

Review of:

Richardson Farms Environmental Impact Study dated February 15, 2015 by Stantec for Z Group (proponent)

Reviewers: B. Gibson, S. Levin, M. Murphy, R. Trudeau

SPECIES AT RISK (Ontario Endangered Species Act - ESA)

Barn Swallows (threatened) are present and nests were found. Nests are often reused year over year and for multiple broods in a single year.

Although they were found nesting in the culverts to the west of the site, there are potential impacts to the habitat either from increased water flows through the culverts, risking the birds while nesting, or from improper nearby site work. EEPAC notes that the City plans remediation in the Pincombe Drain and the construction of the SWM pond on the proponent's site as part of the Growth Management Implementation Strategy. Therefore, EEPAC has forwarded these recommendations to the City's Stormwater Management group.

There is a General Habitat Description under the Ontario Species at Risk Act. It states as follows: <http://www.ontario.ca/environment-and-energy/barn-swallow>

Category 3

Category 3 includes the area between 5 m and 200 m of the nest and has a high tolerance to alteration. Barn Swallows depend on this area for various life processes including rearing, feeding, and resting. Barn Swallows are insectivores, foraging in relatively low airspace on the wing (Waugh 1978). They feed at lower altitudes than most other North American swallows, usually no more than 10 m above ground and often lower than 1 m from ground (Brown and Brown 1999). They depend on nearby open areas that provide good sources of flying insects, such as waterbodies, pastures with livestock, and woodland edges (Brown and Brown 1999, Evans *et al.* 2007). The stage of the nesting cycle influences foraging distance. The period of greatest energy demand for a swallow is during nestling rearing (Bryant and Westertep in Turner 1980). Turner (1980) found the average distance traveled by Barn Swallows while feeding the first brood to be 188 m and 138 m for the second. Weather plays an important role in the variation in food availability for swallows and therefore also influences foraging distance. Turner (1980) found the average distance traveled by Barn Swallows during the breeding season was 148 m when the temperature was above 20°C but increased to 203 m when it was 16°C or less.

In section 7.3.5 the consultants indirectly provide support for mitigation. The consultants claim there will be no reduction in the number and range of species that could utilize this large habitat block are anticipated. However, development will remove Eastern Meadowlark habitat as well as introduce domestic cats which, as noted by the consultants, can result in increased predation of birds. The consultants then state that "...the woodland along the Pincombe will provide a variety of habitat niches for such species to find suitable habitat and adapt to increase predation." This seems specious and without basis, particularly for the Barn Swallows which are not a woodland species. The City provided 200 m of habitat along the Thorncliffe

Drain for nesting barn swallows in a culvert on Southdale Road for the new Community Centre. A similar approach should be followed here.

The EIS has no information on subdivision phasing nor as to whether parts of the subdivision will be built prior to the SWM facility will be built. Therefore, the timing of carrying out these recommendations must be specified in any development agreement and for the SWM construction contract in order to protect the Species at Risk.

- 1) **RECOMMENDATION:** The MNR be consulted to determine if a permit is required.
- 2) **RECOMMENDATION:** Any work in the area must take place outside of breeding season.
- 3) **RECOMMENDATION:** At least 200m of habitat from the nesting sites be protected as per the General Habitat Description under the ESA.
<http://www.ontario.ca/environment-and-energy/barn-swallow>
- 4) **RECOMMENDATION:** If the nesting sites are damaged, kiosks or other mitigation measures must be installed at the expense of the party causing the damage. Monies may be available by application to the Species at Risk Stewardship Fund.
- 5) **RECOMMENDATION:** These recommendations be forwarded to the City's Stormwater Management group as this relates to the Scoped EIS for the design of Pincombe SWM 3 that is scheduled for construction in 2017 as per the recent GMIS report (SPPC May 12, 2015).

In addition to the Barn Swallows, the consultants found a singing male Eastern Meadowlark (threatened) during their work. We assume it was during the morning of either June 5 or June 27 when the breeding bird inventories were done. We believe this work was done too late in the year to establish if this bird was breeding. In the COSEWIC Assessment and Status Report, 2011, for this species, it is noted that in Canada, males arrive on the breeding grounds in April and the females arrive 2 to 4 weeks later. Nesting starts 1 week after pair bonds are formed. Eggs incubate for about two weeks. Fledging 10-12 days and then continued to be fed by adults for 2 weeks or more. Male may take part if the female re-nests.

Eastern Meadowlarks walk and stalk on the ground of thickly vegetated grasslands searching for insects to eat. Males are very vocal during the breeding season, singing boldly from open areas or elevated perches. Singing is a primary means of territory establishment. **Outside of breeding season**, Eastern Meadowlarks are very shy, remaining hidden among tall grasses and silently slinking away when people approach. (Cornell Lab of Ornithology web site).

Once the breeding season is over, male *S. magna* cease defending their territories. Males establish their territories in March, females arrive about two to four weeks later females. Male [S. magna](#) display their territories with flight displays and by singing.

Given this information, EEPAC provides the following recommendations.

- 6) **RECOMMENDATION:** The breeding bird survey be repeated in early spring 2016 or the MNR be consulted to determine if a permit is required for this development due to impact on this threatened species.
- 7) **RECOMMENDATION:** If not already reported, the sightings of Barn Swallows and the Eastern Meadowlark be reported to the NHIC.

WETLAND

Although the wetland along the Pincombe Drain is outside the study area for this development, staking of the wetland should be undertaken to ensure an appropriate buffer. EEPAC recommends a 30 m buffer.

- 8) **RECOMMENDATION:** A wetland evaluation be done by a qualified evaluator to determine if the wetland is Provincially Significant.
- 9) **RECOMMENDATION:** In the absence of an evaluation under the Ontario Wetland Evaluation System, the wetland be presumed to be Provincially Significant and that it be staked for a 30 m buffer prior to development beginning. This must be included as a condition in the development agreement.

BUFFER

The EIS provides clear support for a 15 m buffer where the pond and park will be located. However, there is no information provided for why the buffer is only 15 metres where Blocks 5 and 44 (housing) are located. Given the EIS clearly outlines the potential impacts on the wetland due to the increase in the number of people and their pets, a wider buffer should be required in addition to the recommended fencing with no gates that EEPAC supports.

- 10) **RECOMMENDATION:** A 30 m buffer be required from the wetland from the residential blocks due to the presence of Barn Swallows. The buffer should be measured and staked based on the ELC shown in the consultants' report as a condition of the development agreement.

- 11) **RECOMMENDATION:** Educational material be supplied by the builders to new homeowners including information on the wetland and its significance including how to identify Barn Swallows.
- 12) **RECOMMENDATION:** The subdivider be required to provide an educational kiosk (with suitable recognition for the contribution) in the park to the satisfaction of a City Ecologist. The content should include information on wetland features and functions, barn swallows, and why the wetland is being protected.
- 13) **RECOMMENDATION:** EEPAC supports the consultants' recommendation on page 7.10 that the boundary between development and the buffer be fenced.
- 14) **RECOMMENDATION:** The buffer should be staked prior to any development activities and no work shall take place in the buffer nor should any equipment be stored or serviced in the buffer.

WATER BALANCE

EEPAC is concerned with the water balance report on page 6.2 which calculates, but does not state, that there will be an estimated 40% reduction in infiltration after development (from 130,000 cubic metres per year to 74,500 cubic metres per year). In section 7.2.1 the consultants' note that "Potential indirect impacts to the wetlands include changes to the existing water budget as a result of altered surface runoff quantity and patterns or altered shallow groundwater flow..." However, there is no information provided regarding how ground water effects this wetland if at all. As well, although surface water flows to the wetland post development will match flows under existing conditions, we assume that this is in total and will not match timing and volume of flows under various conditions over the seasons. There is no information on what changes to the hydrologic regime/hydro-period will occur.

EEPAC also notes there is a drainage divide because part of the flows from the development will go to the White Oaks Facility (SWM 3?) and part to the Pincombe 3 SWM. Both projects are scheduled for 2017 in the City's GMIS, and should proceed in such a way that there is no further negative impact on the hydrological regime.

- 15) **RECOMMENDATION:** The UTRCA's hydro-geologist be asked to comment on the impacts to the hydrologic regime.
- 16) **RECOMMENDATION:** The SWM facility be designed to mimic the present hydroperiod. (EEPAC has not seen the EA for the facility).

WATER COURSES:

The consultants identified open watercourses on the site, albeit it is not clear from the detail sheets which watercourse is “Springer Creek Drain.” There is no clear justification for piping the open watercourses.

- 17) **RECOMMENDATION:** The EIS be considered incomplete until the consultants clarify why piping is appropriate and will not have a negative impact on natural features or ecological functions or on fish habitat.

CONSTRUCTION IMPACTS

- 18) **RECOMMENDATION:** Work near to the wetland should not take place during Barn Swallow breeding season.
- 19) **RECOMMENDATION:** No construction equipment should use or be stored in the areas determined to be buffers.
- 20) **RECOMMENDATION:**
- a. The Clean Equipment Protocol for Industry be followed. It is available at various web sites including:
<http://www.canadanursery.com/Page.asp?PageID=122&ContentID=2304&SiteNodeID=1020>
 - b. Any material or soil stockpiles construction laydown, vehicle access, fueling, etc. (page 100) should be at least 30 m from all watercourses and from the development set back.
 - c. Any material or soil stockpiles on site when heavy rain is forecasted (20 mm in 24 hours) and significant snow melts, must be covered or removed in time to reduce the chance of discharges to watercourses. This should be included in the Sediment and Erosion Control Plan (page 102). This Plan must be included in all construction documents (including for the Stormwater Management Facility) and form a requirement of the development agreement.
 - d. Hydro-seeding be avoided as this causes a large, sudden nitrate burst.
 - e. A Flood Response Plan be in place prior to the start of construction.
 - f. The inspection of the wetland buffers be carried out by a City Ecologist prior to the start of construction as a condition of the development agreement and a condition of the construction contract for the Pincombe Drain SWM 3.
 - g. As per the consultants’ recommendation in section 7.3.1, erosion and sediment controls must be employed during all phases of construction to avoid deposition of silt and sediment in watercourses or the wetland.

MONITORING

EEPAC agrees with the consultants that monitoring be required during all phases of development to ensure compliance with the final grading plan and with the erosion and sediment control plans.

- 21) **RECOMMENDATION:** Monitoring at the sub-divider's expense be included during all phases of development. This must be included in the development agreement.

There is also a need to monitor the Barn Swallow population. If there is a decline in the population due to development, the subdivider should provide remediation measures.

- 22) **RECOMMENDATION:** Monitoring by a Species at Risk biologist with the MNR or UTRCA be required as part of the development agreement.
- 23) **RECOMMENDATION:** Compliance reports be sent to the City (as per page 8.2) as well as the MNR and UTRCA when the reports relate to Species At Risk.
- 24) **RECOMMENDATION:** The qualitative vegetation monitoring noted on page 8.2 must be included in the development agreement. EEPAC believes it should take place concurrent with and on the same schedule as the compliance monitoring, rather than annually. The beginning of the monitoring period should be when the buffer plantings take place. This must be clearly laid out in the development agreement and Development Services must follow up.