Muncaster Environmental Planning Inc.

February 12, 2024

Mr. Raad Akrawi
Project Manager
12714001 Canada Inc.
768, Boulevard St-Joseph, Bureau 100
Gatineau (Quėbec)
J8Y 4B8

Dear Mr. Akrawi:

RE: 2983 Navan Road (at Brian Coburn Boulevard)
Tree Conservation Report and Environmental Impact Statement - Updated

This Tree Conservation Report (TCR) and Environmental Impact Statement (EIS) addresses the existing vegetation, potential tree retention, Species at Risk utilization and other natural environment features such as significant woodlands at 2983 Navan Road in the Chapel Hill South area of the southeast portion of Orleans. Navan Road is to the south of the site, with Brian Coburn Boulevard to the northwest, and Pagé Road to the east. Pagé Road now terminates for vehicular traffic at Brian Coburn Boulevard, with a cul-de-sac adjacent to the northeast edge of the site. Existing residence are along the west side of Pagé Road and the north side of Navan Road adjacent to the site. The approximate 4.5 hectare site is described as part of Concession 3 (Ottawa Front), Lot 6, Gloucester Geographic Township, City of Ottawa.

Historical aerial photography from 1965 shows extraction on much of the site, with much less tree cover than 2018 conditions. In many areas spoil piles were left adjacent to the former extraction area causing the micro-topography of the site to be very undulating. In addition, there appears to be no defined outlet for the site, with Brian Coburn Boulevard recently constructed to the northwest, a traffic circle with Navan Road to the west, and the residences to the east and south all at higher elevations. No defined channel or culvert under Navan Road was observed in the vicinity of the lower lying southeast corner. Areas of standing water were common throughout the site in 2018, including the former excavation areas. Standing water was not observed in 2021. The site is currently forested, with dispersed mature white pines scattered throughout the site.

For the purposes of this report the Navan Road is assumed to be in an east-west orientation. This report has been updated since 2018 to assess an expansion of the site in the southeast corner. The balance of the site was also reviewed in June, 2021, including completion of two morning breeding bird surveys and reviewed again outside of the growing season in 2023.

Background and Project Description

Residential development is now proposed for the site, including six four-storey apartment buildings (Building A will include 48 units, Building B will include 36 units and commercial, Building C will include 36 units and commercial, Building D will include 47 units and Buildings E & F will include 48 units each) and 67 townhomes. The development also includes a gas bar with a car wash, EV charge station, and a fast-food outlet in the southwest corner of the site, and a 0.20 hectare public park and stormwater management area in the southeast (Map 2).

Conceptually, the plan looks to add a signalized full-movement intersection at Brian Coburn Boulevard, in line with the entrance for the park and ride on the opposite side. A curb-cut with a right-in right-out will be provided to allow better access to the gas bar that will be located in southeast corner of the site. An additional entrance will be provided off Navan Road in the southeast portion. Eight townhomes will be accessed directly off the cul-de-sac at the north end of Pagė Road.

As detailed in J. L. Richards (2023), the development will be on full municipal services. Via an extension of the existing storm sewers from Renaud Road and along Navan Road to the site, stormwater will be directed to the existing storm sewers outletting to the stormwater management pond to the south of Renaud Road (J. L. Richards, 2023). This existing stormwater management pond (known as Pond # 3) was designed to provide an enhanced level of water quality protection (80% removal of total suspended sediments). The downstream infrastructure was designed to provide capacity and treatment of stormwater runoff from the site (J. L. Richards, 2023). The gas bar lands will utilize a dedicated oil and grit separator for the asphalt surface drainage.

The site is within the east portion of the Urban Area, specifically within the study area for the Community Design Plan for Phase 1 of the East Urban Community. The site is described as *Evolving Neighbourhood* on Schedule B8 of the City`s Official Plan and is zoned *General Mixed-Use*. There are no natural heritage features for the site itself shown on Schedule C11-C of the Official Plan, with natural heritage features overlay shown to the northwest along the James Blais Municipal Drain and Brian Coburn Boulevard corridors and an Urban Natural Features beginning approximately 250 metres to the east of the northeast part of the site, east of Pond # 1 to the east of Pagé Road. Unstable slopes are shown in the west and north portions of the site on Schedule C15. As shown by the purple line on Map 1, the vast majority of the site and lands to the north are part of the high-rated Navan Road at Pagé Road Urban Natural Area (Muncaster and Brunton, 2005). Mer Bleue is the closest provincially significant wetland and Area of Natural and Scientific Interest, with the north part of this unique feature approximately 950 metres to the south of the site.

<u>Navan Road at Pagé Road Urban Natural Area</u>

The site represents a small portion (approximately seven percent of the original Urban Natural Area) of this 72 hecatre Urban Natural Area. The site is separated from the balance of the Urban Natural Area by the residences along both sides of Pagé Road. The vast majority of the Urban Natural Area was in a contiguous area to the north of Renaud Road and east of the residences

east of Pagé Road. Since the Urban Natural Area Environmental Evaluation Study was completed in 2005 much of the Navan Road at Pagé Road Urban Natural Area has been developed. The original core area to the east of Pagé Road was about 60 hectares, with approximately 6.5 hectares remaining in a natural state in 2018 following the recent removal of the vegetation at 6211 Renaud Road.

The Navan Road at Pagé Road Urban Natural Area was described by Muncaster and Brunton (2005) as an extensive young to submature low deciduous upland forest and deciduous swamp forest in sand substrate. The Urban Natural Area was rated high overall for natural significance, with the best scores assigned to the size and shape, significant flora and fauna, representative flora, and wildlife habitat criteria. Selective logging, a major powerline corridor, and informal pathways were disturbances identified by Muncaster and Brunton (2005) for the Urban Natural Area. The impact of non-native flora was considered minor and a large interior core area was identified east of Pagé Road, between Renaud Road and a powerline corridor to the north, although as indicated almost ninety percent of this area has since been developed.

In addition to the high rated Navan Road at Pagé Road Urban Natural Area, the site was mapped in the mid-90s as part of the Navan Road/Pagé Road Woods, a 143-hectare Natural Area delineated in the former Region of Ottawa-Carleton's Natural Environment System Strategy (Brownell and Blaney, 1997). Like the Navan Road at Pagé Road Urban Natural Area, in the mapping for the Navan Road/Pagé Road Woods the site is separated from other much larger portions of the Natural Area to the east and north. The Navan Road/Pagé Road Woods received an overall evaluation of moderate, scoring moderate or high for the landscape attributes, endangered, threatened and rare species, and hydrological criteria. The overall Woods scored low or nil for the common and rare vegetation community/landform representation and diversity, and seasonal wildlife criteria (Brownell and Blaney, 1997). The more significant features of the Navan Road/Pagé Road Woods are not in proximity to the current site, including the best representations of common vegetation communities, the natural salt springs in the east portion of the natural Area, the rare vegetation community, or the observations of rare flora species. Brownell and Blaney (1997) concluded in the 1990s that fragmentation of the Navan Road/Pagé Road Woods was very high. Since then, much of this Natural Area is now in urban residential land use.

No current Species at Risk were identified for either the Navan Road/Pagé Road Woods or Navan Road at Pagé Road Urban Natural Area by Brownell and Blaney (1997) or Muncaster and Brunton (2005), respectively.

Methodology

This EIS was prepared in accordance with Section 4.7.8 of the City of Ottawa Official Plan following the EIS Guidelines and the Guidelines for City of Ottawa Tree Conservation Reports, with guidance from the Natural Heritage Reference Manual (OMNR, 2010).

The major objective of this EIS is to determine the feature and functions of the on-site and adjacent natural environment conditions and to assess the anticipated impacts associated with the proposed development on these features and functions.

The following items were identified for particular attention in this EIS, recognizing that many of these issues are interrelated:

- what are the terrestrial habitat features of the site and adjacent lands and the associated sensitivities?
- is there any amphibian use on the site given the ponds and standing water?
- where feasible, what are the recommended areas of tree retention and other mitigation measures to avoid unacceptable impacts on any significant natural heritage features? and,
- does the site support any other significant natural heritage features, including Species at Risk and significant woodlands, that should be considered in development of the site?

Colour aerial photography (1976 - 2019) was used to assess the natural environment features in the general vicinity of the site. Several field reviews of the site have been completed by Bernie Muncaster, with assistance from Michelle Muncaster:

Date	Time (h)	Air Temp. °C	Weather	Main Purpose
04/12/17	10:00 – 13:30	5	light breeze, overcast	woody vegetation
16/02/18	13:15 – 14:45	3	light breeze, overcast, snow cover	winter wildlife, recreation
20/04/18	13:45 – 16:00	11	light to moderate breeze, partly cloudy	cavity trees, bird nesting in trees removed for geotech
23/04/18	20:15 – 20:55	16	calm, clear	amphibians
23/05/18	20:45 – 21:20	19	calm, clear	amphibians
27/05/18	06:45 – 09:45	16	light breeze, overcast	breeding birds, spring vegetation
20/06/18	06:50 – 08:45	16	calm, sunny	breeding birds, vegetation
24/06/18	20:45– 22:20	17	calm to light breeze, cleared after light rain	amphibians, bats
23/10/18	13:40 – 15:30	8	light breeze, partly cloudy	review periphery vegetation
10/06/21	07:15 – 09:30	16	light breeze, sunny	breeding birds, review site expansion and balance of site
25/06/21	08:05 – 09:20	22	light breeze, partly sunny	breeding birds, review current site conditions
15/11/23	13:05 – 15:20	8	light breeze, partly sunny	review current site conditions

The field surveys and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty-three years of experience in completing natural environment assessments. The purpose of the Tree Conservation Report component is to assess the vegetation and determine which will be retained and protected on the site. The owner of the site is 12714001 Canada Inc. It is proposed to remove the woody vegetation not to be retained outside of the breeding bird season in 2024.

The *Environment Canada Marsh Monitoring Program* (MMP) guide was followed as described below to complete amphibian surveys on April 23rd, May 23rd, and June 24th:
:

- The surveys were completed three times during the spring and early summer.
- Observations begin 30 minutes after sunset and end before midnight;
- Each station is surveyed for 3 minutes during which time the species and the calling code are recorded for each of the following distances: 0-50m, 50-100m, and >100m. The calling codes are recorded as one of:
    - Code 1: Calls not simultaneous, number of individuals can be accurately counted
    - Code 2: Some calls simultaneous, number of individuals can be reliably estimated
    - Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated
- Surveys are only conducted if the wind strength was Code 0, 1, 2 or 3 on the Beaufort Wind Scale.
- Amphibian survey stations were separated by at least 500 metres.

The location of the amphibian survey station is shown on Map 1. Due to the small site size only one survey station was required. In addition to the point count, a walk around the site was also completed as part of each survey.

Breeding bird surveys were completed on May 27th and June 20th, 2018 and June 10th and 25th, 2021. The breeding bird surveys meet the following requirements:

- completed between May 24th and July 10th, and completed a minimum of 15 days apart;
- completed by mid-day in response to decreasing calling;
- conducted on days with no rain, little to no wind and good visibility;
- consisted of 5-min point observations located 300 metres apart (if habitat is complex additional points within 100 metres can be added)
- while walking between points, any additional observations were recorded; and
- birds were identified by sound and/or sight.

The location of two breeding bird point counts is also shown on Map 1.

Existing Conditions

Greater tree coverage is on the site following regeneration over the last three decades from sand extraction. EXP (2021) described the soil conditions as a layer of topsoil and fill underlain by native loose to compact silty sand to sandy silt that extends to varying depths followed by a deep silty clay to clay deposit with an upper stiff to very stiff desiccated brown crust underlain by a firm to stiff grey silty clay to clay. The silty clay to clay lowers in strength with depth (EXP, 2021). The depth of the groundwater table ranges from 0.6 m to 1.7 m (Elevation 84.1 m to Elevation 79.5 m). Based on available mapping, the bedrock is shale of the Billings formation with an overburden drift thickness ranging between 18 and 55 metres (EXP, 2021). EXP (2021) estimated that the long-term groundwater table can be expected at approximately four to five metres below ground surface. EXP (2021) concluded that the site is underlain by a sensitive marine clay deposit that is prone to consolidation settlement if overstressed by loads imposed on it by site grade raise, foundations and by the permanent lowering of the groundwater level following construction.

J. L. Richards (2023) noted that the existing topography suggests that the site naturally slopes towards the south, where the existing grade drops substantially as it reaches Navan Road. There is a grade drop of approximately four metres across the site.

As indicated above ponded water was common on the site in 2018 in the former excavation areas and lower lying areas adjacent to the raised Brian Coburn Boulevard corridor, and the raised rear yards on the north side of Navan Road and the west side of Pagé Road (Photos 1, 2 and 3). There was no ponded water observed in 2021 or 2023, with the lower areas of the site appearing to be quite dry in November, 2023. No defined outlet from the site was observed, including in the lower southwest corner and the existing grades within portions of the site are approximately one metre below the existing right of way limits for Brian Coburn Boulevard (IBI, 2018). No amphibians were heard on the site during three targeted surveys in April, May and June, 2018 and no amphibians were observed during any of the field surveys. During the April and May amphibian surveys spring peepers, at a call level of Code 2, were heard to the northwest of Brian Coburn Boulevard in the vicinity of the James Blais Municipal Drain, over 100 metres from the site. Spring peepers were heard from the same location to the north, at a call level of Code 1, during the June survey. No other amphibians were heard or observed on or adjacent to the site.

<u>Red Maple Deciduous Swamp with Upland Mixed Forest Inclusions</u>

The on-site forest was a mosaic of lower wetland areas and upland habitat on the spoil piles and other areas of higher elevation. It became impractical to try to map the two communities separately.

On the upland representation scattered mature white pines up to 80cm diameter at breast height (dbh) were a feature of the forest (Photo 8), with smaller large-leaved aspen, white elm, white spruce, white birch, white ash, red oak, bur oak, white cedar, sugar maple, black cherry, Scot's pine, American beech, and basswood. The largest trees of these other species were in the 40cm – 50cm dbh range (Photo 7). The trees appeared to be in generally good condition with wind throw (Photo 4) and recent cuttings in the west portion adjacent to the Brian Coburn Boulevard

construction, and some windthrow in the southeast. Spoil piles (Photos 9 and 10) and access lanes (Photos 11 and 12) were throughout the site. Debris, including abandoned cars and yard waste were common along the south and east portions of the forest edges.

Nannyberry, red raspberry, blackberry, tartarian honeysuckle, beaked hazel, alternate-leaved dogwood, winterberry holly, red elderberry, and white elderberry shrubs were in the understory of the upland portions, with regenerating white cedar stems extensive in the northeast portion of the forest. Red oak, bur oak, maple, white pine, and poplar regenerating stems were also present. A pocket of the highly invasive Japanese knotweed was observed in 2023 near the central-east site boundary. Foamflower, trout lily, clintonia, white trillium, red trillium, false Solomon's-seal, wild sarsaparilla, bunchberry, white baneberry, red baneberry, Canada mayflower, tall white lettuce, starflower, shinleaf, partridgeberry, rattlesnake fern, lady fern, eastern bracken, evergreen wood fern, blue violet, enchanter's nightshade, Pennsylvania sedge, heal-all, Canada goldenrod, field horsetail, poison ivy, and thicket creeper were representative of the ground flora in the upland areas. Garlic mustard and common dandelion were common along the periphery of the forests.

Red maples up to 50cm dbh were dominant in the wetland habitats, with white cedar, trembling aspen, yellow birch, white birch, eastern hemlock, and white elm well represented. Typical size of the red maples was less than 20cm dbh (Photo 6), with scattered larger examples. Glossy buckthorn was dominant in the understory of many of the wetland areas, with a high density of small shoots often observed. Other shrubs in the wetland habitat included speckled alder, slender willow, and black currant, along with regenerating stems of maple, balsam fir and white cedar. Pockets of red maple regeneration were extensive in the central portion of the site. Trout lily, dwarf raspberry, royal fern, sensitive fern, ostrich fern, oak fern, fowl manna grass, wild grape, enchanter's nightshade, scouring rush, boneset, awl-fruited sedge, green sedge, hop sedge, and lake sedge were representative of the ground vegetation in the wetland habitats (Photo 5).

The following tree species are representative of the on-site forest:

Tree Species Mixed Forest	dbh Range	Distribution
White cedar	3 – 35 cm	10 %
Red maple	12 – 52 cm	20 %
White pine	34 – 92 cm	10 %
Sugar maple	22 – 35 cm	5 %
White birch	14 – 30 cm	10 %
Trembling aspen	15 - 40 cm	10 %
Eastern hemlock	25 – 38 cm	4 %
White spruce	16 - 45 cm	5 %
Balsam fir	3 - 14 cm	2 %
Black cheery	22– 40 cm	5 %

Tree Species Mixed Forest	dbh Range	Distribution
Yellow birch	27 – 36 cm	1 %
White elm	6 - 44 cm	5 %
Bur oak	15 - 32 cm	5 %
White ash	10 – 40 cm	3 %
Green ash	6 – 15 cm	3 %
Black ash	5 - 12 cm	2 %

Cultural Meadow

An area of cultural meadow is in the southeast corner of the site, including the 2021 site extension (Photos 14, 15 and 16). Common ground vegetation in the open areas included tall buttercup, common dandelion, reed canary grass, orchard grass, white clover, black medic, June meadow grass, awnless brome grass, European bur-reed, thicket creeper, heart-leaved aster, wild carrot, Canada goldenrod, narrow-leaved goldenrod, wild grape, butter-and-eggs, daisy fleabane, spreading dogbane, cow vetch, field horsetail, white bedstraw, Canada thistle, bull thistle, purple loosestrife, common milkweed, eastern bracken, sensitive fern, and common burdock. Much of the site extension in the southeast corner is covered with fine gravel, perhaps for parking.

Three mature trembling aspens were in the central east and northeast portions of the cultural meadow (Photo 15). The up to 70cm dbh aspens appeared to be in relatively good condition for their age, with some broken limbs. A 45cm dbh white spruce, also appearing to be in good condition (Photo 17), is along the east edge of the expansion area, on the west side of Pagė Road. This tree appears to be a co-owned tree along the boundary with the Pagė Road allowance. A hedge of white cedar is immediately to the north of the southeast portion of the site, along the south edge of 2768 Pagė Road. Red raspberry, glossy buckthorn, red-osier dogwood, Bebb's willow, pussy willow, and slender willow shrubs were scattered in the meadow habitat along with regenerating poplar, Manitoba maple, and ash stems.

A swale in the north portion of the expanded study area in the southwest corner of the site contained no standing water on June 10th, 2021, no evidence of water and no connection to potential habitat, including the swale on the west side of Pagė Road. Vegetation in the swale included broad-leaved cattail, and slender and pussy willow shrubs.

City-Owned Trees

The site is adjacent to several city-owned road allowances. However, there are few city-owned trees with critical root zones extending onto the site or co-owned trees shared with the site. Along the Brian Coburn Boulevard, all the trees in the road allowance were removed as part of the road work and associated multi-use pathway and servicing. The closest remaining trees are white cedars up to 36cm dbh, which are on the site, a minimum of four metres southeast of the property line. Along Navan Road there are no trees within the road corridor or along the

property line at either the entrance to the gas bar in the west portion of the site, east of the roundabout, or in the southeast corner west of Pagė Road.

There are two areas of adjacent City-owned trees along Pagė Road. These are identified on Map 1. 'Tree A' (Photo 17) is the 45cm dbh white spruce, appearing to be in good condition and co-owned (though the property line was difficult to accurately locate in this area). The tree will likely require pruning due to the hydro line. As shown on Map 3, it is proposed to retain this tree as no grading or other servicing requirements are required adjacent to this section of the property line

The second area is adjacent to the northeast corner of the site, west of Pagė Road. This area is marked as 'Tree B' on Map 1 and includes many trees ranging between 11cm and 19cm dbh (Photo 18). These trees are described in the following table. As the trees are generally along the upper side of a dry swale to the west of Pagė Road and no grading or other servicing requirements are required adjacent to this section of the property line, retention of these trees should be feasible and are identified as such on Map 3. Given the condition of many of these trees and high density of the regenerating stems, if City staff would prefer replacement plantings, this of course can also be undertaken.

'Trees B' on City Lands except where noted	dbh Range	Condition All trees proposed for retention or replacement if desired
White cedar (3)	11 – 14 cm	Generally good condition, some angling of trunks
White pine (1)	19 cm	Pruned under hydro line
White birch (4)	15 – 18 cm	A 17cm birch appears to be co-owned and has poor form with trunk angled. The other stems have some trunk angling but otherwise appear to be in good condition
Trembling aspen (4)	12 - 19 cm	The upper half of the trunk on the 19 cm stem is missing. One of the 17cm stems has poor trunk form with 's' shape trunk and angled stems. The other 17cm stem is missing the upper half of the trunk, with poor form on the remaining lower portion of the trunk
Balsam fir (2)	11 and 18 cm	The 11 cm stem is missing the upper portion of trunk. The 18cm stem appears to be in good condition
Red maple (5)	10 – 14 cm	Generally good condition, with extensive trunk damage on one stem
White elm (2)	17 and 19	Generally good condition

Co-owned and Adjacent Trees on Private Land

For the residences on the north side of Navan Road and the west side of Pagė Road it was difficult to assess co-owned and adjacent trees with critical root zones that extend onto the site due to the lack of clarity on the property boundaries. Once the property boundaries have been clearly marked in the field, co-owned and adjacent trees that may be harmed are to be identified and potential impacts assessed. As required, discussions will be undertaken with the adjacent landowners on tree protection and/or replacement plantings following construction.

Wildlife

Birds observed during the breeding bird surveys included mourning dove, American crow, red-winged blackbird, black-capped chickadee, great-crested flycatcher, least flycatcher, alder flycatcher, red-eyed vireo, yellow warbler, ovenbird, American redstart, blue jay, American goldfinch, northern cardinal, song sparrow, chipping sparrow, and American robin. Other wildlife observed on and adjacent to the site included common raven, merlin, downy woodpecker, pileated woodpecker, white-breasted nuthatch, common yellowthroat, northern flicker, common grackle, grey catbird, grey squirrel, red squirrel, and racoon scats. As indicated above no amphibians were heard on the site during three targeted surveys in April, May and June, 2018, or observed on-site during any of the field surveys.

Sixteen trees with wildlife cavities were observed scattered through the site during the April cavity tree search which was completed during the leaf-off period by walking transects twenty metres apart throughout the entire site. The visibility through the forest was good, and there was no snow cover or precipitation during the survey. Many of the cavity trees were poplars between 32cm and 58cm dbh, with some cavities in larger white pine, black cherry, and red maple, and smaller white birch (Photo 13). The only evidence of cavity use on the site were raccoon scats at the bases of a white pine, and several trees with woodpecker cavities.

The site has become more isolated as the adjacent portions of south Orleans are converted to urban residential development, including construction of Brian Coburn Boulevard and many urban subdivisions. The lands between the site and Mer Bleue are now dominated by urban residences, providing no wildlife linkage to the extensive natural areas of Mer Bleue. Thus, the site is not anticipated to perform a significant linkage function.

Photo 1 – One of the larger areas of standing water.
This example is in the northeast portion of the site (May 27th, 2018).

Photo 2 – Standing water in another excavation area.
This example is in the south-central portion of the site (May 27th, 2018)

Photo 3 – Another low area from former extraction activity.
This example is in the west portion of the site (December 4th, 2017)

Photo 4 - Windthrow was common in the west portion of the site (June 20th, 2018)

Photo 5 – Red maple swamp in the central-east portion of the site (May 27th, 2018)

Photo 6 – Typical maple tree size, with white birch and trembling aspen present. This example is in the south-central portion of the site (December 4th, 2017)

Photo 7 – Larger trees were more common in the northeast portion of the site. Debris was also common in this area (December 4th, 2017)

Photo 8 – Mature white pine in the northeast portion of the site (June 20th, 2018)

Photo 9 – Spoil piles from past sand extraction are common throughout the site. This example is in the northeast portion of the site (June 20th, 2018)

Photo 10 – Another example of the spoil piles, in the southeast portion of the site (December 4th, 2017)

Photo 11 – Many access lanes are on the site.
This example is in the southwest portion, with view looking west (June 20th, 2018)

Photo 12 – Another access lane in the east portion of the site.
View looking west (December 4th, 2017)

Photo 13 – Red maple with potential wildlife cavity in the northeast portion of the site (June 20th, 2018)

Photo 14 - Cultural meadow in the southeast corner of the site north of Navan Road. View looking north to the southeast edge of maple swamp (June 20th, 2018)

Photo 15 - Mature trembling aspen in the northeast portion of the cultural meadow in the southeast corner of the site (June 20th, 2018)

Photo 16 – Cultural meadow in the expanded site area in the southeast corner of the site. View looking north from north edge of gravel fill (June 10th, 2021)

Photo 17 – White spruce along the southeast edge of the site ('Tree A'). This appears to be a co-owned tree with the Pagė Road allowance. View looking northwest

Photo 18 – Row of regenerating stems along and adjacent to the northeast edge of the site ('Trees B'). Most of the trees are within the Pagė Road allowance adjacent to the east edge of the site. View looking south

Species at Risk

No Species at Risk were observed during the field survey other than black ash, with a current exemption on the protection of black ash in place under the *Endangered Species Act*. On December 4th, 2017 and again on June 9th, 2021 and November 14th, 2023 MNRF's Make a Map: Natural Heritage Areas website was reviewed. This site allows for a search of Threatened and Endangered species covered by the 2008 *Endangered Species Act*, as well as other species of interest. A search was conducted on the 1 km squares including the site and adjacent areas (18VR53-81, -90 and -91). Three Species at Risk were identified for these 1 km squares, butternut, eastern meadowlark, and bobolink. They are discussed below and were not found on the site. Four species of special concern, eastern wood pewee, wood thrush, golden-winged warbler, and snapping turtle, were also recorded for these squares. Eastern wood pewee and wood thrush are found in larger deciduous and mixed forests with interior habitat. These species were not noted during the breeding bird surveys and forest interior habitat is not present on the site. Golden-winged warblers breed in tangled, shrubby habitats such as regenerating clearcuts, wet thickets, and tamarack bogs, habitat not present on the site and this species was also not recorded during the breeding bird surveys. No suitable turtle habitat is on or adjacent to the site. No butternuts were observed on or within 50 metres of the site.

Four Species at Risk, chimney swift, bank swallow, eastern meadowlark, and bobolink, are identified for the overall 10 km square (18VR53) including the current site in the Ontario Breeding Bird Atlas. Eastern meadowlark and bobolink utilize larger grassland areas such as hay fields, habitat not present on or adjacent to the site. Bank swallows nest in open sand walls, often in association with sand pits. No open sand walls were observed on the site.
Barn swallows feed in open areas and nest in structures with accessible rafters such as barns, storage sheds, and the underside of bridges. Chimney swifts nest predominantly in open chimneys and historically in tree hollows. No structures are present on the site that may be utilized by these species, and adjacent open brick chimneys were not observed.

Henslow's sparrow were other Species at Risk identified in MNRF correspondence (Appendix A) that may be found in the general area of the site. Note that updates to the 2018 correspondence are no longer available. Henslow's sparrow utilizes unmaintained tall weedy fields. This bird has not been reported in the overall City of Ottawa for decades and there were no observations in Ottawa during the breeding bird atlas field work.

Many larger cavity trees which may be used for bat summer maternity colonies were observed, however the snag/cavity tree density was < 10 snags per hectare of trees as fewer than 45 snag/cavity trees ≥25 cm dbh were observed (total was 16) on the 4.5 hectares of forest. Thus the site is not considered a candidate for maternity colony roosts and bats were not identified as potential Species at Risk for the site in the MNRF correspondence. On the evening of June 24th, 2018 from 30 minutes before dusk to one hour after, the site was reviewed for bats, including a focus on the east clusters of best candidate snag/cavity trees based on height, size, height of the cavities, condition of the snag, cavity tree, loose, peeling bark, and maple, white pine, and aspen trees which are more likely to provide good cavity habitat (OMNR, 2011). No bats were

observed at the cavities or elsewhere on the site. Two bats were observed at 21:05 flying north of the site, over the steel tower hydro corridor north of Brian Coborn Boulevard. No caves or mines, used for overwintering by bats, were present on or adjacent to the site.

The potential Species at Risk in the City of Ottawa were also reviewed. Endangered and threatened species reported in the overall City include butternut, American ginseng, eastern prairie fringed-orchid, wood turtle, spiny softshell, Blanding's turtle, musk turtle, Henslow's sparrow, loggerhead shrike, little brown myotis, northern long-eared bat, olive hickorynut, chimney swift, eastern meadowlark, barn swallow, bank swallow, bobolink, eastern whip-poor-will, bald eagle, golden eagle, cerulean warbler, least bittern, eastern cougar, lake sturgeon and American eel.

The habitat requirements of the above species along with those listed as special concern were reviewed. In addition to black ash, the only Species at Risk considered to have the potential to be on the site is butternut, which is found in a variety of habitats in the Ottawa area. As indicated above, no butternuts were observed on or adjacent to the site.

Significant Wildlife Habitat

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNRF (2015). Potential components which may lead to a designation of significant wildlife habitat include seasonal concentration areas of animals, rare vegetation communities or specialized habitat for wildlife, habitat for species of conservation concern and animal movement corridors.

No field observations which would trigger a significant wildlife habitat designation with respect to the ELC communities present were noted. For example, the cultural habitats do not support waterfowl stopover or staging areas, colonial nesting bird breeding habitat, or other examples of seasonal concentration areas. No rare vegetation communities as noted in MNRF (2015), Provincially rare species, evidence of animal movement corridors, or rare or specialized habitats were observed. No old growth forest or forest interior habitat are present. Due to the lack of forest interior habitat, potential Species of Special Concern such as eastern wood pewee and wood thrush are not anticipated to nest in the onsite forests and were not recorded during the breeding bird surveys. No potential bat over-wintering hibernacula features were observed. Although several large cavity trees are present, no bat or other wildlife usage was noted other than raccoon. No amphibians were observed on site, including three targeted evening surveys. Stone fences or areas of broken and fissured rock for potential use by snakes, including potential reptile hibernaculum, were not observed. No stick nests were observed.

As described above, no significant linkage functions are anticipated for the site due to the adjacent urban residential developments and associated well-travelled road corridors and other infrastructure.

Significant Woodlands

A forested area is considered significant woodlands in the urban area of the City of Ottawa if the forest is 0.8 hectares in size or larger, and is 60 years of age and older at the time of evaluation. Although much of the site lacked tree cover in 1965, a forest in the north portion of the site was contiguous with an area greater than 0.8 hectares to the north. However, the construction of Brian Coburn Boulevard eliminated this contiguous connection and thus there is no portion of the site or adjacent contiguous forest with trees 60 years of age that is at least 0.8 hectares.

The on-site forest does not support forest interior habitat due to the existing residences to the south and east, and Brian Coburn Boulevard to the northwest. Ovenbird and American redstart were heard during the breeding bird surveys. These species are often associated with a large area of contiguous forest for successful nesting but have also been observed by the author and colleagues in many forests without interior habitat in eastern Ontario. The on-site forests are not contiguous with adjacent forests. No evidence of cross-country skiing or snowshoeing was observed during the winter field survey. A bench was noted in the forest but no observations of the public utilizing the forest was observed during any of the field surveys.

Impact Analysis and Recommendations

No natural heritage feature, as identified in the Provincial Policy Statement and OMNR (2010), are noted for the site. The on-site forest is disturbed from past extraction activity, non-native vegetation in the understory and ground flora, windthrow, spoil piles, and access trails. The access trails have been expanded in width to permit geotechnical testing. No forests interior habitat is present. No Species at Risk or amphibians were observed and no natural channels with aquatic habitat potential were noted.

Since the forested swamp is not contiguous with other natural communities no impacts on adjacent communities are anticipated. However, as the entire site will be developed, the existing features and functions of the forested swamp will be lost, including a direct loss of vegetation and wildlife habitat, a decrease in biodiversity, disturbances to wildlife, and loss of local wetland and forested habitat. As the site does not drain to downstream wetlands, changes in surface runoff and other aspects of the moisture regime are not anticipated to have an impact on the local natural landscape.

Important mitigation measures are presented in this section to protect any wildlife utilization during removal of the forest, and the environment in general. There are no trees of note remaining adjacent to the site and thus potential impacts such as wind throw and sunscald on adjacent remaining trees are not applicable.

The Grading Plan G1 produced by J.L. Richards (September 22nd, 2023) shows grade raises on average in the range of one metre for much of the site, with areas where a lower grade or cut up to 0.6 metres or raises up to 1.5 metres are required. These grading requirements and swales at the rear of many of the development blocks will greatly impact the opportunities for tree retention on the site. Map 3 identifies an area of potential tree retention in the south portion of

the proposed park and where City-owned or co-owned trees are present. For longevity, the focus of the tree retention will be on trees in the 20 – 30cm dbh size.

The potential for tree retention along the east and south site boundaries adjacent to the rear of the residential lots along Navan and Page Roads was examined. It was concluded that the east and south perimeters would be best served by no tree retention due to the lower quality of trees present along the perimeters and the grading, future servicing infrastructure, and fencing requirements. Pending the location of the swales and catchbasins, after grading and servicing are completed, it is proposed to plant native trees and shrubs in this area adjacent to the fencing to be installed along the property lines. A planting plan will be prepared once the detailed engineering studies have been completed for the site.

Recommended Mitigation Measures

1. Due to the anticipated grading, swales, and other servicing requirements for the urban residential development no tree retention is anticipated for the site outside of the potential areas identified on Map 3. Plantings of native vegetation are recommended as part of the development, including adjacent to the fencing along the south and east property lines as described above. Potential native species to plant include nannyberry, elderberry and dogwood shrubs along with sugar maple, red maple, basswood, balsam fir, bur oak, tamarack, and white spruce trees. Sourcing native species from local seed sources is strongly recommended to ensure adaptability and longevity. With respect to planting sensitivities due to the silty clay soils, tree and shrub species that have a high water demand are not recommended. These species include willows, poplars, Manitoba maple, and elm;

2. Discussions are required with adjacent landowners for potential impacts on co-owned and adjacent trees with critical root zones extending onto the site. Where these trees will be impacted, replacement plantings will be provided as requested by the adjacent landowners.

3. To provide sediment and erosion control, delineate the work area, and protect adjacent vegetation to be retained and their associated critical root zones, silt fencing is to be installed along the perimeter of the work area. The fencing must be properly keyed in to filter runoff and assist in keeping wildlife out of the work area. The fencing will need to be maintained as required including repair of broken sections and removal of accumulated sediment. Signs, notices or posters are not to be attached to any tree. No grading, heavy machinery traffic, stockpiling of material, machinery maintenance and refueling or other activities that may cause soil compaction are to occur outside of the work area delineated by the silt fencing. The root system, trunk or branches of the trees to be retained are to be protected and not damaged. If any roots of trees to be retained are exposed during site alterations, the roots shall be immediately reburied with soil or covered with filter cloth, burlap or woodchips and kept moist until the roots can be buried permanently. A plastic covering should be used to retain moisture during an extended period when watering is not possible. Any roots that must be cut are to be cut cleanly to facilitate healing and as far from the tree as possible. Exhaust fumes from all equipment

during construction will not be directed towards the canopy of trees to be retained. The silt fencing is to be retained and kept in proper working order until all site servicing and construction has been completed and the site has been stabilized.

4. Once the fencing has been installed, prior to any site disturbances the work area is to be thoroughly searched and any wildlife at risk including turtles and snakes are to be safely relocated to the Environmental Protection and Open Space lands to the east of Pagé Road and south of Brian Coborn Boulevard. Animals should be moved only far enough to ensure their immediate safety. See Appendix 1 and the links in Section 4 of City of Ottawa (2022) for suggestions on how to effectively relocate turtles and snakes.

5. To protect breeding birds, the woody vegetation removal should not 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 trees or shrubs. An important note is that is can be very difficult in forests with a thicker understory to determine if bird nests are present in the upper portions of the canopy;

6. In addition to the above no cutting window of April 15th to August 15th, to avoid potential impacts to summer bat maternity roosting, tree removal should not take place between April 1st and September 30th. The ideal time for tree removal with potential wildlife cavities is October 1st to November 15th to protect breeding birds, bats and any overwintering wildlife in cavity trees. If winter tree removal is anticipated, surveys should be undertaken ahead of time to determine no overwintering wildlife use in trees with suitable cavities;

7. With the presence of Japanese knotweed and other invasive species, it is important that all machinery be properly cleaned before leaving the site to assist in the control of invasive species. Japanese knotweed is likely the most invasive species in the City and thus it is recommended that the batch of Japanese knotweed along the east edge of the site be sprayed with glyphosate applications to the plant in the late summer following flowering;

8. To discourage wildlife from entering the work area during construction, the site should be kept clear of food wastes and other garbage, and proper drainage provided to avoid accumulation of standing water, which could attract amphibians, birds, and other wildlife to the work area;

9. Many helpful wildlife-oriented mitigation measures are detailed in the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2022). The contractor is to be aware of the potential Species at Risk in the vicinity of the site including butternut. Appendix 1 of City of Ottawa (2022) describes these species. Appendix 1 should be modified for this development project to include the contact information of the project biologist, as applicable. Any Species at Risk sightings are to be immediately reported to the project manager and the Ministry of the Natural Resources and Forestry and work that may impact the species suspended immediately; and,

10. As recommended in the City of Ottawa (2022) prior to beginning work each day, the work areas are to be checked for wildlife by conducting a thorough visual inspection of the work space and immediate surroundings. See Section 2.5 of the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2022) for additional recommendations on construction site management.

Additional recommended mitigation measures for sediment and erosion control and general environmental protection include:

- Any groundwater removed from the work area will be pumped into a proper filter mechanism such as a sediment trap or filter bag prior to release to the environment;
- The extent of exposed soils is to be kept to a minimum at all times. Re-vegetation of exposed, non-developed areas is to be achieved as soon as possible. The objective with respect to erosion and sediment controls will be to ensure that the surface water runoff leaving the site is not degraded with respect to water quantity or quality. Erosion and sediment control will focus on best management practices such as grassed swales with a reduced slope, and direction of roof runoff to grass or other permeable surfaces;
- During construction, seepage barriers such as silt fencing, straw bale check dams and other sediment and erosion control measures will be installed as required to OPSD requirements in any temporary drainage ditches and around disturbed areas during construction and stockpiles of fine material. These control measures must be properly maintained to maximize their function during construction;
- Municipal by-laws and provincial regulations for noise will be followed and utilities will be located as required in the vicinity of the site prior to construction; and,
- Waste will be managed in accordance with provincial regulations. The contractor will have a spill kit on-hand at all times in case of spills or other accidents.

Schedule of Proposed Works

The woody vegetation not to be retained is proposed for removal in 2024, outside of the breeding bird season. A Tree Cut Permit will be required for removal of trees on private land that are greater than 10cm dbh. City of Ottawa staff (Forester – Planning) is to be contacted at least two business days prior to any tree removal so that staff have the opportunity to verify that the protective fencing has been properly constructed.

Cumulative Effects

The Canadian Environmental Assessment Agency (CEAA) defines cumulative effects as…"*the effects on the environment caused by an action in combination with other past, present, and future human actions*…" They occur when two or more project-related environmental effects, or two or more independent projects, combine to produce an augmented effect. These cumulative effects may be positive or negative.

The forests which have been historically disturbed through aggregate extraction, wind throw, cutting, and non-native vegetation will be removed. It is anticipated that wildlife using these areas will relocate to the lands to the south of the adjacent urban residential developments and

not be impacted provided the important mitigation measures in this report are properly implemented. No significant cumulative effects are anticipated on the general landscape as a result of the proposed development. There will be a loss of urban canopy cover, although this will be mitigated to an extent with plantings of native trees adjacent to the east and south property lines and other components of the site, where grading, future servicing infrastructure, and fencing requirements permit. No significant social functions appear associated with the site. In terms of economic functional value, aggregate has been removed from the site and the cut trees will be supplied to saw and pulp mills and other woodland products wherever feasible.

Conclusion

The site has a high level of historical disturbance through aggregate extraction. The on-site forest has reduced function due to the non-native flora, lack of forest interior habitat, historical cutting, access lanes, and wind throw. The forest is not connected with adjacent forests and is surrounded by residences and Brian Coborn Boulevard.

No Species at Risk or significant natural heritage features other than the urban significant woodlands were observed or are anticipated for the site other than butternut, which was not seen, and black ash which is currently not protected under the ESA.

It is important that the mitigation measures outlined in this EIS and TCR are properly implemented and maintained.

References

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Ontario Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. March 2010. 233 pp.

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Ontario Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. January, 2015. 38 pp.

Please call if you have any questions on this updated EIS and TCR.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.

Bernie Muncaster, M.Sc.
Principal

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Legend

- Site
- Vegetation Communities
- A — Amphibian Survey Point
- B2 — Breeding Bird Point Counts
- A — City Co-owned and Adjacent Trees

Vegetation Communities

1. Red Maple Swamp with Upland Inclusions
2. Cultural Meadow

Approx. Scale 1: 2,500

0 30 60 90
METRES

Map 1

FILE: 17-13

November 8, 2023

Prepared for: Heafey Group

Prepared by: Muncaster Environmental Planning Inc.

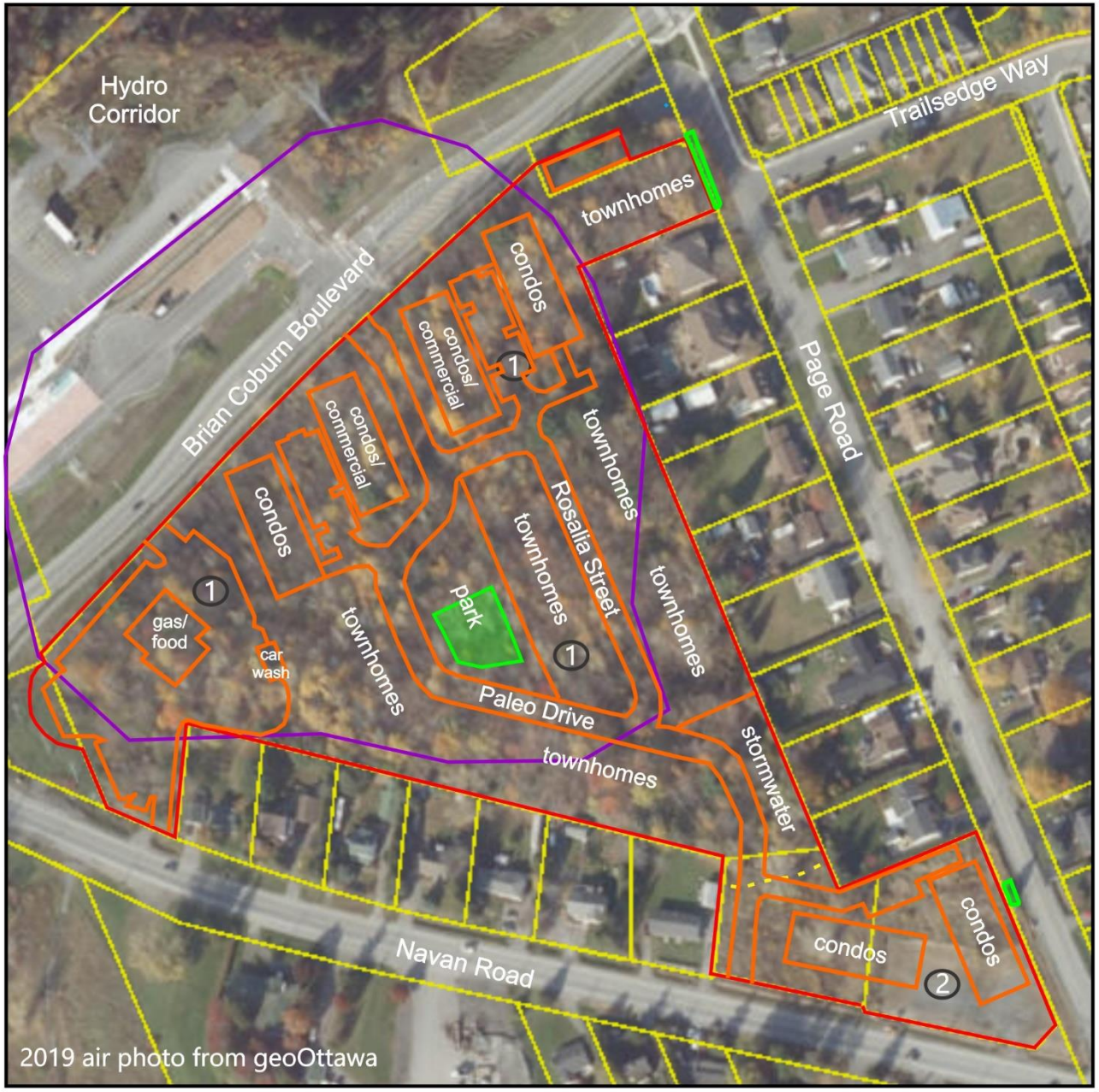
NATURAL ENVIRONMENT FEATURES

2983 Navan Road at Brian Coburn Boulevard,
Orleans, City of Ottawa

MAP 2 – CONCEPT PLAN

LOTS AREAS

LOT NUMBER	AREAS (M2)	LOT NUMBER	AREAS (M2)
B01-1	304	B06-4	154
B01-2	184	B06-5	163
B01-3	184	B06-6	154
B01-4	189	B06-7	369
B01-5	189	B07	2,001
B01-6	184	B08-1	525
B01-7	184	B08-2	174
B01-8	299	B08-3	184
B02-1	281	B08-4	174
B02-2	176	B08-5	184
B02-3	184	B08-6	174
B02-4	184	B08-7	234
B02-5	174	B09-1	234
B02-6	233	B09-2	174
B03-1	254	B09-3	184
B03-2	182	B09-4	184
B03-3	182	B09-5	174
B03-4	182	B09-6	234
B03-5	182	B10-1	234
B03-6	182	B10-2	174
B03-7	250	B10-3	184
B04-1	233	B10-4	184
B04-2	174	B10-5	174
B04-3	184	B10-6	467
B04-4	174	B11-1	748
B04-5	184	B11-2	266
B04-6	174	B11-3	269
B04-7	278	B11-4	246
B05-1	373	B11-5	242
B05-2	154	B11-6	242
B05-3	163	B11-7	321
B05-4	163	B12	240
B05-5	154	B13	1,233
B05-6	206	B14	5,733
B06-1	206	B15	5,399
B06-2	154	B16	7,811
B06-3	163	B17	5,329



Legend

Site

Vegetation Communities

Navan Rd at Page Rd Urban Natural Area (2005)

Area of Possible Tree Retention

Vegetation Communities

1 Red Maple Swamp with Upland Inclusions

2 Cultural Meadow

Approx. Scale 1: 2,500

0 30 60 90

METRES

Map 3

FILE: 17-13

November 8, 2023

Prepared for: Heafey Group

Prepared by: Muncaster Environmental Planning Inc.

PROPOSED CONSERVED VEGETATION

2983 Navan Road at Brian Coburn Boulevard, Orleans, City of Ottawa

APPENDIX A

MINISTRY of NATURAL RESOURCES and FORESTRY

CORRESPONDENCE

Ministry of Natural Resources and Forestry

Kemptville District

10-1 Campus Drive
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

Ministère des Richesses naturelles et des Forêts

District de Kemptville

10-1, promenade Campus
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Téléc.: 613 258-3920

Ontario

Tue. Feb 13, 2018

Bernie Muncaster
Muncaster Environmental Planning Inc
491 Buchanan Crescent
Ottawa
K1J 7V2
(613) 748-3753
bmuncaster@rogers.com

Attention: Bernie Muncaster

Subject: Information Request - Developments
Project Name: Navan Road and Brian Coburn Boulevard Proposed Residential Development
Site Address: Navan Road and Brian Coburn Boulevard
Our File No. 2018_GLO-4413

Natural Heritage Values

The Ministry of Natural Resources and Forestry (MNRF) Kemptville District has carried out a preliminary review of the above mentioned area in order to identify any potential natural resource and natural heritage values.

The following Natural Heritage values were identified for the general subject area:

- Municipal Drain, James Blais Drain (Non-Sensitive)
- Unevaluated Wetland (Not evaluated per OWES)

Municipal Official Plans contain information related to natural heritage features. Please see the local municipal Official Plan for more information, such as specific policies and direction pertaining to activities which may impact natural heritage features. For planning advice or Official Plan interpretation, please contact the local municipality. Many municipalities require environmental impact studies and other supporting studies be carried out as part of the development application process to allow the municipality to make planning decisions which are consistent with the Provincial Policy Statement (PPS, 2014).

The MNRF strongly encourages all proponents to contact partner agencies and appropriate municipalities early on in the planning process. This provides the proponent with early knowledge regarding agency requirements, authorizations and approval timelines; Ministry of the Environment and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

As per the Natural Heritage Reference Manual (NHRM, 2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage

features and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

The NHRM also recommends that cumulative effects of development projects on the integrity of natural heritage features and areas be given due consideration. This includes the evaluation of the past, present and possible future impacts of development in the surrounding area that may occur as a result of demand created by the presently proposed project.

In Addition, the following Fish species were identified: bluntnose minnow, brook stickleback, central mudminnow, common shiner, creek chub, fathead minnow, finescale dace, golden shiner, Iowa darter, johnny darter, longnose dace, northern redbelly dace, Unidentifiable, white sucker.

Wildland Fire

MNRF woodland data shows that the site contains woodlands. The lands should be assessed for the risk of wildland fire as per PPS 2014, Section 3.1.8 "*Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards*". Further discussion with the local municipality should be carried out to address how the risks associated with wildland fire will be covered for such a development proposal. Please see the Wildland Fire Risk Assessment and Mitigation Guidebook (2016) for more information.

Significant Woodlands

Section 2.1.5 b) of the PPS states: *Development and site alteration shall not be permitted in significant woodlands unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* The 2014 PPS directs that significant woodlands must be identified following criteria established by the Ontario Ministry of Natural Resources and Forestry, i.e. the Natural Heritage Reference Manual (NHRM), 2010. Where the local or County Official Plan has not yet updated significant woodland mapping to reflect the 2014 PPS, all wooded areas should be reviewed on a site specific basis for significance. The MNRF Kemptville District modelled locations of significant woodlands in 2011 based on NHRM criteria. The presence of significant woodland on site or within 120 metres should trigger an assessment of the impacts to the feature and its function from the proposed development.

Significant Wildlife Habitat

Section 2.1.5 d) of the PPS states: *Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.* It is the responsibility of the approval authority to identify significant wildlife habitat or require its identification. The MNRF has several guiding documents which may be useful in identification of significant wildlife habitat and characterization of impacts and mitigation options:

- Significant Wildlife Habitat Technical Guide, 2000
- The Natural Heritage Reference Manual, 2010
- Significant Wildlife Habitat Mitigation Support Tool, 2014
- Significant Wildlife Habitat Criteria Schedule for Ecoregion 5E and 6E, 2015

The habitat of special concern species (as identified by the Species at Risk in Ontario list) and Natural Heritage Information Centre tracked species with a conservation status rank of S1, S2 and S3 may be significant wildlife habitat and should be assessed accordingly.

Water

The Ministry of Natural Resources and Forestry (MNRF) has established timing window guidelines to restrict in-water work related to an activity during certain periods. These restricted periods are identified in order to protect fish from impacts of works or undertakings in and around water during spawning and other critical life stages. A suite of appropriate measures should be taken for projects involving in-water works to minimize and mitigate impacts to fish, water quality and fish habitat, and include:

- avoiding in-water works during the timing guidelines;
- installation of sediment/erosion control measures;
- avoiding the removal, alteration, or covering of substrates used for fish spawning, feeding, over-wintering or nursery areas; and
- debris control measures to manage falling debris (e.g. spalling).

Timing guidelines are based on species* presence and are therefore subject to change if new information becomes available. Timing guidelines in Kemptville District are:

Waterbody (and applicable geography or Fisheries Management Zone)	Timing Guidelines (no in-water works)
○ St. Lawrence River (FMZ 20)	March 15 – July 15 (Spring spawning species)
○ Ottawa River – Lac Des Chats (FMZ 12)	October 1 to July 15 (Spring and fall spawning species, including Lake Trout and Lake Whitefish)
○ Ottawa River – Lac Deschenes (FMZ 12)	October 15 to July 15 (Spring and fall spawning species, including Cisco)
○ Ottawa River – Lac Dollard des Ormeaux (FMZ 12)	January 1 to July 15 (Winter and spring spawning species, including Burbot)
○ Big Rideau Lake (South Burgess and South Elmsley Twps) ○ Charleston Lake (Lansdowne and Escott Twps)	October 1 to June 30 (Spring and fall spawning species, including Lake Trout)
○ Bass Lake (South Elmsley Twp) ○ Lower Rideau Lake (South Elmsley Twp) ○ Bob's Lake (South Sherbrooke Twp) ○ Christie Lake (South Sherbrooke Twp) ○ Crow Lake (South Crosby Twp) ○ Dalhousie Lake (Dalhousie Twp) ○ Davern Lake (South Sherbrooke Twp) ○ Farren Lake (South Sherbrooke Twp) ○ Grippen Lake (Leeds Twp) ○ Indian Lake (South Crosby Twp) ○ Little Long Lake (Lansdowne Twp) ○ Millpond Lake (South Burgess) ○ Otter Lake (South Elmsley, South Burgess and Bastard Twps) ○ Otty Lake (North Burgess and North Elmsley Twps)	October 15 to June 30 (Spring and Fall spawning species, including Lake Whitefish and Cisco)

○ Pike Lake (North Burgess Twp) ○ Silver Lake (South Sherbrooke Twp) ○ Redhorse Lake (Lansdowne Twp) ○ Tay River (South Sherbrooke, Bathurst, Drummond and North Elmsley Twps) ○ Wolfe Lake (North Crosby Twp)	
○ Bennett Lake (Bathurst Twp) ○ Crosby Lake (North Crosby Twp) ○ Big Rideau Lake (South Burgess, Bastard and South Elmsley Twps) ○ Gananoque River (Leeds Twp) ○ Lac Georges (Plantagenet and Alfred Twps) ○ Gillies Lake (Lanark Twp) ○ Little Crosby Lake (North Crosby Twp) ○ McLaren Lake (North Burgess Twp) ○ Mississippi Lake (Drummond, Beckwith and Ramsay Twps) ○ Mississippi River (Beckwith, Ramsay, Pakenham and Fitzroy Twps) ○ Raisin River below Martintown dam (Charlottenburgh Twp) ○ Rideau River (Wolford, Oxford, Montague, Marlborough, South Gower, North Gower, Osgood, Nepean and Gloucester Twps) ○ South Lake (Leeds Twp) ○ South Nation River below Plantagenet weir (Plantagenet Twp) ○ Upper Rideau Lake (North Crosby Twp) ○ Westport Sand Lake (North Crosby Twp)	January 1 – June 30 (Winter and spring spawning species, including Burbot)
○ Small rivers and streams (denoted on 1:50,000 National Topographic System maps as being one lined) ○ All other waterbodies in FMZ 18	March 15 to June 30 (Spring spawning species)

**Please note: Additional timing restrictions may apply as they relate to endangered and threatened species for works in both water and wetland areas. Timing restrictions are subject to change, depending on species found in a given waterbody.*

In addition to adhering to the above timing guidelines, a work permit from the MNRF may be required depending on the nature and scope of work. No encroachment on the bed or banks of a waterbody/watercourse (e.g. abutments, embankments, etc.) is permitted without MNRF approval. Additional information regarding work permits may be found online at https://www.ontario.ca/page/crown-land-work-permits#section-2.

The MNRF does not have any water quality or quantity data available. We recommend that the Ministry of the Environment and Climate Change be contacted for such data along with the local Conservation Authority. For further information regarding fish habitat and protocols, please refer to the following interagency, document, *Fish Habitat Referral Protocol for* Ontario at: http://www.web2.mnr.gov.on.ca/mnr/ebr/fish_hab_referral/protocol_en.pdf.

Additional approvals and permits may be required under the Fisheries Act and the Species at Risk Act; please contact Fisheries and Oceans Canada to determine requirements and next steps. There may also be approvals required by the local Conservation Authority or Transport Canada, and these agencies should be contacted directly to determine requirements. As the MNRF is responsible for the management of provincial fish populations, we request ongoing involvement in such discussions in order to ensure population conservation.

Species at Risk

A review of the Natural Heritage Information Centre (NHIC) and internal records indicate that there is a potential for the following threatened (THR) and/or endangered (END) species on the site or in proximity to it:

- Bank Swallow (THR)
- Barn Swallow (THR)
- Bobolink (THR)
- Butternut (END)
- Eastern Meadowlark (THR)
- Henslow's Sparrow (END)
- Sensitive Species (END)

All endangered and threatened species receive individual protection under section 9 of the ESA and receive general habitat protection under Section 10 of the ESA, 2007. Thus any potential works should consider disturbance to the individuals as well as their habitat (e.g. nesting sites). General habitat protection applies to all threatened and endangered species. Note some species in Kemptville District receive regulated habitat protection. The habitat of these listed species is protected from damage and destruction and certain activities may require authorization(s) under the ESA. For more on how species at risk and their habitat is protected, please see: https://www.ontario.ca/page/how-species-risk-are-protected.

If the proposed activity is known to have an impact on any endangered or threatened species at risk (SAR), or their habitat, an authorization under the ESA may be required. It is recommended that MNRF Kemptville be contacted prior to any activities being carried out to discuss potential survey protocols to follow during the early planning stages of a project, as well as mitigation measures to avoid contravention of the ESA. Where there is potential for species at risk or their habitat on the property, an Information Gathering Form should be submitted to Kemptville MNRF at sar.kemptville@ontario.ca.

The Information Gathering Form may be found here:
http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&TAB=PROFILE&ENV=WWE&NO=018-0180E

For more information on the ESA authorization process, please see:
https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization

One or more special concern species has been documented to occur either on the site or nearby. Species listed as special concern are not protected under the ESA, 2007. However, please note that some of these species may be protected under the Fish and Wildlife Conservation Act and/or Migratory Birds Convention Act. Again, the habitat of special concern species may be significant wildlife habitat and should be assessed accordingly. Species of special concern for consideration:

- Common Nighthawk (SC)
- Eastern Wood-Pewee (SC)
- Snapping Turtle (SC)
- Wood Thrush (SC)

If any of these or any other species at risk are discovered throughout the course of the work, and/or should any species at risk or their habitat be potentially impacted by on site activities, MNRF should be contacted and operations be modified to avoid any negative impacts to species at risk or their habitat until further direction is provided by MNRF.

Please note that information regarding species at risk is based largely on documented occurrences and does not necessarily include an interpretation of potential habitat within or in proximity to the site in question. Although this data represents the MNRF's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. It is the responsibility of the proponent to ensure that species at risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the activities carried out on the site.

The MNRF continues to strongly encourage ecological site assessments to determine the potential for SAR habitat and occurrences. When a SAR or potential habitat for a SAR does occur on a site, it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at sar.kemptville@ontario.ca.

The approvals processes for a number of activities that have the potential to impact SAR or their habitat have recently changed. For information regarding regulatory exemptions and associated online registration of certain activities, please refer to the following website: https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization.

Please note: The advice in this letter may become invalid if:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) re-assesses the status of the above-named species OR adds a species to the SARO List such that the section 9 and/or 10 protection provisions apply to those species; or
- Additional occurrences of species are discovered on or in proximity to the site.

This letter is valid until: Wed. Feb 13, 2019

The MNRF would like to request that we continue to be circulated on information with regards to this project. If you have any questions or require clarification please do not hesitate to contact me.

Sincerely,

Carolyn Hann
Management Biologist
carolyn.hann@ontario.ca

Encl.\
-ESA Infosheet
-NHIC/LIO Infosheet