Muncaster Environmental Planning Inc.

February 5, 2024

Ms. Melanie Riddell, P. Eng.
Director, Land Development
NOVATECH
Suite 200, 240 Michael Cowpland Drive
Kanata, Ontario
K2M 1P6

Dear Ms. Riddell:

RE: Provence Orleans Subdivision, Phase 6
Lalande Conservation Park Expansion
Updated Forest Management Plan – Woodland Park

The Phase 6 component of the Provence Orleans subdivision in the southeast portion of Orleans is located between Portobello Boulevard and Provence Avenue south of Newcarlisle and Calico Crescents (Map 2). Of the approximately 4.9 hectares Phase 6 lands, about 0.48 hectares of forest in the southwest portion will remain as a passive Woodland Park. This retained upland deciduous forest represents a portion of the core of the Nantes Street Woods Urban Natural Area, including the portion treed in 1960 aerial photography, and is an expansion of the existing Lalande Conservation Park.

Additional details on the urban residential development are provided in our Environmental Impact Statement and Tree Conservation Report dated May 24th, 2023. The recommendations in this updated Forest Management Plan have been limited to the lands in the southeast of the Woodland Park to be transferred to the City. This area is identified on Map 1 at the end of this Plan as Part 4, Parkland Dedication ((also referred to as Block 41 on the Draft Plan of Subdivision).

The objectives of this Forest Management Plan are:

- A general inventory of trees by percentages of species: this is provided on pages 2 and 3, including a table with percentages of species on page 3;
- Comments on the health of the trees: this is provided at the bottom of page 2;
- Identification of hazardous trees, particularly where they might be in-line with existing trails to be upgraded as part of the passive park: this is provided in recommendation 4) on page 8;

- Comments on the regeneration of the forest: this is provided at the top of page 3; and,
- Additional management recommendations: this is provided on pages 7 - 9.

Woodland Park Background

The Nantes Street Woods Urban Natural Area is a 3.6 hectare Natural Area, including the retained Woodland Park and younger forest representation proposed for development adjacent to the core Woodland Park. The majority of the Natural Area, including the core and older portions of the upland forest, are now a City-owned woodlot. The Urban Natural Area was assigned a low overall environmental rating in the Urban Natural Areas Environmental Evaluation Study. The Natural Area scored below average for all nine evaluation criteria and was assigned the lowest score for the significant flora and fauna, natural communities, connectivity and wildlife habitat (Muncaster and Brunton, 2005). The site summary for Nantes Street Woods concludes that the natural area is a small, isolated, very dry woodland fragment with minimal potential to support significant natural environment values. Significant features of the Urban Natural Area are one regionally uncommon plant species, small skullcap in the woodland habitat, and atypical presence of wetland species Canada bluejoint and small skullcap in dry upland woods. Invasive species, including Manitoba maple and swallowwort were noted as representing only a modest impact in the early 2000s. Swallowwort appeared common in portions of the forest in more recent 2018 field surveys. No connectivity or interior habitat is associated with the Urban Natural Area. Disturbances noted within the Urban Natural Area include heavily used informal trails, dumping of yard waste along the south edge, tree forts, and edge effect through the area (Muncaster and Brunton, 2005).

Potential Species at Risk were assessed as part of the Environmental Impact Statement and Tree Conservation Report. No butternuts were observed on or adjacent to the Phase 6 lands other than one butternut to the south of the site by a picnic shelter. This butternut appeared to be planted and it was confirmed to be a hybrid by the Forest Gene Conservation Association of Ontario. As a hybrid, this butternut is not covered under the Endangered Species Act. Regardless the butternut will not be impacted.

Bats are another Species at Risk with potential to utilize the site. Large cavity trees that may be used by bats for summer maternal colonies were observed on and adjacent to the retained Woodland Park (Photo 1). One of the cavity trees to the north of the Woodland Park will not be retained and measures are presented in the Environmental Impact Statement and Tree Conservation Report to mitigated potential harm to any wildlife using the cavities.

Woodland Park Conditions

An upland maple deciduous forest over bedrock dominates the retained Woodland Park. Several mature sugar maples up to 88cm diameter at breast height (dbh) are scattered in the retained woodlot (Photo 1). In addition to the dominant sugar maple, trembling aspen, red maple, white elm, grey birch, black cherry, ironwood, white birch, bur oak, basswood, and white ash are also present (Photo 3). Historically, some of the sugar maple had been tapped. A good size range of maple trees are present, including red maple up to 48cm dbh in the east portion of the forest. Trembling aspen up to 58cm dbh are along the west edge of the forest, though many of these

trees appear to be in poorer condition as described below. Most trees are in the 20cm to 30cm dbh range in the east half of the forest to be retained, with smaller trees dominant in the west half (Photo 3) and the portion of the forest to be removed to the east of the Woodland Park. Exposed bedrock, boulders, and bedrock fissures are common throughout the forest. Bedrock outcrops to be retained in the west portion of the forest are unusual features in an urban landscape (Photo 2).

Many of the ash and elm appeared to be in poor condition or dead, with greatly reduced or no leaf-out. Evidence of emerald ash borer was observed on many of the ash trunks. Some of the larger poplars in the west portion of the forest are in poor condition with broken upper trunks and major limbs and fungus on the trunks. A few of the sugar maples contain potential wildlife cavities, but generally appeared to be in good condition based on leaf out and trunk characteristics, with some of the larger maples in senescence with extensive trunk decay (Photo 4). The red maples and ironwood appeared to be in generally good condition. Some fill and debris were observed, along with a couple of tree forts (Photo 5).

Regeneration of sugar maple is very good in many areas of the forest, with regenerating stems of ash common in areas. Regenerating stems of white elm and, in fewer quantities, bur oak are also present.

Hawthorn and staghorn sumac shrubs are common in the periphery of the forest, with purple-flowering raspberry, prickly gooseberry, beaked hazel, highbush cranberry, fly honeysuckle, black currant, narrow-leaved meadowsweet, round-leaved dogwood, and tartarian honeysuckle shrubs also present in the understory. Poison ivy is dominant in most portions of the forest. Other ground vegetation includes eastern bracken, thicket creeper, common dandelion, heart-leaved aster, thimbleweed, white avens, yellow avens, timothy, white baneberry, white trillium, enchanter's nightshade, and false Solomon's-seal.

The following table summarizes the tree species in the upland sugar maple deciduous forest.

Tree Species Deciduous Maple Forest	Average dbh of Observed Trees	Distribution
Sugar maple	34cm	32 %
Red maple	33cm	10 %
Bur oak	22cm	2 %
White elm	18cm	10 %
White ash	27cm	12 %
White birch	20cm	5 %
Grey birch	14cm	2 %
Black cherry	29cm	2 %
Trembling aspen	28cm	6 %
Basswood	24cm	4 %
Ironwood	15cm	15 %

The maple deciduous forest support potential significant wildlife habitat associated with snake use in the exposed bedrock fissures, and cavity trees. No channels with aquatic habitat potential were observed or are mapped for the Woodland Park.

Photo 1 – Mature sugar maple with potential wildlife cavities to be retained along the east edge of the Woodland Park. View looking north

Photo 2 – Fissures in the exposed bedrock are common in the upland maple forest. This example is in the east portion of the Woodland Park and will not be disturbed

Photo 3 - Typical conditions of upland maple deciduous forest to be retained in the Woodland Park. This example is in the west portion of the park, with view looking northeast

Management Recommendations

The Woodland Park has several existing City-owned trails which are recommended to be used and enhanced as outlined in a Facility Fit Plan prepared by Novatech. Access to the Woodland Park will be in several locations where existing links are present including in the southeast portion of the forest adjacent to the existing park structures, in the southwest off the north side of Nantes Street, and along the west and northeast forest edges (Map 1).

As the existing informal trail network will be utilized, tree removal is anticipated to be very limited. Management recommendations for the Woodland Park include:

1. The existing City-owned trails are extensive and are recommended to be utilized as much as possible. Other than a new short connection in the southeast corner (see dashed pink line on Map 1), no new trails should be created. This will greatly minimize tree removal and other potential impacts on the forest. Map 1 shows the existing trail network. A trail segment that would lead to created rear yards in the southeast portion is to be abandoned and the trail alignment rehabilitated (see zig-zag red line on Map 1). The trail to be abandoned is to be blocked with pruned branches and the closest portion of the abandoned trail disturbed where soils condition permit;

2. As indicated above the only new trail segment proposed is for the southeast connection to existing trails (dashed pink line on Map 1). This area is a cultural woodlot with less tree cover than the deciduous forest. The alignment of the connector is to be identified in the field to minimize the extent of removal of healthy trees of desirable species;

3. Where the trails are to be upgraded only stonedust or other permeable material is to be used and the upgraded trails are to be approximately 1.8 metres in width;

4. Once the trail network within Part 4 is finalized, areas of tree trimming and hazardous tree removal are to be reviewed with City staff and confirmed. Tree trimming and hazardous tree removal are also to be reviewed along the rear property lines of the adjacent lots;

5. To protect breeding birds, no tree removal should occur between April 15th and August 15th, unless a breeding bird survey conducted by a qualified biologist within five days of the woody vegetation removal identifies no active nests in the vegetation to be removed;

6. It is important that residents with lots backing onto the adjacent forest understand that no access points or other intrusions associated with backyard creeping will be permitted. A permanent 1.5 metre black vinyl chain link fence will be installed along the rear property lines. No gates will be permitted in the fencing and existing trails will be abandoned;

7. Where the drainage solution permits, the critical root zones of the co-owned and tree immediately adjacent to the property lines are to be protected with no disturbances in the critical root zones, identified as a distance of ten times the trunk diameter of the co-owned or adjacent trees. The critical root zones are to be protected by limited excavations and other site disturbances at the rear of the adjacent lots. Installation of the

permanent fencing is not expected to have an impact on the critical root zones of the adjacent retained trees. Grading in the rear of the lots adjacent to the Woodland Park have been designed to not overload the woodlot with surface drainage;

8. Signage is required within Part 4 to remind users of the Woodland Park that they must stick to the existing trails for the benefit of flora and fauna in the forest and their own protection from abundant poison ivy. The signs will also indicate disturbances to wildlife and vegetation, including plant or flower removal, is not permitted; and,

9. Black swallowwort appears to be spreading in the upland maple forest. A program should be considered aimed at removing or controlling this highly invasive species, recognizing that caution will be required for poison ivy contact during the swallowwort removal.

Conclusion

The Forest Management Plan provides guidance on the trail network and protection measures for a Woodland Park to be retained as part of the Lalande Conservation Park Expansion in the south-central portion of the Phase 6 lands of the Provence Orleans subdivision. The Woodland Park is dominated by an upland sugar maple forest and represents the core of the Nantes Street Woods Urban Natural Area. Many of the ash, poplar, and elm trees appear to be in poorer condition but the dominant maple trees generally appear to be in good condition, with some mature tree exceptions. Regenerating maple stems are very common in many areas.

Important management recommendations are identified above to protect the features and functions of the Woodland Park.

References

Muncaster, B.W. and D.F. Brunton. 2005. Urban Natural Areas Environmental Evaluation Study. Prepared for the City of Ottawa.

Muncaster Environmental Planning Inc. 2023. Provence Orleans Subdivision, Phase 6. Environmental Impact Statement and Tree Conservation Report. May 24, 2023. 20 pp & Append.

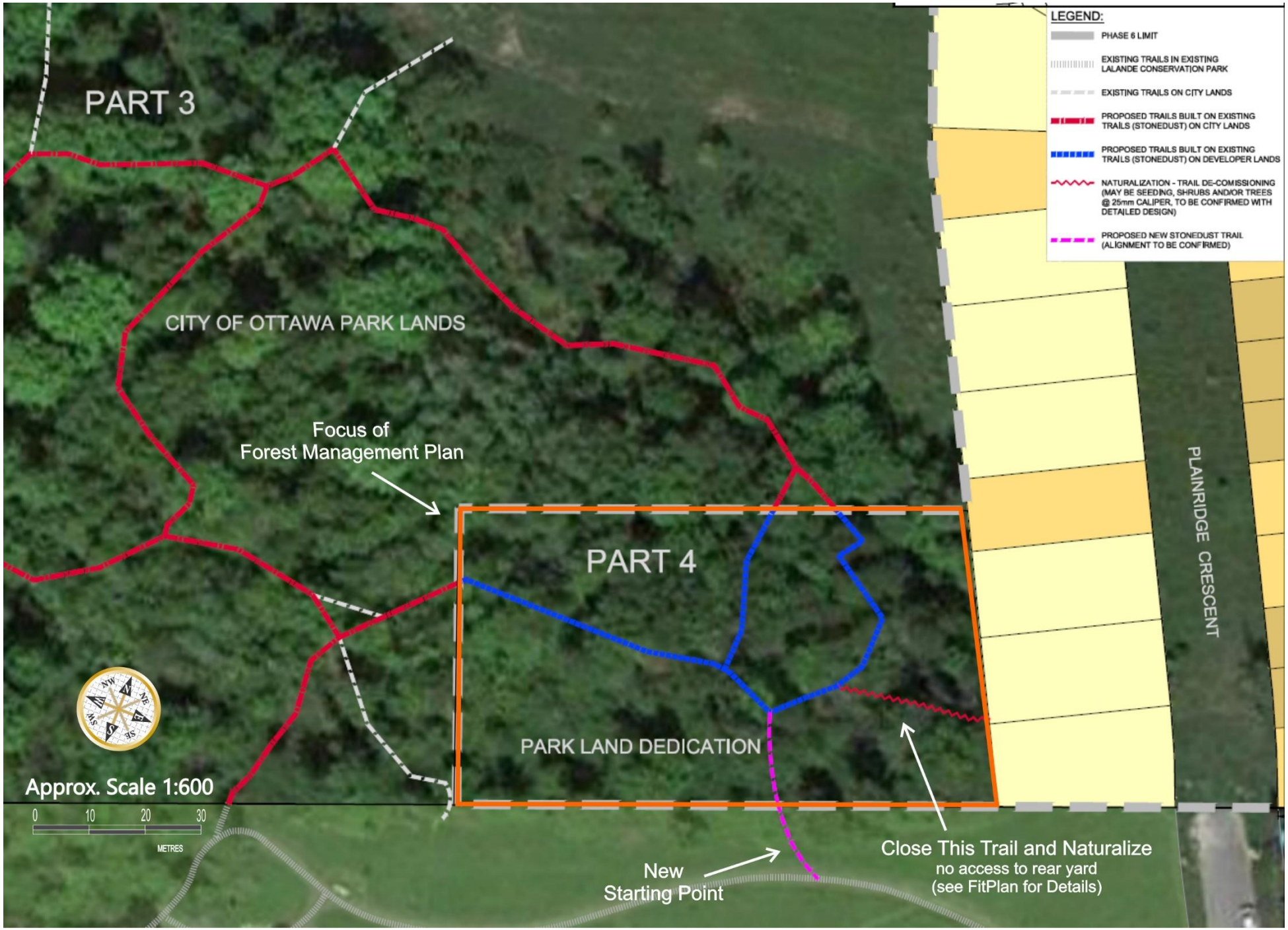
Please call if you have any questions or comments on this updated Forest Management Plan.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.

Bernie Muncaster, M.Sc.
Principal

Legault Phase 6 FMP 24

MAP 1 - LALANDE CONSERVATION WOODLAND PARK EXPANSION



Legend

- Phase 6 Lands
- Nantes Street Woods UNA
- NHS (Schedule L1) & UNF (Schedule B)
- Proposed Tree Retention

Vegetation Communities

1. Cultivated fields
2. Cultural meadow
3. Cultural thicket
4. Cultural woodland
5. Deciduous hedgerow
6. Upland sugar maple deciduous forest

Approx. Scale 1:3,300

0 50 100 150 200 METRES

Map 2	FILE: 17 - 26	May 17, 2023

Prepared for: Provence Orleans Realty Investments Inc.

Prepared by: Muncaster Environmental Planning Inc.

PROVENCE ORLEANS SUBDIVISION
PROPOSED CONSERVED VEGETATION

Orleans, City of Ottawa