



REGION OF WATERLOO

PLANNING, HOUSING AND COMMUNITY SERVICES Community Planning

TO: Chair and Members of the Ecological and Environmental Advisory Committee

FROM: Ted Creese, Ron Donaldson, Derek Parks, Dave Schmitt (Subcommittee Chair)

DATE: February 14, 2005 **FILE CODE:**

SUBJECT: EIS Review for proposed plan of subdivision, City of Waterloo (White Tail Crossing)

RECOMMENDATION:

THAT the Ecological and Environmental Advisory Committee advise Regional Planning staff to defer approval of the above mentioned application until the following issues are resolved to the satisfaction of the Region, the GRCA and the City of Waterloo.

- a) The determination of an appropriate ecological boundary for Forested Hills ESPA (ESPA 19);
- b) The impacts that this development will have on the shallow groundwater system and the deep water supply aquifer;
- c) The impact that the stormwater management ponds for this development will have on the long-term viability of the cold water fish habitat in both Monastery Creek and Laurel Creek;
- d) The addition of conductivity and chloride content to the surface water monitoring requirements to determine the effectiveness of the proposed mitigative measures for surface water quality protection; and
- e) The viability of the breeding / significant bird populations found within the conifer plantation as well as the mixed hardwood forest found on this property if development occurs within the conifer plantation.

REPORT:

In May 2003, Regional staff prepared a report to EEAC making a series of recommendations regarding the proposed White Tail Crossing plan of subdivision. The recommendations of this report (P-EEAC-03-003) read as follows:

THAT the Ecological and Environmental Advisory Committee take the following actions with respect to the proposed White Tail Crossing plan of subdivision on Wideman Road, City of Waterloo on lands within and contiguous to E.S.P.A. 19:

1. Advise Planning, Housing and Community Services staff that the Environmental Impact Statement required in support of this application be scoped, as per Policies 3.2.4 and 4.3.13 of the ***Regional Official Policies Plan***, to address the following:
 - a. confirmation of an ecologically appropriate boundary of and buffer to E.S.P.A. 19 on the subject lands;
 - b. potential thermal and water quality impacts of stormwater management on the tributary and main channel of Monastery Creek;
 - c. maintaining the quantity and quality of groundwater discharge and surface flows from the subject lands to the regional aquifer and to the Provincially Significant Wetland and tributary of Monastery Creek;
 - d. methods for preventing or minimising human impacts on the contiguous portions of E.S.P.A. 19; and
 - e. stewardship options for the portions of E.S.P.A. 19 and buffer areas on the western and southern parts of the subject lands.
2. Strike a sub-committee to review the scoped Environmental Impact Statement when it is submitted.

Upon reviewing the Scoped EIS as presented by PEIL (dated November 4, 2004), the subcommittee is of the opinion that the information provided does not adequately address items 1.a., 1.b., 1.c. and 1.d. of Report P-EEAC-03-003. The following report discusses material the subcommittee feels is relevant to a satisfactory completion of the scoped EIS for the subject property.

Determination of an appropriate ESPA Boundary

Parts of the subject property are already identified as being part of Forested Hills ESPA 19, and the remaining lands on this property would be defined as being "contiguous" to both ESPA 19 and ESPA 17 (Schaefer's Woods) which is located to the north of the subject property (Figure 1.). The Terms of Reference approved by EEAC in May, 2003 asked that there be a "confirmation of an ecologically appropriate boundary of and buffer to ESPA 19 on the subject lands." Rather than evaluating whether the plantation areas on the subject property warranted being included within the existing ESPA, they were evaluated as if they were to form a new and separate ESPA. Thus, it is the opinion of this subcommittee that the Scoped EIS does not adequately address EEAC's first concern, namely, the "confirmation of an ecologically appropriate boundary of and buffer to ESPA 19 on the subject lands." Therefore the subcommittee requests that the consulting team review their assessment of the subject lands, and determine whether changes should be made to the existing boundary of ESPA 19.

Justification for changes in existing ESPA boundaries is based on the recognition that the

original boundaries were only approximations of the actual ESPA (ROPP Policy 4.3.6). When the area was evaluated in 1988-95 a working boundary was established which excluded the plantation based on the fact that it protruded out from the main part of the ESPA as per the boundary guidelines developed in February 1995. This working boundary was used in the scoped subwatershed study. Nevertheless, ROPP Policy 4.3.7 does state that boundaries are general in nature and need to be interpreted/confirmed through the development approval process. The subcommittee concludes that the report by Dougan & Associates presents field data not available in 1995 which cast doubts on the appropriateness of the working boundary. This could trigger Policy 4.3.4. allowing for the enlargement of the ESPA boundary.

In addition to the above, there are several considerations the subcommittee feels warrant further examination and discussion relative to the confirmation of the boundary of ESPA 19:

- Conserving native biodiversity in large natural areas tends to be easier than in small patches of natural habitat, particularly within a fragmented landscape. Maintaining core natural areas by avoiding further fragmentation is critical as fragmented landscapes tend to be more subject to local extinctions and influences from the surrounding landscape. At the same time that new information continues to come to light with respect to the impact of development on area sensitive bird species which require forest interior habitat, new roads and/or development increase fragmentation of natural landscapes; and
- The vegetation survey for the Scoped Subwatershed Study was carried out only at two seasons of the year, Sept-Oct, 1996, and July, 1997, not "late winter, spring, summer and autumn of 2004 as stipulated in the Region's Guidelines for the Preparation of Environmental Impact Statements."

Stormwater Management

The eastern area of the proposed plan of subdivision on the subject property falls within sub-watershed 309. The draft plan proposes to only develop a small area within sub-watershed 309, while the majority of the lands proposed for development fall within sub-watershed 308. Sub-watershed 308 contains Monastery Creek which is recognized as a cold water tributary of Laurel Creek. The subject lands contain a tributary of Monastery Creek. Both this tributary and Monastery Creek are within ESPA 19, and Monastery Creek flows across Wideman Road into ESPA 17. If adverse environmental impacts were to occur, these impacts have the potential to not only alter the structure and function of Monastery and Laurel Creek but also the adjacent vegetation communities associated with ESPAs 17 and 19. The proposed development identifies two storm water management ponds being located adjacent to both Wideman Road and ESPA 19, therefore the discharge from these ponds has the potential to impact Monastery Creek through either or both ESPAs. It is unclear to the subcommittee how potential adverse environmental effects to Monastery Creek and ESPAs 19 and 17 can be identified and mitigated when the creek has not been studied in this scoped EIS. In addition to the need to ensure that the storm water management ponds are designed to protect the adjacent natural heritage features and functions, it is also critical that appropriate measures be in place to ensure that the systems are maintained and monitored. Recent correspondence from the consultant states that a detailed fisheries study is not required because development will be set back more than 30 meters from the watercourse. It is this subcommittee's opinion, which conforms with previous decisions by EEAC, that adverse environmental impacts to ESPAs can result from development of contiguous

lands beyond 30 meters. The Provincial Policy Statement concerning adverse impacts and scientific research concerning development adjacent to natural areas supports this position. The concerns of the Region and EEAC concerning this issue were clearly identified in the staff report (May 27, 2003) and they are consistent with concerns identified by the Grand River Conservation Authority.

Groundwater

The report only briefly addresses the role of groundwater in a local and regional context. The brief geological description of the site focuses on the near surface soil materials. The relationship to the regional aquifer is presented conceptually, but does not appear to have been investigated. The proponents have not provided any data to demonstrate the role of the site in terms of regional recharge, but has addressed the role of the site in local recharge to the tributary to Monastery Creek. Additional detail regarding the groundwater regime should be presented graphically in the EIS. Deep well information should also be provided that shows the relationship between the shallow, local groundwater system and the deeper regional system, either by on-site drilling investigations or available information.

The subcommittee acknowledges the recommendations put forward with respect to the maintenance of infiltration characteristics and minimization of water quality impacts. Prevention of groundwater quality impacts are of great importance regionally and locally. The mitigative measures will help, but won't eliminate potential impacts. We feel that the City of Waterloo should implement road de-icing activities that do not use salt. The report does not make any recommendations regarding cosmetic pesticide and fertilizer use. The cosmetic use of pesticides and fertilizers should be restricted.

Adverse Impacts

The long-term conservation of ESPAs requires that the structure and function of the ESPA be maintained over the long-term, and that adverse environmental impacts do not degrade the ESPA over time. The ROPP defines adverse environmental impacts as:

Changes likely to arise directly or indirectly from development within or contiguous to an element of the Natural Habitat Network that result in widespread, long-term, or irreversible degradation of the significant features or impairment of the natural functions of the designated area.

Lands "contiguous" to an ESPA are defined in the ROPP as:

lands adjoining an Environmental Preservation Area or Environmentally Sensitive Policy Area which are situated in sufficiently close proximity that development could reasonably be expected to produce one or more of the following impacts: alterations to existing hydrological or hydrological regimes; clearing of existing vegetation; erosion and sedimentation into the Environmental Preservation Area or Environmentally Sensitive Policy Area; or producing a substantial disruption of existing natural linkages or the habitat of a significant species known to inhabit the Environmental Preservation Area or

Environmentally Sensitive Policy Area.

In reviewing this Scoped EIS the subcommittee has serious concerns that the following items from the above definition have not been adequately addressed in terms of the effects that development on the Owen property will have on either ESPA 17 or 19:

1. *alterations to existing hydrological or hydrological regimes*
2. *clearing of existing vegetation*
3. *producing a substantial disruption of existing natural linkages or the habitat of a significant species known to inhabit the ESPA.*

The subcommittee has concerns about potential "adverse environmental impacts" from potential changes to the groundwater system in this area which is critical in sustaining the adjacent natural heritage features, and the potential impacts from the proposed storm water management ponds. The subcommittee cannot comment on these issues until it has further information in this area. It is the understanding of the subcommittee that the GRCA and the Region's Water Resources Protection Group also have concerns regarding these matters. The terms of scoping for the EIS clearly identify these areas as a concern to EEAC.

While the Scoped EIS proposes maintaining or transplanting regionally significant plant species found on the subject property, the development will put significant pressures on these species and the subcommittee has serious concerns whether they will survive over the long-term. Losing existing habitat that is currently being used by regionally significant species is a serious concern of the subcommittee. This habitat cannot be recreated once development occurs.

The proposed development on the subject lands would lead to the clearing of the majority of the southern and northern plantation, which in turn would lead to the disruption of an existing natural heritage linkage and the habitat of a significant species which are known to inhabit the adjacent ESPA.

The Terrestrial Resources report by Dougan & Associates (Appendix C; dated October, 2004) notes that the southern plantation is unique and not typical of plantations commonly found in southern Ontario. These characteristics provide nesting and foraging habitat for six regionally significant breeding bird species, in addition to other common bird species. The surveys by Dougan & Associates confirmed breeding bird activity for Red-breasted Nuthatch, Golden-crowned Kinglet, Blue-winged Warbler, and Nashville Warbler, with potential breeding activity also being noted for Pine warbler.

For the subject property, Dougan & Associates confirmed 50 different bird species, eight of which are migrants and twelve that are considered significant in the Region. The high diversity of bird species using this property and the adjacent ESPAs is supported by the long-term monitoring work being done by Lyle Freisen an expert songbird biologist with the Canadian Wildlife Service and by Ted Cheskey a local expert birder. Mr Freisen's recent work, while not directly focused on the Owen Property, has confirmed the following significant bird species breeding on the Owen Property: Blue-winged Warbler, Pileated Woodpecker, Pine Warbler and Purple Finch. Forested Hills ESPA has been the site of long term research for breeding birds.

Work by Cheskey in Forested Hills ESPA also confirms this is an important area for breeding birds. Over a seven year period, 37 breeding bird species, of which ten are considered to be significant species, have been documented at a bird monitoring station located just outside the Owen property boundary. Of the ten significant species, Cheskey confirmed that four of them (Red-breasted Nuthatch, Golden-crowned Kinglet, Veery and Pine Warbler) were on the Owen property.

The long-term monitoring done by Cheskey and others confirms the historical importance of Forested Hills ESPA for breeding birds. This includes 28 regionally significant bird species, five species considered area sensitive and the Acadian Flycatcher and the Hooded Warbler which have been designated as "Endangered" and "Threatened" respectively (COSEWIC, 2003). As noted by Dougan & Associates, the "57 species recorded between 1997 and 2003, of which 28 species are recognized to be significant in the Regional Municipality of Waterloo... is considered high for such a relatively small area is a clear indication of the size and quality of the adjacent ESPA." Further indication of the high value of this forested landscape is the confirmed sighting of Broadwinged Hawk reported by Dougan & Associates in 2004, and by Cheskey earlier for several years around 1997. Based on the times the bird was noted by Cheskey it was his opinion that it was probably breeding locally. Other raptors sighted near the subject property include Coopers Hawk, a regionally significant bird, and the Red Shouldered Hawk, a species identified by COSEWIC as a species of "Special Concern."

Conclusion

The scoped environmental impact study for these lands suggests that the impacts of this development are limited and inconsequential when considered within the context of the larger development that has already occurred in this area. A key factor this report fails to acknowledge is that this proposed development will bring the negative impacts identified to be occurring on the adjacent lands approximately 100 to 120 meters closer to ESPA 19. Therefore this development will bring the well documented effects on breeding birds and the associated social pressures related to urban development closer to ESPA 19 and 17.

It would appear that the proposed development will result in the displacement of regionally significant bird species and the permanent loss of habitat that has been used by these and other bird species as foraging and breeding habitat.

Recognizing this, and the other concerns regarding this development, the subcommittee is of the opinion that there is a very strong argument for the extension of the boundary of ESPA 19 into parts of the Owen property. Until this issue is resolved, the subcommittee feels that it is premature to comment on the other issues.