



Memo

To: TFAC

From: Environmental & Parks Planning (E&PP)

Date: November 29, 2016

RE: City Responses (November 2016) to TFAC's Comments on Draft Ecological Restoration Plan for Westminster Ponds / Pond Mills ESA Saunders Cabin Area by St. Williams Nursery & Ecology Centre – September 2016

E&PP and St. Williams Nursery & Ecology Centre thank TFAC for their review of the Draft Ecological Restoration Plan for Westminster Ponds / Pond Mills ESA Saunders Cabin Area by St. Williams Nursery & Ecology Centre, September 2016.

1. The presenter is already aware that Ash trees are on the list of recommended species for planting and she is aware that this species should be removed.

City Response: *There is a good chance that the small number of white, black and red ash tree species included in the restoration plan will germinate and survive as the Emerald Ash Borer (EAB) tends to target mature ash trees. 10-15 years from now when the young ash trees could be vulnerable to EAB, the EAB may have moved on or there may be a biological control available for the EAB. There are ash seedlings regenerating naturally in the ESA now indicating the conditions are appropriate for these trees and there is very little downside to including them as they make up a very small percentage of the tree species included in the overall planting plan. If the ash do succumb to the EAB the other tree species will outcompete them and fill in.*

2. I would like to recommend that species that will be more adept to survival in 2065 climate conditions be added to the planting species list.

City Response: *We agree and the consultants included a broad range of native tree species in Appendix B to enhance the biodiversity and resilience of the restoration area to a changing climate. There are 25 different, native-tree species included over the Fresh Moist Oak Maple Hickory Deciduous Forest reference model area, and, 17 different native-tree species included in the Swamp Maple Mineral Deciduous Forest reference model area. If a few of these species do succumb to factors brought on by a changing climate the other tree species will outcompete them and fill in.*

3. The presenter mentioned that some logs (remains of some cleared trees) will be left to provide habitat for insects, birds and animals, etc. I would like to recommend that part of this approach should copy recent initiatives that the City has done over this last year. I am referring to the cut down tree in Springbank Park (right beside Sheila's Place Playground) and the other cut down tree along Thompson Road (just before it intersects with Pond Mills Road). In both of these cases around 20 feet of tree stump was left and cut outs and bore holes, etc were made to encourage these stumps to be used by birds.

City Response: Yes, we agree and where it is possible and safe to do so the contractors will retain some standing dead ash tree-stumps.

I mostly have questions for this, rather than comments or recommendations:

4. p. 6 - It sounds like trail alignment will be planned after restoration begins? Is there not cause for concern that the trail construction will not impact the restoration work? (Should this not be the other way around to allow for construction staging?)

City Response: Trail planning for the ESA is based on the Council approved 2005 Conservation Master Plan and a site visit in September 2016 with the Trails Advisory Group (TAG). As noted on page 14 under Section 3.0 Sequence and Schedule of Restoration Works, "Timing is subject to adaptive management; dependent on time required to achieve adequate control of buckthorn/invasives." This means that the conceptual trail alignments recommended by consensus by TAG in September of 2016, as identified on Figure 1 on page 5 will be implemented in 2017 after a second visit by TAG to microsite TAG's trail conceptual alignments once the buckthorn and dead ash clearing/mulching part of the restoration process is complete, while the control of buckthorn re-sprouts continues (in advance of plantings), which could take up to 5 years as noted on page 11.

5. p. 7 - Why are they redirecting the trail to be closer to the wood pewee habitat? Would it not make sense to move away from this? (map on p. 7; purple line is being removed and replaced with red)

City Response: The trail alignments in Figure 1 were recommended by the Trails Advisory Group (TAG) consensus in September of 2016. TAG is comprised of representatives of EEPAC, Thames Valley Trails Association, local Adopt an ESA groups, UTRCA, Nature London and the Accessibility Advisory Committee of Council who arrived at their decisions following the Council approved Guidelines for Trails in Environmentally Significant Areas document and process.

6. p 11 - I doubt elimination of buckthorns will be possible unless they treat the ponds as a whole: has any consideration been given to a property-wide plan for buckthorn? There must be thousands of plants.

City Response: Yes, the buckthorn density has been inventoried and mapped for the entire ESA as noted by St. Williams Nursery and Ecology Centre (SWNEC) on page 6, "In preparation for the ecological restoration works the comprehensive field inventories examining natural communities, wildlife, and invasive species in the 2015 Volume 1 and 2 reports by North South Environmental (NSE) were reviewed ...".

The approach used to manage buckthorn in the restoration area, and for the ESA as a whole is described on page 11: "Long term monitoring and management to prevent re-invasion will be required as buckthorn can be re-introduced by birds and small mammals which eat the buckthorn berries that are prevalent throughout the City. The laxative properties of the berries helps to spread them widely.

It is worth noting that The Upper Thames River Conservation Authority (UTRCA) ESA team have managed buckthorn primarily through basal bark application of Garlon RTU as part of operational and capital projects, funded by the City, in the ESA since 2008 including the buckthorn in the Rotary/UTRCA restoration area noted on Figure 1. In 2014 - 2016 woody invasives including buckthorn were managed in the landfill meadow to protect habitat for Meadowlarks a Threatened Species at Risk. In 2014 - 2016 buckthorn around Spettigue Pond were treated to protect many rare species and their habitats. Buckthorn was managed on the northeast shore of Saunders Pond in 2015. This approach is

generally consistent with the North South Environmental 2015 report that prioritizes protection of SAR and rare species from buckthorn infestation, then to treat the areas of least infestation to protect them, moving to then manage the remainder of the denser stands of buckthorn in the ESA as funds and opportunities such as this ecological restoration project arise.”

7. p. 12 - Why put all this mulch all over the site (from chipping the buckthorn they want to remove), if there are herbaceous plants they want to save, as stated earlier?

City Response: *SWNEC ecologists conducted a detailed field survey in 2016 to identify and locate the native and invasive species listed in Appendix A. Page 6 identifies that “Currently, common buckthorn and glossy buckthorn are estimated to comprise more than 80% of the living stems within large portions of the project area and occupy a significant amount of the forest canopy layer.” Despite the presence of 80% buckthorn coverage in much of the 3.5 ha restoration area and a limited number of herbaceous species present as a result, many plants will be protected as described by SWNEC in Section 2.5 Conservation of Existing Natural Biodiversity on page 9. “Measures will implemented to retain ecologically significant plants, larger quality trees and plant associations during invasive species and standing dead ash tree mitigation and mulching operations.”*

The recommendation for mulching is supported by SWNEC in Section 2.6 Eradication of Invasive Species on page 10, “With adequate herbicide control, cutting and mulching will open up the site to help promote the growth of native species versus exotics and invasives. This process is facilitated by incorporation of woody mulch as well as felled logs into the ground layer which will increase soil carbon and promote soil denitrification.”

8. p. 14 - Talks about allowing herbaceous plants to establish through the mulch layer... but mulch is generally recommended for keeping "weeds" (herbaceous plants) out. How is that expected to work? (Is chipping in place only being done as a matter of convenience?)

City Response: *SWNEC on page 12 identifies that “Unlike planting of trees and shrubs, seeding of the area with appropriate restoration seed mixes is possible in advance of foliar spraying to control buckthorn. We recommend seeding in advance of mitigation and mulching to ensure good seed soil contact. The mulch layer will act as a mulch to prevent erosion, help to denitrify the site and allow herbaceous species to establish through the mulch layer.” The mulching of the dead ash and the dense buckthorn infestation is a necessary part of the restoration process that will also serve to increase soil carbon, promote soil de-nitrification and limit erosion as described by SWNEC in Section 2.6 Eradication of Invasive Species on page 10.*

9. p. 32 - Planting plan does not explain if these are seedlings to be planted, large potted stock, bareroot, etc.: this is something that should definitely be clarified in the final version, as it would greatly affect projected survival.

City Response: *Yes, we agree and under the adaptive management process described in part by SWNEC on page 9, “The species and relative planting densities are specified in the Planting Plans to achieve objectives consistent with the reference models. Final detailed planting plans will be developed in consultation with the native plant supplier(s) and must consider stock species and format availability, and must be implemented adaptively with consideration of natural regeneration following treatments to remove invasive species from the site.”*