Bowfin Environmental Consulting

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Sami Rehman
Environmental Planner
City of Ottawa

May 4, 2021

Re.: Woodland Memo – 1009 Trim Road

Dear Sami:

Thank you for the comments to the initial letter dated April 23, 2021. In that memo, we provided information on the communities and individual trees. The summary of the wooded area within the future phases was:

- That the area may have been cleared as there is a presence of fill (and garbage) buried in the slope. This was evidenced by the exposure of some garbage and buried culverts along the slope of the bank.
- Overall average diameter was estimated at 3-12 cm (all trees).
- The average diameter of the individuals measured during the TCR inventory is skewed towards those that are larger (as only trees that are 10 cm in diameter or larger need be identified) however, even these had a calculated average of 19 cm (n= 135).
- Our results support those from WSP (2017) that indicated that the average diameter was 15 cm (their maximum diameter was 45 cm).
- Only 8 individuals were estimated to be at least 60 years old.

It is understood that the City has disagreed with our conclusions and finds that the presence of few larger tress signifies that they will consider this area a significant woodland. As such, we are moving forward with presenting our rational for the removal of the 0.11 ha wooded area.

As per the *Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment* (City of Ottawa, 2019) (hereafter referred to as the Guidelines), no negative impact is not always possible with woodlands. The project is to try to avoid, minimize, mitigate and/or compensate for the impacts. This is discussed in the table below.

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Table 1: Discussion of Mitigation Hierarchy

Mitigation Hierarchy	Comments	Fully Mitigated?
Avoidance	The full development of the site cannot avoid the removal of this small portion of the woodland (0.11 ha).	Not feasible to avoid. The New OP includes the entire south side of 1009 Trim along Jean D'Arc within the PMTSA around the new Trim LRT Station. Lands identified as having environmental value are focused along the north side of 1009 trim. The PMTSA overlay supports the compact high-density mixed-use development for the southern part of the site. Such development would also advance the key objectives of the new OP to have streets within the PMTSA animated and activated to contribute to creating strong pedestrian linkages to the LRT station especially where the new Trim realignment intersects with Jean D'Arc. Additional measures required see next row.
Minimization	During the detailed design phase, the architect will be asked to try to minimize the removal of healthy trees. However for this Site, the Ottawa River and the PSW are considered of higher value than this wooded area. As such, it is more desirable to keep the development south (towards Jeanne D'Arc Boulevard North) and in the fill areas as opposed to avoiding trees in this disturbed wooded area.	Not feasible to minimize. Additional measures required see next row.

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Mitigation Hierarchy	Comments	Fully Mitigated?
Mitigation	Should it be determined that some trees can be retained during the design phase, then they will be protected with physical barriers during construction. But there will still be a negative impact to the wooded area.	Not feasible to mitigate. Additional measures required see next row.
Compensation	The development of the entirety of this Site could result in the loss of up to 0.11 ha of wooded area identified as significant by the City. However, the nature of the existing conditions is such that there is undesirable fill along, and in some areas in, the PSW. This area of previously impacted habitat, that is outside of the proposed building envelop, is roughly 0.83 ha. The Guidelines recommend an offset of greater than 1:1 for the removal of wooded areas in the Urban Area. The overall benefit will far exceed this ratio. But the overall benefit will also include other types of habitats. The goal for the wooded area is 0.22 ha of treed area within the habitat enhancement plan.	Fully compensated with an aim to provide 0.22 ha of wooded area. Plus another 0.61 ha of enhancements (total enhanced habitats ±0.83 ha).

Please note that the details of the habitat enhancement area are pending this discussion as well as discussions with other agencies. At this time, the following is anticipated:

- The overall area available for enhancements is calculated at ±0.83 ha (Figure 1).
- The existing conditions in the enhancement area consists of:
    - heavily compacted rocky fill vegetated with broad leaf herbaceous species such as bird's foot trefoil, common sow thistle, white sweet clover, wild carrot, cow vetch, burdock, viper's bugloss, field bindweed, smooth brome, coltsfoot, and

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common mullein. There were also a few scattered, young, eastern cottonwoods. These were less than 2 m tall and provided very little in terms of cover.

- The shoreline on the west side consisted of fill. The species here were eastern cottonwood, black willow, Freeman's maple, green ash, red maple, and Manitoba maple with staghorn sumac (both 1-2 m tall and regeneration) and the ground layer included white sweet clover, bird's foot trefoil and tall goldenrod. On the east, it consisted of clay with reed canary grass (likely the invasive species).

- The intent is to create habitat that consists of a mosaic of native meadow, marsh/tall shrub swamp, shrub and treed habitats.
- The portion of wetland habitat created will be restricted to 30 m from the edge of the permanent footprint of this development.
- The option to transplant some of the woody vegetation from the proposed development lands to the enhancement area will be evaluated by the landscaper.
- The proponent plans on using potted stock for at least a portion of the wooded species. This will improve the speed at which the site becomes functional.
- The treed areas also need to allow for viewing from terraces, Trim Road and the walking trail. There will be a goal of reaching 0.22 ha with details determined as the information on how the site will be developed and where the public viewing could take place is gathered. For instance, the denser areas (with >60% canopy cover, at maturity) could be situated in front of parking areas while strategic plantings (groupings, tall shrubs) could be placed where viewing is desirable. It is expected that details for tree planting to ensure key views are provided for with tree planting framing and enhancing significant views would be informed through a view analysis to confirm key views to and from the development and for viewing areas.

Other important factors are:

- Timing
  - The intent is to complete the habitat enhancement works concurrently with the excavation activities - if possible, in its entirety. However it is noted that access to native vegetation may be problematic. If issues arise, then an annual cover crop would be sown, and the plantings completed as soon as possible.
  - The headwater feature will be removed immediately and will include a design feature to allow for the existing upstream contributing flow to continue to be directed to the reed canary grass below through the on-site stormwater management system to be provided with the development.

- Public Access
  - A public viewing area would be created along the edge of Trim Road.

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- Because of the need to create urban value to the wooded area, a narrow walking path will also be created. However to help discourage public access to the wetland, a buffer of native shrubs on a steep slope is anticipated along the new shoreline. Note that MECP may have comments on the location of the path.
- A second viewing area may be established at the east end of the path.

- The enhancement plans will be receiving input from other agencies (RVCA, MECPP) and the final design will be one that considers all benefits.

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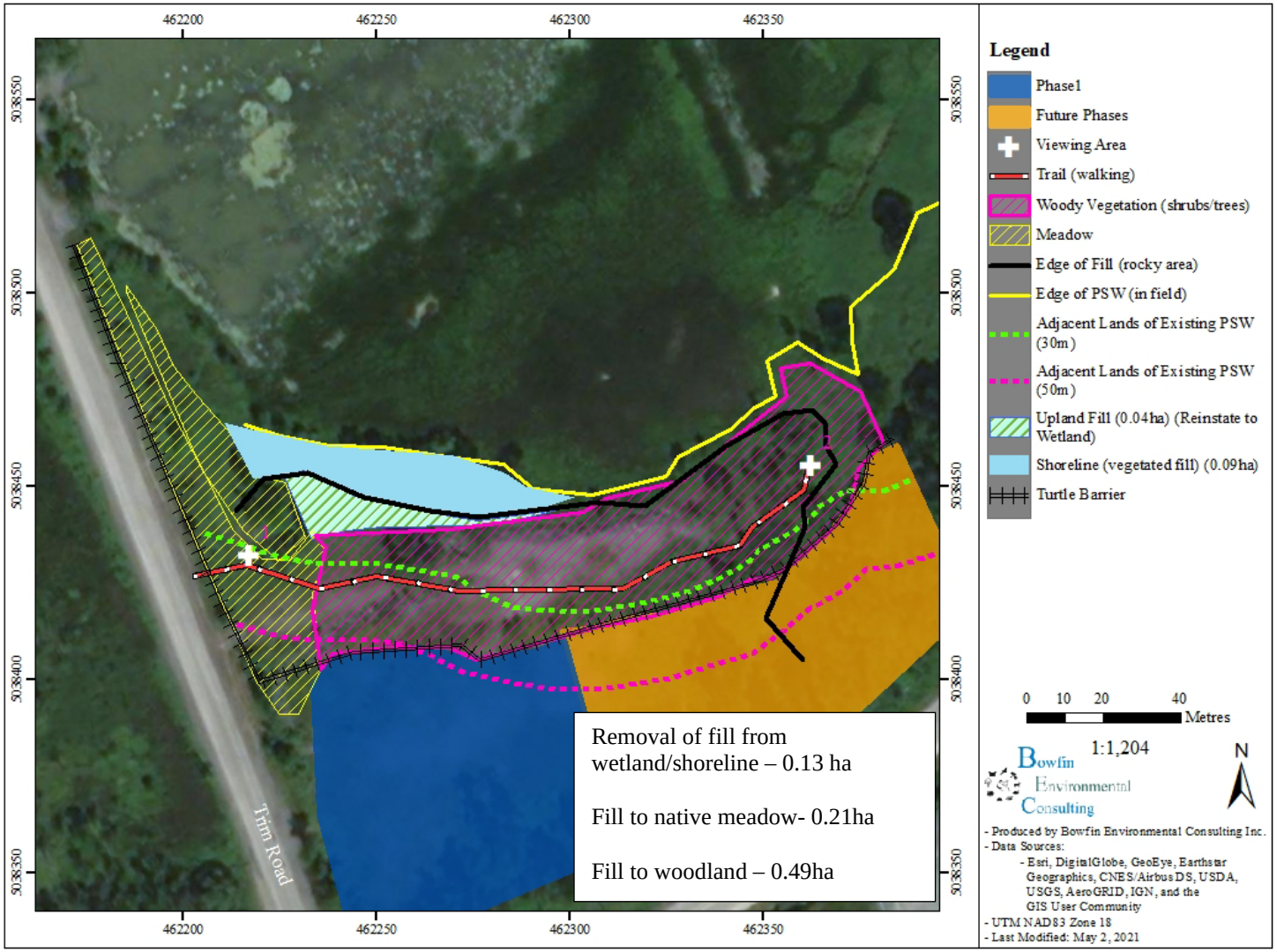
Figure 1: General Enhancement Concept



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As indicated in the Guidelines, urban woodlands values are more strongly tied to their social and economic values (i.e. outdoor recreation, public events, gatherings, educational opportunities etc.). This is followed by their ability to absorb rainfall and decrease stormwater runoff, reduction of urban heat island effects, shading and refuge during heat events and mitigation to air pollution. The focus is on physical and mental health benefits. This site is within the Urban Area.

The existing woodland:

- Is not accessed by the public (is on private lands, no evidence of trails noted in the wooded area itself);
- Is on a slope and contained a high number of downed trees which limits accessibility by the public;
- The two bullets above prevent it from use for public events, gatherings etc.;
- Had a high percentage of unhealthy or dead trees (55%) (these trees are not providing any value in terms of air pollution or shading, and limited water absorption).
- The slope is mostly bare and has erosion suggesting that it is not providing functions in the way of decreasing runoff during heavy rain events;
- Did not provide habitat for significant habitat for flora or fauna;
- Contained invasive woody species (Common Buckthorn, Tartarian Honeysuckle);
- Did not contain any uncommon characteristics;
- The replacement of this portion of wooded area with the enhancement area will not result in a negative impact to any connectivity;
- The woodland stand, as a whole, is small, and does not have any interior habitat, and is on a steep slope with poor access for the public.

Table 2: Discussion of Urban Criteria

Criteria	Comments
Air, Water Cycle and Climate	**Existing trees** are: -Young (average diameter 3-12 cm) and covers over an area of 0.11 ha. But because >50% are dead or dying its total canopy cover is poor. Further many species are those susceptible to disease (ash, elm) its total canopy at maturity may never reach its full capacity. -Within 250m of high-rise towers. -Are not accessible to the public.

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Criteria	Comments
	-High percentage of dead/dying trees which do not provide any benefits in terms of air, water cycle or climate. -The lack of herbaceous ground cover and presence of bare soil on slope indicates that it is not assisting in run-off storage. **Proposed will**: -provide more total canopy cover (goal of reaching 0.22 ha in the enhancement) and will be planted with species other than ashes and elms in an effort to avoid those species that are presently susceptible to disease. This will create more total canopy cover at maturity, equating to more of the benefits (removal of pollutants, reduction of urban heat, and carbon storage. This does not consider the remainder of the enhancement area that will also include individual trees and shrubs and native meadows/wetlands. -Have an enhancement area that is graded to minimize erosion and improve run-off storage. -will include potted stock plantings and possibly transplanting from the site to reduce the lag time of the new area in providing the benefits. -will remain within 250 m of high-rise towers (already built by others) -will become readily accessible.
Green Infrastructure	**Existing trees**: -are on bare slope (little herbaceous cover) and signs of erosion. -do not offer high run-off capturing capabilities. -Much of the proposed development area and the enhancement area is currently rock fill or clay fill with little run-off capabilities. **Proponent is considering**: -Development is considering reflective (white) roof for the towers and vegetated terraces for lower roof levels for outdoor amenity areas .

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Criteria	Comments
	-plantings, strategically placed, within the development to reduce heat and stormwater runoff. -landscape architect will review opportunities for tree retention. -The enhancement area is currently rock fill with little run-off capture capabilities. Enhancement area (0.83 ha) will see a large improvement. -is an opportunity to provide community access to a wooded green space.
Disease Regulation	While woodlands can create an area where disease can be communicated, this will be minimized at this location by/because: -Low population of deer in the area (lower number of ticks) -Walking trail [1.5-2.0 m wide (wood chips)] will be built -Signage to ask people to stay on the trail will be posted -Native meadows and vegetation will be planted to reduce the amount of wild parsnip and other invasive species that impact human health. -Education panels are being considered to provide walkers information on dangerous plants and on ticks.
Pollination	Proposal includes an increase in area of native plants (including trees) at a ratio of 5:1. Vast improvement over current rock fill.
Socio-cultural	**The existing:**
Recreation, heritage, tourism	-has **no public access** (is entirely on private land), -has **no opportunities** for recreational, educational, or cultural interactions. **Proposed enhancement area:** -will allow public access on privately-owned land. -will provide a new viewing point of the river and PSW not currently available. -will create ±0.83 ha of accessible greenspace. -will provide an opportunity to create educational panels for the public. -new area to offer relief from extreme heat events, to view nature and relax/spiritual contemplation.

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Criteria	Comments
	-the viewing platforms will offer opportunities for bird-watching in the PSW and the remainder of the enhancement area for bird-watching of more common terrestrial breeders. -the viewing platform will be named after the Grandmaître family (previous owners of the site).
Habitat	Surveys did not identify any unusual characteristics, or significant wildlife habitat. New area will provide a better buffer to the PSW (naturalized instead of the existing rock fill). The existing wooded area is over 30 m from the PSW and most of it is more than 50 m from the PSW. The new area will be within 30 m-50 m of the PSW. New area will be vegetated with native species.

CONCLUSION

The City considers the 0.11 ha of wooded area found on the east side of the future phases to be significant. To allow for maximum density of housing in this area, situated next to the future LRT area, the proponent has proposed to remove this wooded area (and the headwater feature) but to create an enhancement area. The total area to be removed is 0.16 ha [0.11 ha (wooded) and 0.05 ha (headwater)]. This area is on private, steep lands with eroding slope and contains invasive species. It is not currently accessible and does not provide any special natural habitat value (no species of conservation value or endangered or threatened species). The enhancement area will be up to 5 times larger than the two types of habitats to be removed (anticipated to be ±0.83 ha). It will result in the removal of fill and naturalization with native vegetation. It will create a vegetated buffer to the wetland and provide an opportunity for controlled public assess. While this proposal will have a negative impact on the existing wooded area, the wooded area is considered to be of low value and health with the larger enhancement opportunity providing much better value in terms of urban natural features than those it is replacing.

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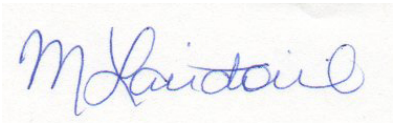
Please do not hesitate to contact use should you have any questions.

Sincerely,



Michelle Lavictoire
Biologist

City of Ottawa (2019). Significant Woodlands: Guidelines for Identification, Evaluation and Impact Assessment. 65pp.

WSP (2017). Grandmaitre Estate Environmental Impact Statement 1009 Trim Road Land Use Change Project, Ottawa, Ontario. 99 pp.