habitats as per the direction from the Natural Heritage Reference Manual (NHRM, p. 69) where:
 - Woodlands that overlap, abut or are close to other significant natural heritage features or areas could be considered more valuable or significant than those that are not.
 - Patches close to each other are of greater mutual benefit and value to wildlife.

In addition to other criteria such as size, woodlands should be considered significant where “a portion of the woodland is located within a specified distance (e.g., 30 m) [note that 30 m is an “example” not a set distance] of a significant natural feature or fish habitat likely receiving ecological benefit from the woodland and the entire woodland meets the minimum area threshold (e.g., 0.5–20 ha, depending on circumstance)” (p. 69).

The consideration of proximity is an important factor on the subject property as it relates to habitat for interior bird species. While the woodlands do not qualify as SWH for Area-Sensitive Bird Breeding Habitat due to the break in the woodland resulting from the hydro corridor (approximately 40 m), the woodlands above and below the hydro corridor clearly function

together to provide habitat for interior bird species as is evident by the number and diversity of forest interior bird species (five species, including Veery, Black-throated Green Warbler, Black-throated Blue Warbler, Ovenbird and Winter Wren) and area sensitive bird species (five species, including Hairy Woodpecker, Pileated Woodpecker, White-breasted Nuthatch, Black-and-white Warbler, American Redstart) recorded in these woodlands. The distance from the northern edge of the north woodland unit to the southern edge of the southern woodland unit is on average over 400 m, whereas the width is over 475 m. This means that when considered together, the two woodland units have the potential to provide interior forest habitat (where interior forest habitat is at least 200 m from forest edge). The Hydro corridor does not appear to result in a functional break in forest habitat that precludes the use of the woodland north and south of the hydro corridor from functioning as habitat for interior forest bird species or area sensitive bird species.

The functions associated with proximity to other woodlands or other habitats should be evaluated in the update to the EIS. In addition, these functions should be considered in the Impact Assessment section when discussing impacts to the Significant Woodland.

Significant Valleyland

7. The watercourse that traverses through the north and south woodland on the subject property is contained within a topographic valley feature that has not been assessed. While the topography of the valley is not apparent as it crosses under Mill Street where the Garden Hill reservoir has flooded the landscape, it appears that the valley feature reappears south of Ganaraska Road where the watercourse continues through the forested area to the south. Please assess the potential that the valley associated with the watercourse is a Significant Valleyland.

Significant Wildlife Habitat (SWH)

Section 4.7 provides an overview of the candidate SWH types and if through the field surveys SWH was confirmed. The following provides comments related to specific types of SWH that were not discussed in the EIS:

8. Turtle Wintering Areas. During the site walk on May 31st, 2022, five (5) Midland Painted Turtles were observed in the pond located in southwest area of the subject property, adjacent to amphibian breeding station #5. SWH for Turtle Wintering Areas is confirmed when there are five or more over-wintering Midland Painted Turtles or one or more Northern Map Turtle or Snapping Turtle. Surveys for overwintering habitat are to be conducted in the fall (September - October) or the spring (March - May). Given the observation of five Midland Painted Turtles in

May, this pond would qualify as SWH Turtle Overwintering Areas. This should be acknowledged and discussed where appropriate in the update to the EIS.

9. Special Concern and Rare Wildlife Species. This type of SWH was not discussed in Section 4.7 as there were no Special Concern or Provincially Rare (S1-S3, SH) plant and animal species recorded during the field surveys. However, during the site visit on May 31st, 2022, an Eastern Wood-pewee was heard within the southern forest unit, on the eastern area of the woodland. Eastern Wood-pewee is listed as Special Concern in the Province, as such, the habitat for Eastern Wood-pewee, which includes the eastern portion of the southern woodland (ELC units #9 and #10) is considered SWH for Special Concern and Rare Wildlife Species. This should be acknowledged and discussed where appropriate in the update to the EIS.
10. Amphibian Breeding Habitat (Woodlands and Wetlands). The paragraph in Section 4.7 that discusses amphibian breeding habitat (woodland and wetland) suggest that the criteria for this SWH type requires two or more frog species with >20 individuals or Call Code 3 (full chorus). NSE has received directly or reviewed correspondence from staff at the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF) that has clarified that two species with a collective total of 20 individuals is considered SWH. This can include one frog species with a call code of 3 (assuming this represents 20 or more individuals) and a second species with any call code, or observations of adults and call codes that total more than 20 individuals between two or more species. Based on this interpretation and clarification from the MNDMNRF the following breeding ponds associated with amphibian breeding survey stations are confirmed SWH:
 - a. MMP #2 - Amphibian Breeding Habitat (Woodlands) due to Spring Peeper (code 3), Wood Frog (1 individual), and Gray Tree Frog (4 individuals). In addition, dozens of tadpoles were observed in the pond indicating successful breeding.
 - b. MMP #3 - Amphibian Breeding Habitat (Woodlands) due to Spring Peeper (code 3) and Gray Treefrog (2 individuals). In addition, dozens of tadpoles were observed in the pond indicating successful breeding.
 - c. MMP #5 - Amphibian Breeding Habitat (Woodlands) due to Spring Peeper (code 3), Wood Frog (4 individuals), Gray Treefrog (2 individuals)
 - d. MMP #7 - Amphibian Breeding Habitat (Woodlands) due to Spring Peeper (code 3), Wood Frog (3 individuals), Gray Treefrog (6 individuals). In addition, hundreds of tadpoles were observed in the pond indicating successful breeding.

The habitat is considered the wetland area plus a 230 m radius of woodland area. In the case of the southern woodland, it should be recognized that the vernal pools scattered throughout the woodland would also contribute to the available breeding habitat and are contained with

the SWH. As such, the ecological functions of these ponds need to be assessed and considered as part of the complex of SWH for Amphibian Breeding Habitat (Woodland).

Please note that there are also records of Spotted Salamander within the Ontario Reptile and Amphibian Atlas square that overlaps the subject property. The subject property contains vernal pools and woodland habitat that could support Spotted Salamander. Surveys for salamanders were not completed. The Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E note that the presence of one (1) or more of the listed salamander species meets the criteria for Amphibian Breeding Habitat (Woodland). In addition to the vernal pools and woodland meeting criteria as SWH for Amphibian Breeding Habitat (Woodland), the potential for these vernal ponds and other ponds within the woodland to provide habitat for Spotted Salamander should also be factored into assessing the woodland as SWH for Amphibian Breeding Habitat (Woodland). With the confirmation of SWH for Amphibian Breeding Habitat (Woodland), this should be acknowledged and discussed where appropriate in the update to the EIS.

11. Seeps and Springs. During the site walk on May 31, 2022, two seepage areas were observed along the lower slope of the valley associated with the coldwater creek within the Fresh-Moist White Cedar Coniferous Forest (FOM7-1). According to the SWH Criteria Schedules for Ecoregion 6E the presence of a site with two (2) or more seeps/springs should be considered SWH, whereby the ELC forest ecosite is the SWH. As such, the FOM7-1 ELC unit is confirmed SWH for Seeps and Springs and should be acknowledged and discussed where appropriate in the update to the EIS.

Species at Risk

12. The woodlands on the subject property have the potential to provide habitat for Species at Risk bats as noted in Section 4.8.1 of the EIS. While the woodland may not qualify as Significant Wildlife Habitat - Bat Maternity Colonies, habitat for SAR is addressed in accordance with the Endangered Species Act, irrespective of whether the woodland is SWH for Bat Maternity Colonies. As such, the Ministry of Environment, Conservation and Parks (MECP) should be consulted by way of an Information Gathering Form (IGF). Correspondence from the MECP should be provided to demonstrate that matters related to the habitat of endangered species and threatened species have been addressed in accordance with the Endangered Species Act, as per policy 2.1.8 of the Provincial Policy Statement and section C5.2.1 g) of the Municipality of Port Hope Official Plan.

Earth Science ANSI

13. Section 4.9 provides a description of the Earth Science Area of Natural and Scientific Interest (ES-ANSI). This section refers to an assessment of the ES-ANSI completed by GHD. This assessment concluded that the ES-ANSI does not overlap the proposed development. The mapping and evaluation (or re-evaluation in this case) of the extent of an ANSI is the responsibility of the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF). As such, any proposed revision to mapping of the ES-ANSI needs to be reviewed and accepted by the MNDMNRF prior to concluding that the ES-ANSI does not require further discussion or consideration as part of the EIS. In addition, the “pitted” nature of an outwash plain is often evident in the topography where small depressions of variable size are found throughout this geologic formation. These depressions are easily visible on orthoimagery of the surrounding area, including on the subject property where ephemeral/vernal pools are present. Please consult with the MNDMNRF regarding revisions to the extent of the ES-ANSI and provide correspondence where the MNDMNRF has accepted the conclusions of the assessment completed by GHD.

Impact Assessment

General note on the Provincial Policy Statement (PPS) and application of the test of no negative impact. The PPS is intended to provide direction on matters of provincial interest related to land use planning and development. This includes providing direction for “appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment” (p. 1). The PPS has provided direction that settlement areas is where growth and development shall be focused (s. 1.1.3), where the subject property is located within a settlement area. That said, the PPS also recognizes “Ontario’s long-term prosperity, environmental health, and social well-being depend on conserving biodiversity, protecting the health of the Great Lakes, and protecting natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits” (Section 2.0). Accordingly, the PPS provides direction for development in and adjacent to natural features and areas where:

2.1.1 Natural features and areas shall be protected for the long term.

2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

It should first be recognized that not all natural features and areas are considered significant and protected through policy. The criteria established to identify significant features recognizes this, and

where a feature meets those criteria, the features and functions should be protected adequately to meet policy 2.1.1 and 2.1.2.

The PPS also provides flexibility regarding development in some natural features and areas through an assessment of negative impacts on the natural features or their ecological functions. This is recognized through the later part of policy 2.1.5 where there can be some impacts to significant features provided these impacts are not 'negative impacts', where negative impacts are defined as "degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities."

Degradation can be associated with the removal of a portion of a natural feature, and where this removal threatens the "health" and "integrity" of natural features or ecological functions, would be considered a negative impact. The natural features and areas identified on the subject property include:

- Significant Woodlands
- Fish Habitat
- Significant Valleyland (candidate)
- Significant Areas of Natural and Scientific Interest
- Significant Wildlife Habitat
 - Turtle Wintering Areas
 - Special Concern and Rare Wildlife Species
 - Amphibian Breeding Habitat (Woodlands)
 - Seeps and Springs

The ecological functions associated with natural features and areas must be thoroughly assessed in order to evaluate impacts and determine if these impacts constitute a negative impact. The following comments pertain to the assessment of impacts and determination of negative impacts.

Significant Woodland

14. The discussion on impacts to the woodland in Section 5.1 suggests that providing a 10 m setback "will result in a net ecological gain to the woodland over existing conditions". This statement related to achieving a "net ecological gain" has not considered the impact associated with the proposed removal of 1.5 ha of woodland and increased occupancy. An assessment of net ecological impacts, whether net gain or net loss, requires consideration of all impacts together. It is recommended the EIS provide a comprehensive net impact assessment including a review of cumulative impacts as per section C20.3 i) of the Municipality of Port Hope OP and section C4.1 of the Northumberland County Official Plan (2021).

15. Section 5.1 of the EIS suggests that variable zoning, such as an environmental protection provision, be applied to the lots that overlap the woodland and associated buffer. Based on professional experience monitoring natural areas adjacent to or within private lots, leaving natural features and buffers under private ownership, even with some type of zoning, has little to no effect on preventing impacts to natural features and their ecological functions. Impacts to natural features where under private ownership often include vegetation clearing (often understory), removal of trees (including hazard trees), construction of small structures, use of insecticide on vernal pools/ponds to eliminate mosquito larvae, predation of wildlife by domestic pets, spread of invasive species, dumping of yard waste and other debris, creation of ad-hoc trails, fire pits, etc. The Natural Heritage Reference Manual notes that “buffers should not be located on lots privately owned by individuals. Rather, buffers should be included into the same ownership as the feature that is to be protect. When buffers are incorporated into individual lots, consistent management of buffers is not possible. In such cases, different landowners will treat the buffer in various ways, and planning authorities will have little ability to enforce any zoning or covenants intended to preserve buffer function” (p. 131).

Section D1.10 of the 2016 Northumberland County OP, and section C.4.2 of the 2021 Northumberland County OP suggests that there be a transfer of lands containing natural heritage features and areas into public ownership through the development process. It is recommended that the Municipality of Port Hope require all buffers and natural features and areas to be transferred into public ownership.

16. Section 5.1.1 of the EIS proposes a permanent fence along the rear lot line of each of the lots that extends through the woodland. This fence will not protect the woodlands contained on private lots which would occupy approximately 3.25 ha of the remaining woodland after the removal of 1.5 ha of woodland. The concept plan should be revised to exclude the lots from woodlands and buffers and any fencing be at the limit of the buffer to the woodland to ensure adequate protection of features and buffers.

In addition, the SWM block extends beyond the permanent fence. The northern SWM block should also be located outside of buffers and be separated from the features and buffers by a chain-link fence.

17. I am of the opinion that the proposed removal of 1.5 ha of woodland does result in a negative impact and therefore does not conform with natural heritage policies of the PPS and municipal official plans (see comment #24, below). That said, section 5.1.1 of the EIS suggests compensation for the removal of 1.5 ha of the woodland in the form of off-site woodland habitat enhancement and creation; for completeness, please provide more details of this woodland habitat enhancement and creation, including a description and mapping of the location where this would occur.

18. Section 5.1.2 provides an assessment of impacts to the woodland function. This assessment should include an evaluation of impacts and address the following:
- a. As noted in comment #6 above, the review of impacts should consider ecological functions associated with proximity, in particular those functions that support interior forest and area sensitive forest bird species. Please update the EIS to include a discussion on impacts to wildlife habitat for interior forest birds and area sensitive forest birds resulting from the proximity of the forest patches. In particular, this section should discuss impacts resulting from creating a new edge and the effect of the change in form and function on all ecological functions, which are defined as “natural processes... that living and non-living environments provide or perform within or between species, ecosystems and landscapes” (PPS, p. 42).
 - b. Changes in impervious surface that could impact groundwater contributions to seeps fish habitat (coldwater creek), vernal pools and wetlands.

While the woodland contains Significant Wildlife Habitat for Special Concern and Rare Wildlife Species, Amphibian Breeding Habitat (Woodlands) and Seeps and Springs, impacts to Significant Wildlife Habitat associated with the woodland should be discussed in Section 5.5.

19. As noted in comment #7 above, if the valleyland is deemed to be a Significant Valley, the Impact Assessment section (Section 5.0) should also assess impacts to the features and functions associated with the Significant Valleyland.
20. Section 5.2 provides a discussion on impacts to wetlands. Recognizing that the wetlands on the subject property have not been evaluated and are not identified as Provincially Significant Wetlands the following comments are provided for consideration by the GRCA, which regulates wetlands:
- a. The wetland in the northeast corner of the agricultural field, adjacent to the Significant Woodland qualifies as SWH for Amphibian Breeding Habitat (Woodlands). The EIS must demonstrate conformity with natural heritage policies of the PPS and municipal official plans in addition to GRCA policies and regulations.
 - b. The EIS has stated that this wetland is “isolated”. While not connected to a surface watercourse, this wetland is physically and functionally connected to the Significant Woodland and is therefore not isolated. Moreover, this wetland relies on and contributes to the ecological functions of the Significant Woodland in part by providing overwintering and foraging habitat for the amphibians that breed in the wetland. The EIS should be updated to recognize the physical connection and ecological interactions between the wetland and the woodland.
 - c. It should be noted that the extension of Porter Crescent does not require the removal of the wetland. There may be a minor encroachment into the buffer to the wetland, but even this can be minimized by angling the road to the south. While essential

infrastructure projects may be permitted to impact or even remove wetlands, there does not appear to be adequate justification for the removal of the wetland related to the development of a lot.

- d. While I am of the opinion that the removal of the wetland would not be permitted as it would not conform with natural heritage policies of the PPS and municipal official plans, it should be noted that a 5 m buffer to a created wetland would not be considered sufficient to mitigate impacts to the water quality and ecological functions of the wetland.

21. Section 5.4 provides an evaluation of impacts to fish habitat. The northern watercourse has been identified as a coldwater stream. Coldwater streams rely on groundwater inputs which in part support the permanent nature of this watercourse. The subject property is largely comprised of permeable soils that allow for groundwater contribution that supports the watercourse. The proposed development will increase the amount of impervious cover thereby reducing infiltration and groundwater inputs. This impact on infiltration and groundwater contributions to the watercourse has not been discussed in the EIS.

Furthermore, the impact of discharging stormwater from the northern SWM pond into the watercourse has not been discussed. Please update the EIS to discuss impacts to groundwater contributions to the watercourse as well as impacts resulting from the discharge of stormwater into the watercourse.

22. Section 5.5 Significant Wildlife Habitat should be updated to discuss impacts to SWH for the following SWH types:
- a. Turtle Wintering Areas
 - b. Special Concern and Rare Wildlife Species
 - c. Amphibian Breeding Habitat (Woodlands)
 - d. Seeps and Springs

Policy Conformity

23. Section 6.0 provides a review of policy conformity with respect to the policies of the Provincial Policy Statement. This section should also be updated as part of addressing the preceding comments (e.g., SWH, ES-ANSI, Significant Valley, etc.). In addition, this section should provide a review of policy conformity with the GRCA Policies for the Implementation of Ontario Regulation 168/06 (January 2014).
24. Table 6 suggests that a compensation strategy would offset the loss of 1.5 ha of woodland through enhancement of 3 ha of woodland off-site. While the Natural Heritage Reference Manual recognizes that mitigation may include replacement of woodlands, "factors such as

successional status and replaceability of the woodland components and functions within a reasonable timeframe (e.g., 20 years)” must be considered (p. 119). In the case of the woodland proposed for removal, it is a mature woodland (over 70 years in age based on 1954 historical air photos) that provides habitat for area sensitive forest birds and interior forest bird species, as well as contains vernal pools and habitat that support a diversity of frog species. It is not feasible to replicate the complex ecological functions associated with this mature woodland within a reasonable timeframe. As such, the compensation strategy is not sufficient to offset the loss of 1.5 ha of woodland on the subject property nor is it considered sufficient mitigation for impacts resulting from the removal of the woodland and associated ecological functions.

Wetland Compensation Feature

25. Please note that given the wetlands proposed for removal have been confirmed as SWH (Amphibian Breeding Habitat, Woodlands), wetland compensation as proposed in Section 7.1.1 is not considered acceptable. That said, the following comments are provided for completeness:
- The wetland compensation area is proposed in an area this is currently a wetland which may be regulated by the GRCA due to a connect to a surface water feature via a tile drain/pipe. The potential for the GRCA to regulate the existing wetland adjacent to the southern watercourse should be discussed with the GRCA.
 - The compensation wetland is only provided with a 5 m buffer. Based on a review of literature examining buffers to wetlands, 5 m is not considered sufficient to mitigate impacts to water quality and ecological functions for a wetland that will be partly surrounding by residential lots.

Woodland Enhancement

26. Should woodland enhancement be pursued, additional description of the location, existing conditions of the woodland enhancement area, and mapping of the proposed woodland enhancement area should be provided as part of the EIS.

Conclusions and Next Steps

27. The EIS is generally well organized and follows a logical approach. However, the comments provided above identify some shortcomings in the field surveys, assessment of significance, as well as the impact assessment that should be addressed in an updated EIS.

The development as currently proposed includes the removal of a 1.5 ha of Significant Woodland which also supports Significant Wildlife Habitat. The EIS has not demonstrated that

the development would avoid negative impacts: “degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities”. Based on the review of the EIS and observations from the site visit on May 31, 2022, it is recommended that the development concept plan be revised to remove all lots and development from the Significant Woodland, Significant Wildlife Habitat associated with the Significant Woodland, and outside of the buffer to the woodland and Significant Wildlife Habitat.

While there are other constraints associated with the subject property in addition to the woodland and SWH associated with the woodland (e.g., fish habitat and wetlands associated with the southern watercourse, and their buffers), there is an opportunity to develop the remainder of the subject property, including the SWH associated with the pond, and avoid negative impacts to SWH if the following is demonstrated:

- alternative habitat is created and designed to support overwintering turtles and amphibians
- prior to removal of the existing pond that supports SWH, demonstration that the created wetland/pond has the ability to support overwintering turtles and amphibians;
- wildlife rescue and relocation to the newly created habitat is undertaken prior to any site alteration activities commencing.

It is recommended that the EIS be updated to address the preceding comments. In addition, please provide a comment response table/matrix indicating how the comments were addressed and what sections were updated to address the comments. In addition to a ‘clean’ version, please submit a track-changes version of the updated EIS to facilitate a faster review.