



May 23, 2018

Cuesta Planning Consultants Inc.
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Dundalk Ontario White Rose Revised Draft Plan of Subdivision, Ontario Regulation 150/06 Incursion into wetland setback technical response.

Further to earlier discussion with GRCA Nathan Garland we are submitting some technical comments on the ecology of the wetland adjacent to the proposed final revised layout of the White Rose draft plan of subdivision.

We acknowledge that the GRCA Ontario Regulation 150/06 speaks to 30 and 15m setbacks from various sizes of wetland habitat, similar to the early fisheries setback recommendations for cold and warm water resources.

These setbacks are good examples of the precautionary principle in planning to safeguard various ecological features and functions and it is also generally accepted that they can be fine tuned at a site level by ground truthing during the required seasonal wildlife field surveys.

The White Rose proposed site for subdivision land use benefits from field observations over a few time intervals due to land ownership changes and the passage of time that required ecology updates in the field. This provides a solid foundation of ecological features and functions to base our review upon for addressing whether the generic wetland setback can be relaxed.

Adjacent Lands

Lands abutting the wetland limit have been farmed in the near past to the west and are actively farmed to the north as illustrated in the following color plates 1 and 2. The fallow fields to the west have been used for recreational purposes as evidenced by cart trails, foot paths and ATV track.

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Color Plate 1: Adjacent land north of the wetland in other ownership



Color Plate 2: Adjacent land west of the wetland on site

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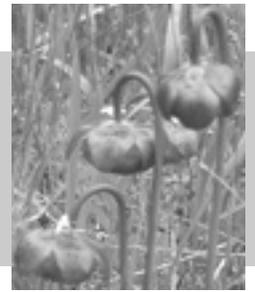


Color Plate 3: Main cart trail crosses the 30m adjacent lands

The surrounding fields support farm and residential escapee flora including *Poa pratensis*, *Phalaris arundinaceae*, *Vicia cracca*, *Lotus corniculatus*, *Vinca major*, *Daucus carota*, *Solidago rugosa*, *Aster nova-angliaea*, *Asclepias incarnata* and others.



Color Plate 4: 30m adjacent lands closer view



Grassland bird surveys did not uncover any significant grassland species ground nesting, and research indicates that the size and height of the grassy portions are not large enough to be considered optimal habitat and based on an absence of breeding pairs do not qualify as significant wildlife habitat.

The fallow field is not a “regularly maintained hayfield” cut seasonally, as McCracken found to be used during his studies on Bobolink habitat requirements (McCracken et al, 2013). We did note Bobolink nesting within 5km in maintained hayfields, supporting this finding.

In the case of other regionally rare grassland nesters such as the Eastern Meadowlark, it too selects maintained cut fields and the fallow grasses and forbs on the White Rose site are taller (e.g. mostly over 70cm+) than heights summarized in the field research (25-50 cm noted by Hull, 2003).

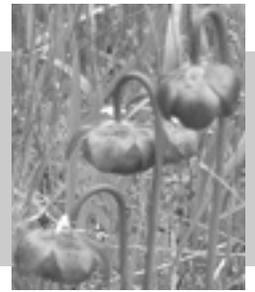
Key Wetland Features and Functions

Herptiles

Seasonal inventories and key wetland features and functions are detailed in the main environmental report and include support habitat for salamanders, amphibians and birds. A vernal pool in particular was studied as it supported salamanders and amphibians, and is located within treed parts of the northeast corner of the wetland. Separation distance exceeds the average daily movement, and migration of the species into the nearby trees.

Observed and documented travel distances for these wetland breeders include forays in particular for the herptiles, into drier adjacent land of the north forest patch edges. This habitat slopes downgradient toward the wetland, approximately 60m from the location of peak amphibian breeding for instance, and sign of Wood frogs during summer inventories was noted in the forest edge.

This portion of forest perimeter should certainly be safeguarded and conserved in the final layout and we note that earlier versions of the draft plan that had initially proposed incursion with seniors residences fully into the bulk of the forest patch have been removed in the current plan. This provides for all season habitat components of the amphibian (Western Chorus Frog) and salamander (Spotted Salamander) life cycle



requirements. Salamanders will not in general select a dry terrain like the adjacent lands field to traverse to complete their life cycle events because they risk desiccation due to their fine skin. This particular species of salamander will develop lungs as an adult and not need to breathe through its outer skin membrane like some other salamanders.

They do require the wetland water, and the water of the vernal pool that is located within the wetland boundary (northeast) with tree cover that will be conserved within the wetland. Their larvae are gilled and stay in the wetland until they grow into juveniles during the summer. At that point the juveniles and adults move back into the treed edges, migrating again in early spring to the wetland breeding area. This species can live to 20-30 years.

Bats

Also noted in our environmental impact study are potential roost trees for bat species (Big Myotis) which are located in the central east portion of the wetland. Aerial forays of possible bats in any of the wetland and wetland edge openings is not impeded by incursion into the reed canary grass meadow.

SAAR has considered the above habitats to be candidate Significant Wildlife Habitat, although the abundance criteria for each species is not met. Guidelines suggest that SWH receive 50m setbacks around the location of the activity and this distance separation has been provided in the current plan.

Fish habitat

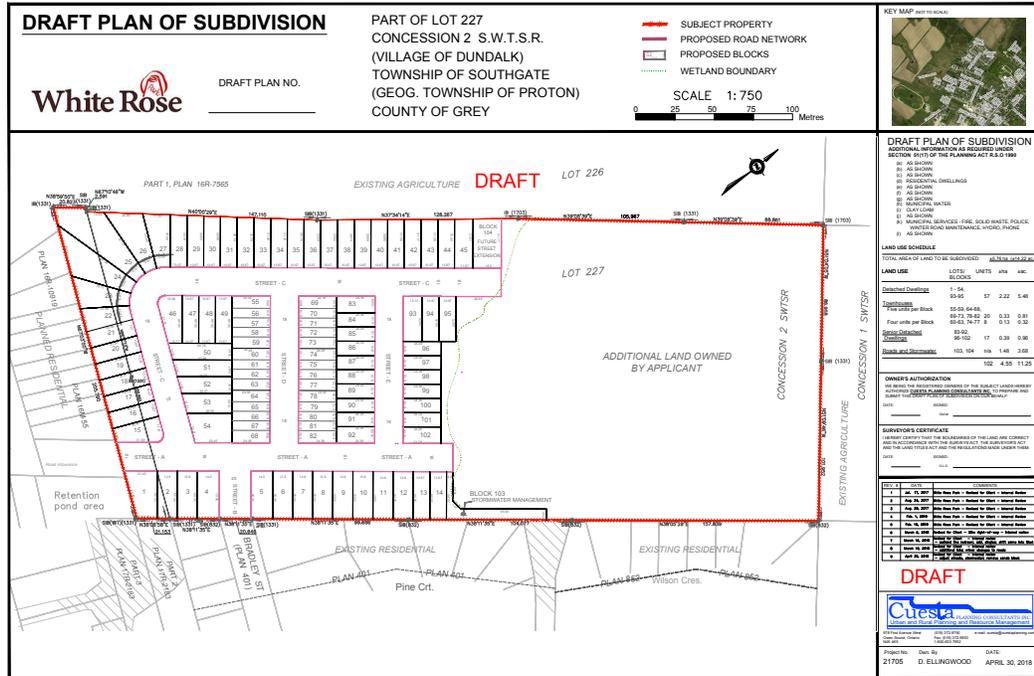
Brook stickleback were noted in the outlet and in the wetland. Some of the aquatic areas are ephemeral in warmer summers, drying and not supporting a number of the egg masses through to full incubation but species are continually transferred back into this wetland environment by terrestrial and avian species feeding and breeding in the wetland. Setbacks for maintaining warmwater species cyprinids (15m) from aquatic habitats are exceeded.



Color Plate 5: Outlet flows south from wetland adjacent to Wilson Crescent.

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Map 1: Current Draft Plan of Subdivision

SAAR has reviewed the current draft plan above and notes with some minor adjustments to the easterly footprint, and strategically positioned enhancement plantings flanking the wetland limits, the plan can be resolved for a sustainable fit.

The wetland setback is variable and reflects ecology content of the wetland, ranging from 2m at the southern edge through to 8m within the north forest.

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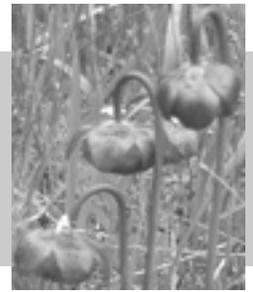


Please do not hesitate to call our offices with any questions or comments.

Best regards



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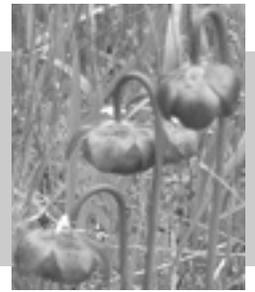
FOR CLIENT SIGN BACK

The Client shall provide the Consultant with all pertinent information that may affect the work to be done, including, if required, a correct survey of the site illustrating existing topography, facilities and utilities, a legal survey of the parcel, development concepts and engineering plans. Where such information is not available, the cost of obtaining the same shall be borne by the Client.

Any and all plans, specifications, drawings and designs furnished by the Consultant will be prepared on the assumption that all information supplied by the Client, or on behalf of the Client, by any person or persons other than the Consultant, is correct and the Consultant shall not be liable for any loss or damage arising from any inaccuracy in such supplied information. The Client shall immediately notify the Consultant of any discrepancies or inaccuracies in such information, as they become apparent. The Consultant shall be entitled to make any necessary change or changes in her plans, specifications, drawings, or designs at the Client's expense, if any such provided information should be erroneous or inaccurate. Where it is necessary to carry out work on property owned or controlled by the Client, access and egress shall be the responsibility of the Client.

LIMITATIONS OF LIABILITY

The Client acknowledges that any environmental assessment report represents a living current view of natural heritage which changes over time. Thus, the report is generally valid and accepted by review agencies for up to a five year period, beyond which natural succession of vegetation communities can change the existing character of vegetation and may require an update. The ecology being documented by the Consultant can be ephemeral, short lived, seasonal and annual in periodicity; for example, species may not emerge every year or breed consistently on a site every year. The Consultant is not responsible for any under representation of these ephemeral ecological features and functions and will accurately report on this aspect of nature.



The Consultant's responsibility is limited to accurately reporting on, and interpreting, ecology encountered on and adjacent to the site and through background review. The Consultant will at times rely on information and data supplied by others, and is not responsible for errors in reviewed data by provided by others.

The Client agrees that the Consultant's financial liability for errors and omissions with respect to the project is limited to the total amount of fees received for work carried out on the project, binding with or without signature.

Neither party shall assign this Agreement without the consent in writing of the other.

Please sign and forward back for our files to be complete.

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