



Muncaster
Environmental
Planning Inc.

February 9, 2023

Mr. Rino Verzeroli.
1910753 Ontario Inc.
6900 Sunset Blvd
Greely, Ontario
K4P 1C5

Dear Mr. Verzeroli:

**RE: 1086 Antochi Lane Residential Development
Environmental Impact Statement and Tree Conservation Report**

This combined Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) addresses the existing vegetation, potential tree retention, Species at Risk, and the Rideau River and associated recommended setbacks at 1086 Antochi Lane in the Village of Manotick, City of Ottawa. The site is at the east end of Antochi Lane, between the cul-de-sac and the Rideau River. The overall site is approximately 0.96 hectares, with approximately 43 metres of frontage on Antochi Lane.

For the purposes of this report Antochi Lane is assumed to be in an east-west orientation.

Background and Project Description

The 0.96 hectare site currently includes a private road accessing several occupied residences and associated surface parking. The residences have been on the site for an extended period, at least since 1976. The non-developed portions of the site are dominated by mowed lawns, with scattered trees. There is greater tree cover along the Rideau River shoreline. In addition to the Rideau River, the site is surrounded by the developed portions of Manotick, with agricultural activity common approximately 500 metres south of the site, south of the Village boundary.

The proposed development is for nineteen new residences with 18 semi-detached units. The existing residences will be demolished. All new building footprints will be a minimum of thirty metres from the controlled water elevation of the Rideau River. Many of the existing residences are within the thirty metre setback. The new residential units will be accessed with a private road extending from the existing cul-de-sac at the east end of Antochi Lane, beginning in the same general location as the existing access. The private road will terminate at the south property line (see Map 2). The river setback will be naturalized, with site alterations in the thirty metre setback limited to passive amenities in the outer ten metres and include decks which will encroach up to approximately four metres into the setback. No portions of the proposed buildings will be within the thirty metre setback. Several of the existing residences are within the 30 metre setback and these will be removed. Retaining walls are required along the

southwest and south property lines adjacent to the private road and the rear of the southeast residential units. As the stormwater will discharge directly to the Rideau River, water quantity control is not required (NOVATECH, 2023). An enhanced level of water quality control corresponding to 80 percent removal of total suspended solids will be provided. To meet the stormwater quality control requirements, the storm sewer system will convey minor storm event flows to a hydrodynamic separator before discharging to the Rideau River (NOVATECH, 2023).

The site and adjacent areas are within the Village of Manotick, as shown on Schedule B9 of the City of Ottawa Official Plan and are zoned *Village Residential First Density*. There are no portions of the Natural Heritage System on or adjacent to the site, as shown on Schedule C11-B of the Official Plan. No Significant Wetlands, Natural Environment Areas, Areas of Natural and Scientific Interest are in the general vicinity of the site. The closest Provincially Significant Wetland is a portion of the West Osgoode Swamp about 4.3 kilometres to the southeast of the site. There is an immediate transition from the Rideau River to upland habitat at the shoreline and no unevaluated wetlands or Rideau River tributaries are mapped for the site or were observed. Unstable slopes are identified along the Rideau River shoreline on Schedule C15 of the Official Plan. There are no natural areas, as identified in the former Region's Natural Environment System Strategy, in proximity to the site.

Methodology

This combined EIS and TCR was prepared in accordance with the City of Ottawa EIS and TCR Guidelines, with guidance from the Natural Heritage Reference Manual (OMNR, 2010).

The EIS will describe the feature and functions of the on-site and adjacent natural environment conditions. The EIS will assess the anticipated impacts associated with the proposed development on these features and functions, with an emphasis on protection for the Rideau River corridor and suitable setbacks, and potential Species at Risk utilization. The purpose of the Tree Conservation Report component is to establish which vegetation should be retained and protected on the site and to assess co-owned and adjacent trees. It is anticipated that the woody vegetation not proposed for retention will be removed in 2023 outside of the breeding bird period.

Colour aerial photography (1976 - 2021) was used to review the natural environment features in the general vicinity of the site. A field survey of the site and adjacent lands was completed on October 6th 2022, from 10:10 to 12:45. The weather conditions included partly cloudy skies, light air, and an air temperature of 15° C.

The field survey 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.

Existing Conditions

Rideau River

The Rideau River is immediately to the north and east of the site. The floodplain (see orange line on Map 2) is generally within a metre or two of the shoreline, extending onto the site by up to 12 metres for a width of approximately 25 metres in the north portion of the site. At the site, the west channel of the Rideau leaves the main channel. The west channel to the north of the site varies between approximately 40 and 60 metres in width, with the main channel to the east in the range of 120 to 140 metres wide. The variety of morphological features in the area of the site is less than other portions of the Rideau River corridor, with a lack of side channels and riffle features. However, the overhanging branches of the mature bur oaks and other woody vegetation along the shoreline provide soil stability, and important shade and food inputs for the littoral zone, which appears to extend up to ten metres from the shoreline. Submergent and floating aquatic vegetation adds to the quality and quantity of available spawning, nursery and feeding habitat (Photo 10), although emergent vegetation is generally lacking in the littoral zones adjacent to the site. Areas of small rock protection are along the shoreline and wetland habitat does not extend onto the site from the adjacent shoreline (Photo 9). Cobbles are common in areas (Photo 10), with fines the dominant substrate in the balance of the littoral zone adjacent to the site.

Despite environmental stresses on the aquatic ecosystem such as water levels controlled by Parks Canada, high nutrient loadings including fertilizers, shoreline development, the invasion of exotic species, and barriers to fish movement, the Rideau River supports a high quality and diverse warm and cool water fishery (Robinson, 2005). Fifty- nine fish species have been historically recorded in the Rideau River system, including thirty-five species documented in the Rideau River Biodiversity Project (CMN, 2003). The aquatic submergent and emergent vegetation in backwater and other nearshore areas of the Rideau River provide spawning habitats for several fish species including brown bullhead, rock bass, pumpkinseed, largemouth bass, yellow perch, and tessellated darter (Portt et al, 2001). Nursery and foraging habitats are also present for northern pike, brown bullhead, rock bass, pumpkinseed, smallmouth bass, largemouth bass, yellow perch, walleye, and tessellated darter. The highest quality of fish habitat is generally located in areas of denser and higher growth of aquatic vegetation. Muskellunge, bluntnose minnow, fathead minnow, blackchin shiner, common shiner, white sucker, banded killifish, black crappie, and logperch are other common fish species in this reach of the Rideau River.

Terrestrial Habitat

The topography of the site is generally flat with gentle slopes to the protected shorelines of the Rideau River. The native soils on the site are primarily a combination of silty sand or silty clay underlain by glacial till (GEMTEC, 2023). Groundwater was measured by GEMTEC (2023) at between 0.8 and 1.5 metres below the ground surface.

In addition to the dominant blue grass (Photo 7), scattered ground flora in the mowed areas include field sow-thistle, bird's-foot trefoil, red clover, yellow wood sorrel, ground ivy, Canada thistle, and common dandelion. Portions of the shoreline are not mowed and in these areas

Canada goldenrod, heart-leaved aster, New England aster, wild carrot, bull thistle, Canada thistle, white sweet clover, and common milkweed were also observed.

Most of the on-site trees are along the perimeter, including the Rideau River shoreline, shown as deciduous hedgerows on Map 1. Several mature bur oaks are present (Photos 3 and 4), along with smaller green ash, Colorado spruce, white cedar, and basswood. The shoreline trees are described in Table 1 below as tree groups 5 - 11. The largest bur oaks are up to 50cm dbh. Regenerating stems of Manitoba maple, white cedar, European mountain ash, white spruce, and green ash are among the shoreline trees, along with common buckthorn and glossy buckthorn, shrubs. Other than the ash and associated impacts of the emerald ash borer, most of the shoreline trees appear to be in generally good condition.

The larger trees in the interior of the site are a 60cm dbh Norway maple in the west portion to the east of the cul-de-sac (Tree # 3), a 56cm dbh red maple (Photo 5) and white spruce 40cm dbh in the southeast portion of the site (Trees # 12 and 17), and a 75cm dbh silver maple in the northeast portion (Tree # 19).

City and other Adjacent Trees

One city co-owned tree is present adjacent to the Antochi Lane cul-de-sac. This mature silver maple in apparently good condition (Photo 1) is described in Table 1 as Tree # 1. In terms of adjacent trees, Tree group number 2, dominated by Norway maples up to 30cm dbh, is along the property line shared with 1101 Antochi Lane (Photo 2). A 55cm dbh Norway maple is approximately 4.5 metres southwest of the existing private road in the front lawn of 1100 Antochi Lane (Tree # 24, Photo # 8). Tree group numbers 13, 14, and 16 are along and to the south of the south property line. These include a 60cm dbh red oak two metres south of the property line in the rear yard of 1091 Orchard Hollow Drive (Photo 6) and many white spruce in the 30cm dbh range and smaller apple and Manitoba maple along the shared property line with 1099 Orchard Hollow Drive and to the south. The latter is identified as a mixed hedgerow on Map 1.

The scattered trees throughout the site are described in the following table, with the associated numbers shown on Map 1.

Table 1 – Description of On-site and Adjacent Trees

Tree #	Species	dbh (cm)	Condition	Fate
1	Silver maple	80	Co-owned City tree Appears to be in good condition with good leaf-out	Retained
2	Norway maples (7) White spruce Green ash (2)	8 – 30 15 20 - 22	Some are likely co-owned. Appear to be in good condition Also regenerating spruce stems Ash in poor condition with dead branches and minimal leaf-out. Both trees are multi-stem	Retained

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Tree #	Species	dbh (cm)	Condition	Fate
3	Norway maple White spruce	60 53	Maple in good condition Spruce appears dead	Removed for City watermain
4	Colorado spruce	23	Appears to be in good condition. Regenerating white cedar and red cedar are closer to residence	Removed
5	Basswood Green ash	up to 25	Both are multi-stem. Some of the ash stems have good leaf-out, others appear dead with extensive vine coverage	Retained
6	Bur oak Manitoba maple	38 35 & 38	Appear to be in good condition. Manitoba maple is twin stem. Regenerating white elm and ash also present	Retained
7	White cedar Col. spruce Manitoba maple	40 40 28	Appear to be in good condition	Retained
8	Bur oak Bur oak Yellow birch	40 26– 50 38	Appears to be in good condition Second bur oak is triple stem	Retained
9	Bur oak Bur oak	58 40 & 50	Regenerating white cedar, spruce, and ash also present Twin stem. Appear to be in good condition	Retained
10	Bur oak Bur oak	48 46	Appear to be in good condition	Retained
11	Bur oak Bur oak	50 60	Appear to be in good condition	Retained
12	Red maple	56	Some trunk damage and decreased leaf-out in portions of canopy. Dead branches	Retained
13	Red oak	58	Good condition. Just inside property line 60 cm dbh red oak is two metres south of property line	Retained at this time but may need to be removed with detailed design of adjacent retaining wall
14	White spruce x 3 Apple White cedar Norway maple E. mountain ash	22, 28 & 32 32 18 up to 24 15	These trees are up to 2.3 metres south of the property line, which was not well defined. Several of these trees have branches that overhang onto the site	Removed (retaining wall on property line)

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Tree #	Species	dbh (cm)	Condition	Fate
15	Manitoba maple Manitoba maples	43, 44 & 44 26, 30 & 42	Triple stem. Appear to be in good condition Three individual stems south of larger tree	Removed
16	Manitoba maples	up to 10	Many regenerating stems, also common lilac and staghorn sumac shrubs	Removed (retaining wall on property line)
17	White spruce (2)	40 42	Appear to be in good condition	Removed
18	Cedar hedges	< 12cm		Removed (retaining wall on property line)
19	Silver maple	75	Generally appears to be in good condition with greater decay on some larger branches. Regenerating black walnut closer to residence	Removed
20	Colorado spruce	35	Appears to be in good condition	Removed
21	White spruce	35	Appears to be in good condition	Removed
22	Norway maple	up to 30	Multi-stem. Poor form but good leaf-out	Removed
23	White cedar	up to 50	Multi-stem with no dominant leader. Appears to be in good condition	Removed
24	Norway maple	55	4.5 metres southwest of property line	Retained

Wildlife observed on and adjacent to the site included mallard, American crow, Canada goose, blue jay, northern flicker, black-capped chickadee, mourning dove, song sparrow, American robin, American goldfinch, eastern chipmunk, and grey squirrel.



*Photo 1 – Mature silver maple near property line adjacent to cul-de-sac (Tree # 1).
View looking west*



*Photo 2 – Norway maples along north property line in the northeast corner of the site
(Tree group # 2). View looking northwest*



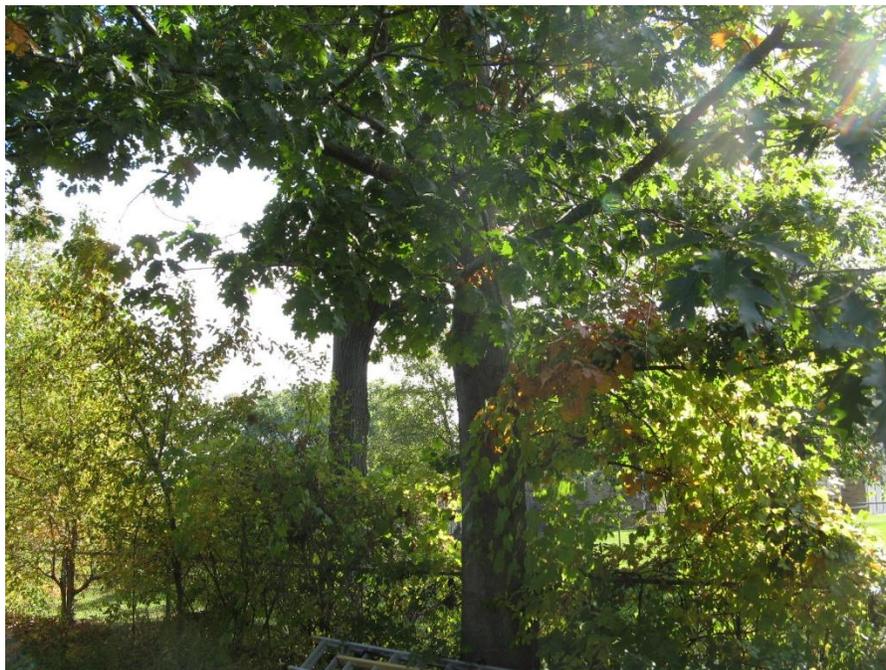
Photo 3 – Mature bur oak (Tree # 7) along Rideau River shoreline in the northeast portion of the site. View looking northeast.



Photo 4 – More bur oak along the Rideau River shoreline (Tree group # 11). This example is on the east edge of the site with view looking northwest



*Photo 5 – Red maple (Tree # 12) adjacent to residence in the southeast corner of the site.
View looking east*



*Photo 6 – Red oak (Tree # 13) and adjacent red oak to the south the southeast corner of the site.
View looking southeast*



Photo 7 – Typical site conditions with mowed lawns and scattered intermediate-aged and mature trees. Colorado spruce is on the right (Tree # 4), with mature bur oak along the Rideau River shoreline in the background. View looking east

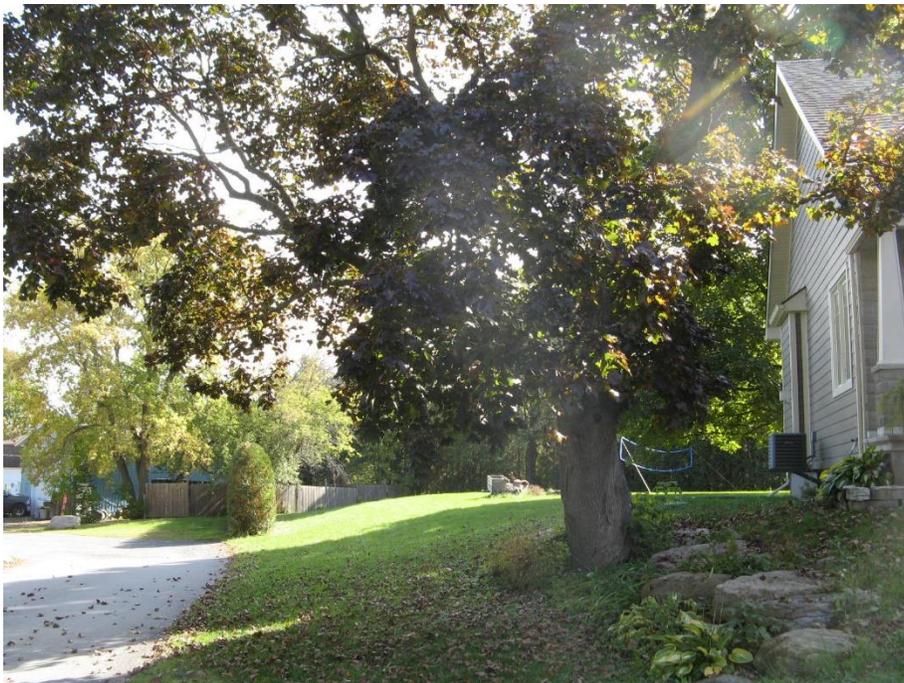


Photo 8 – Off-site Norway maple (Tree # 24) adjacent to the existing private road accessing the site off Antochi Lane. View looking southeast



Photo 9 – Typical hardened shoreline conditions with rock protection, good tree cover, and mowed landscape. View looking east along north edge of site

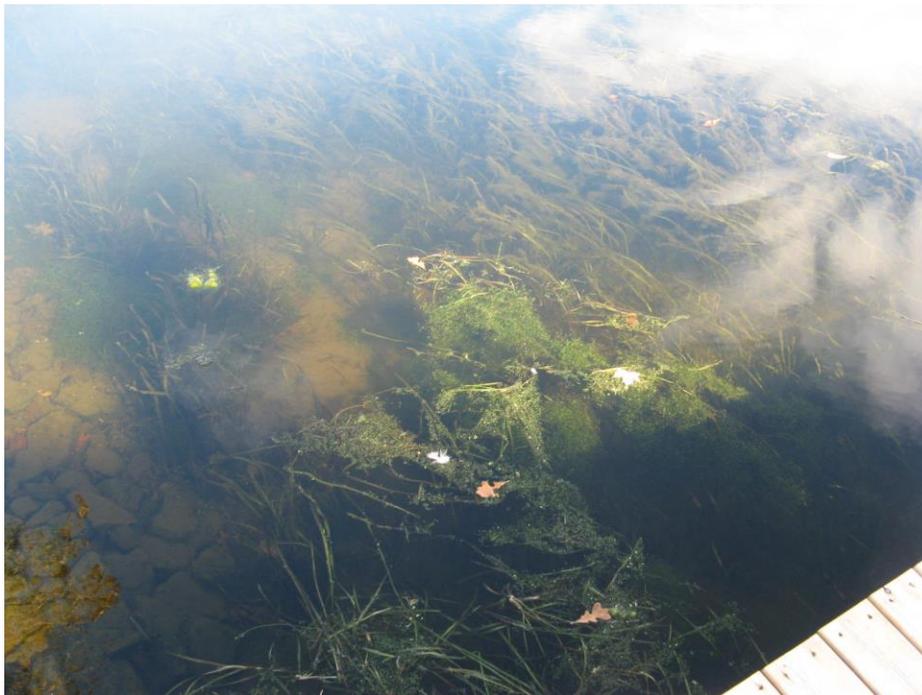


Photo 10 – Submersed and floating vegetation and cobbles in littoral zone adjacent to the southeast site edge. View looking northeast

Species at Risk

No Species at Risk were observed during the early October field survey. On October 3rd, 2022 the Ontario Ministry of the Natural Resources and Forestry'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 square including the site and adjacent areas (18VR40 – 77). Two Species at Risk observations were identified for this square; eastern meadowlark and bobolink. These grassland species are discussed below. Snapping turtle and Blanding's turtle, a threatened Species at Risk, were identified for the overall 10 km square 18VR40 in the Ontario Reptile and Amphibian Atlas. Snapping turtle, Blanding's turtle and painted turtle, also identified in the databases, are likely found in the Rideau River. No wetlands or potential turtle habitat extend onto the site beyond the river shoreline.

The breeding birds listed in the Ontario Breeding Bird Atlas for the 10 km squares 18VR40 identified bank swallow, eastern meadowlark, and bobolink as Species at Risk in the overall 10 km square including the site, as well as barn swallow, now listed as a species of special concern. Eastern meadowlark and bobolink utilize larger grassland areas such as hayfields, habitat not present on or adjacent to the site. The mowed cultural meadows are too small and too disturbed to represent potential habitat. Bank swallows use the open face of sand banks; habitat also not observed on or adjacent to the site. No structures with open rafters that may be used by barn swallow are present. Chimney swift, another potential Species at Risk, nests in larger brick chimneys without a metal liner. Where present, the chimneys on the existing residences are vented, preventing potential bird access to the inside.

Given that residences will be demolished, bats are a potential concern. However, the residences appear to be in generally good condition, continue to be occupied, and appeared to be well maintained. Prior to demolition an inspection of the residences with attics can be completed for bats or an exterior June evening survey for bat activity. No cavity trees for potential use as summer maternal bat colonies were observed.

The potential Species at Risk historically reported for the overall City of Ottawa and their habitat requirements were also reviewed, including butternut, American ginseng, eastern prairie fringed-orchid, wood turtle, spiny softshell, Blanding's turtle, Henslow's sparrow, loggerhead shrike, eastern meadowlark, bobolink, eastern whip-poor-will, bald eagle, golden eagle, least bittern, little brown bat, eastern small-footed myotis, northern long-eared bat, olive hickorynut, eastern cougar, lake sturgeon, cerulean warbler, and American eel. No larger cavity trees for potential bat utilization were observed on the site. No butternut trees were noted on or within 50 metres of the site. In summary, specific habitat characteristics for butternut and Blanding's turtle appear present on and adjacent to the site. No butternut was observed, while no suitable turtle habitat is present outside of the Rideau River shoreline.

Significant Woodlands and Valleylands

The criteria for significant woodlands in the rural area of Ottawa are found in OMNR (2010). There are no forests on or adjacent to the site. Significant valleylands are defined in the City of Ottawa Official Plan as valleylands with slopes greater than 15% and a length of more than 50

metres, with water present for some period of the year, excluding man-made features such as pits and quarries. There are no extended slopes on or adjacent to the site. Thus, there is no potential for significant valleylands on or adjacent to the site.

Significant Wildlife Habitat

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNR (2015). No flora, fauna, or ecological conditions identified in the background review or field survey that would trigger a Significant Wildlife Habitat designation with respect to the ELC communities present were observed on the site. 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, rare vegetation communities as noted in MNR (2015), or rare or specialized habitats including seeps or springs.

No forest interior habitat is present and thus potential nesting of species of special concern such as wood thrush and eastern wood-pewee is not expected. No evidence of raptor wintering areas was noted, and old growth forests are not present. Areas of broken and fissured rock for potential use by snakes were not observed.

Significant Wildlife Habitat is likely present in the adjacent Rideau River, including seasonal concentration areas of animals such as turtle wintering areas and waterfowl stopover and staging areas (aquatic). As assessed below, the identified setback to impervious surfaces and proper implementation of the mitigation measures are anticipated to protect the habitat of the Rideau River including existing turtle and waterfowl use.

Outside of the Rideau River corridor, the site is isolated from an environmental perspective due to extensive residential developments adjacent to the site and further to the south agricultural lands. There are no natural areas in the vicinity of the site other than the Rideau River and thus no linkage function of note is expected through the site away from the Rideau River corridor.

Impact Analysis and Recommendations

The natural heritage features, as identified in the PPS and OMNR (2010), present on or adjacent to the site are the aquatic habitat of the Rideau River and the associated anticipated significant wildlife and Blanding's turtle habitat. These features will not be directly impacted as no site disturbances will take place along the shoreline or within twenty metres of the shoreline. The river setback will be naturalized, with site alterations in the thirty metre setback limited to passive amenities in the outer ten metres and include decks which will encroach up to approximately four metres into the setback. No portions of the proposed buildings will be within the thirty metre setback. Several of the existing residences are within the 30 metre setback and these will be removed. No docks are proposed at this time but any future docks should be primarily floating, with approvals obtained as required from the RVCA and Federal agencies

It is assumed that the Rideau River provides suitable Blanding's turtle Category 2 habitat as defined in the General Habitat Description. No tributaries to the Rideau River with aquatic habitat potential were observed or are mapped for the site or adjacent lands. There is no anticipation that Blanding's turtle will utilize the upland terrestrial habitat of the site for nesting

or migrating, as no adjacent wetland parcels are present and suitable nesting habitat was not observed.

The potential Category 2 Blanding's turtle habitat is limited to the Rideau River itself as the habitat adjacent to the shoreline is upland. By definition the Category 2 habitat extends 30 metres from the top of bank of the Rideau River, the edge of the suitable habitat. Thus, the Category 2 habitat extends to the limit of the 30 metre setback distance, as shown by the dashed green line on Map 2. The balance of the site would be considered Category 3 Blanding's turtle habitat, as Category 3 habitat extends 220 metres from the edge of the Category 2 habitat. The primary purpose with respect to Blanding's turtle habitat of the Category 3 lands is to provide movement corridors between wetlands. As the Category 3 habitat leads only to developed areas via the site, they cannot support overland travel corridors from the Rideau River to wetlands as no wetlands are present within or to the north, west, or south of the Category 3 lands. There is no indication that Blanding's turtle would utilize the site to migrate to other suitable habitats from the Rideau River. Thus, the primary purpose of Category 3 Blanding's turtle habitat is not applicable to the Category 3 lands on the site.

The retention of the Category 2 Blanding's turtle habitat, will also provide suitable protection for the aquatic and significant wildlife habitat of the Rideau River. There will be no site disturbances that will impact wildlife within 30 metres of the Rideau River. Given the very small amount of impacted Category 2 habitat with minor encroachment of decks, the improvement of building removal over vastly larger areas of Category 2 habitat and the lack of functional Category 3 habitat, this assessment concludes that an Overall Benefit Authorization under the Endangered Species Act would not be required for Blanding's turtle.

As the top of slope is within less than a metre of the Rideau River shoreline, the thirty metre setback from the shoreline will be greater than a fifteen metres setback from the top of slope. GEMTEC (2023) determined a 7.5 metre erosion hazard limit for the slopes along the Rideau River, as measured from the toe of the slope. Natural buffers between the river and human alterations are important for filtering excess nutrients running into the creek, infiltrating rainwater, maintaining bank stability, and providing wildlife habitat. Natural corridors also shade the creek, helping maintain baseflow levels, and keeping water temperatures cooler. To improve the features and functions of the setback, the majority of the setback is to be allowed to naturalized and not mowed. More active use in the outer ten metres of the setback should not impact the functions of the setback

Tree Retention

Due to the proposed density of the development footprint and associated servicing, tree retention is not anticipated to be feasible for the interior of the site greater than thirty metres from the Rideau River shoreline. Proposed retaining walls will reduce the extent of tree retention along the southwest and south property lines south of the private road and in the rear yard of the new residences. As shown on Map 3 and indicated in Table 1, many clusters of trees along the Rideau River shoreline and in the thirty metre setback will be retained. Trees to be retained include most of the intermediate-sized and larger examples of the more desirable tree species including red maple, silver maple, white spruce, and bur oak.

Adjacent and Co-owned Trees

No impacts are anticipated on the co-owned silver maple (Tree # 1) adjacent to the cul-de-sac as the proposed access will be in the same general location as the existing access and the closest portion of the new road or new residence will be about twelve metres from the tree trunk.

The critical root zones of trees along the west portion of the north property line (Tree group # 2) will extend up to three metres onto the site. No impacts are anticipated on the critical root zone of these Norway maples and ash trees as the closest potential disturbance to their root systems will be greater than twenty metres from the tree trunks.

Approximately one metre of the critical root zone of the 55cm Norway maple (Tree # 24) in the front lawn at 1100 Antochi Lane will extend onto the site. This tree is not anticipated to be impacted due to the relatively low sensitivity of Norway maple and that the tree is located at a higher elevation than the site. In addition, this portion of the site is already disturbed due the existing asphalt private road off Antochi Lane, although a retaining wall will be required along the property line in this area.

Along the east portion of the south site boundary no impacts are anticipated on the 60cm dbh red oak (adjacent to Tree group # 13) approximately two metres to the south of the site as this area is at the outer edge of the thirty metre river setback. Further west, the critical root zones of the white spruce and other trees (Tree group # 14) adjacent to the south property line will extend onto the site up to 1.5 metres and will likely be impacted by construction of the propose retaining wall. Discussions are required with the adjacent landowner at 1099 Orchard Hollow Drive regarding potential removal of the trees followed by plantings of native tree species in locations acceptable to the adjacent landowner.

The long-term aesthetics and local wildlife activity for the site can be enhanced with post-construction plantings of native trees and shrubs where feasible. Please see below for recommendations for native plantings. Invasive non-native species are not to be planted.

The following is a summary of the recommended mitigation measures:

- No tree removal or other site disturbances, other than for an active park in the outer ten metres of the setback, are to occur within the thirty metre setback area of the Rideau River. A flat topography and vegetated setback with trees along the shoreline will provide good protection for the adjacent Rideau River habitat, and exceed what is currently provided;
- Except for portions of the outer ten metres for passive amenity use, the setback area should be allowed to naturalize without regular mowing. Consideration should be given to develop butterfly gardens with native species or similar native habitat. The existing deciduous trees along the shoreline and others in the setback will be retained;
- The trees to be retained in the outer portion of the thirty metre shoreline setback are to be protected with sturdy temporary fencing, at least 1.3 metres in height, to ensure the retained trees are not impacted by the construction. The protective fencing is to be installed at the outer limits of the critical root zone (ten times trunk diameter) of the

retained trees. 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 to occur within the critical root zone of the trees to be retained and protected. All of the supports and bracing for the protective fencing should be placed outside of the protected area and should be installed in such a way as to minimize root damage. Also, since the desired effect of the barrier is to prevent construction traffic from entering the trees critical root zone, the barrier should be kept in place, maintained, and repaired when needed until all site servicing and construction have been completed;

- In addition, silt fencing is to be installed along the edge of the thirty metre setback to protect the vegetation within the setback and to isolate the work area from sensitive wildlife;
- 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 covering of plastic should be used to retain moisture during an extended period when watering may not be 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 the retained trees;
- Roof runoff is to be collected in rain barrels or other devices, with the runoff diverted to permeable areas;
- Best management practices with respect to sediment and erosion control, stormwater, noise, dust, and light will be undertaken during the construction and operation of the residential development;
- Snow removal and disposal is an ongoing issue for many properties located adjacent to watercourses. The dumping of snow within the setback is not an acceptable practice because contaminants and debris in the snow could enter the river and the vegetation within the buffer could be damaged or destroyed by equipment and the weight of the snow. This practice can have detrimental effects on water quality and aquatic habitat conditions. It is anticipated that private snow removal will be utilized and no stockpiling will occur on site. Any snow stockpiled on the site is to be outside of the thirty metre setback;
- 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 silt fencing described above is to be maintained during the construction period and removed when the site is stabilized;
- Once the silt fencing is in place and as recommended in City of Ottawa (2015) prior to beginning work each day, the work area is 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, 2015) for additional recommendations on construction site management. Any turtles or snakes observed in the vicinity of the work areas or that may otherwise be in danger are to be safely relocated towards the Rideau River. 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 (2015) for suggestions on how to effectively relocate turtles and snakes;

- Many other helpful wildlife oriented mitigation measures are detailed in the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2015). The contractor is to review in detail and understand the City's Protocol for Wildlife Protection during Construction prior to commencement of construction. The contractor is to be aware of the potential Species at Risk in the vicinity of the site including Blanding's turtle. Appendix 1 of City of Ottawa (2015) describes these species. The project biologist for this development is Bernie Muncaster (613-748-3753). Any Species at Risk sightings are to be immediately reported to the Ministry of the Environment, Conservation, and Parks and work that may impact the species suspended immediately;
- To protect breeding birds, tree or shrub 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. No stick nests or other evidence of raptor utilization on the site was observed;
- In addition to snow removal, yard waste is not to be deposited in the thirty metre setback area;
- To discourage wildlife from entering the work areas 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 areas;
- Additional native trees will be planted in the portion of the setback area that is currently open. Plantings of native vegetation as part of the new development will provide a diversity of natural environment and aesthetic features. Potential native species to plant include nannyberry, ninebark, bayberry, elderberry and dogwood shrubs along with sugar maple, red maple, basswood, balsam fir, red oak, and white spruce trees. Obtaining native species from local seed sources is strongly recommended to promote adaptability and longevity. With respect to planting sensitivities, GEMTEC (2023) noted where silty clay deposits were encountered, the silty clay extends to a depth of only about one metre below ground surface. It is likely that the future grades at the site will generally match existing, and, as such, the silty clay will be located above the proposed underside of footing elevation, in which case, the City of Ottawa Tree Planting Guidelines do not apply (GEMTEC, 2023);
- 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.

Conclusion

Nineteen new residential units are proposed for the site, with the existing residences to be removed. In contrast to the existing conditions, no new residences will be within thirty metres of the Rideau River shoreline. The proposed development will be served by municipal water and sanitary services and will utilize in large part the footprint of the existing access. The significant natural heritage features are the aquatic habitat, significant wildlife habitat and turtle habitat of the Rideau River. These features will not be directly impacted as no site disturbances that may impact wildlife will take place within thirty metres of the shoreline.

Many intermediate sized and larger deciduous trees will be retained along the shoreline and other portions of the thirty metre setback. This features and functions of the generally flat setback will be enhanced with native tree plantings. This EIS and TCR concludes that no impacts are anticipated on the fish habitat, significant wildlife habitat, or turtle habitat of the Rideau River providing the important mitigation measures outlined in this EIS and TCR are properly implemented and maintained.

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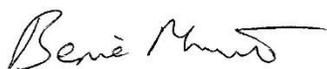
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Please call if you have any questions on this Environmental Impact Statement and Tree Conservation Report.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.



Bernie Muncaster, M.Sc.
Principal

\\Antochi Lane EISTCR



Legend

- Site
- Tree(s)
Number

Vegetation Communities

- ① Cultural meadow
- ② Mixed hedgerow
- ③ Deciduous hedgerow

Approx. Scale 1: 900



Map 1

FILE: 22 - 22

October 10, 2022

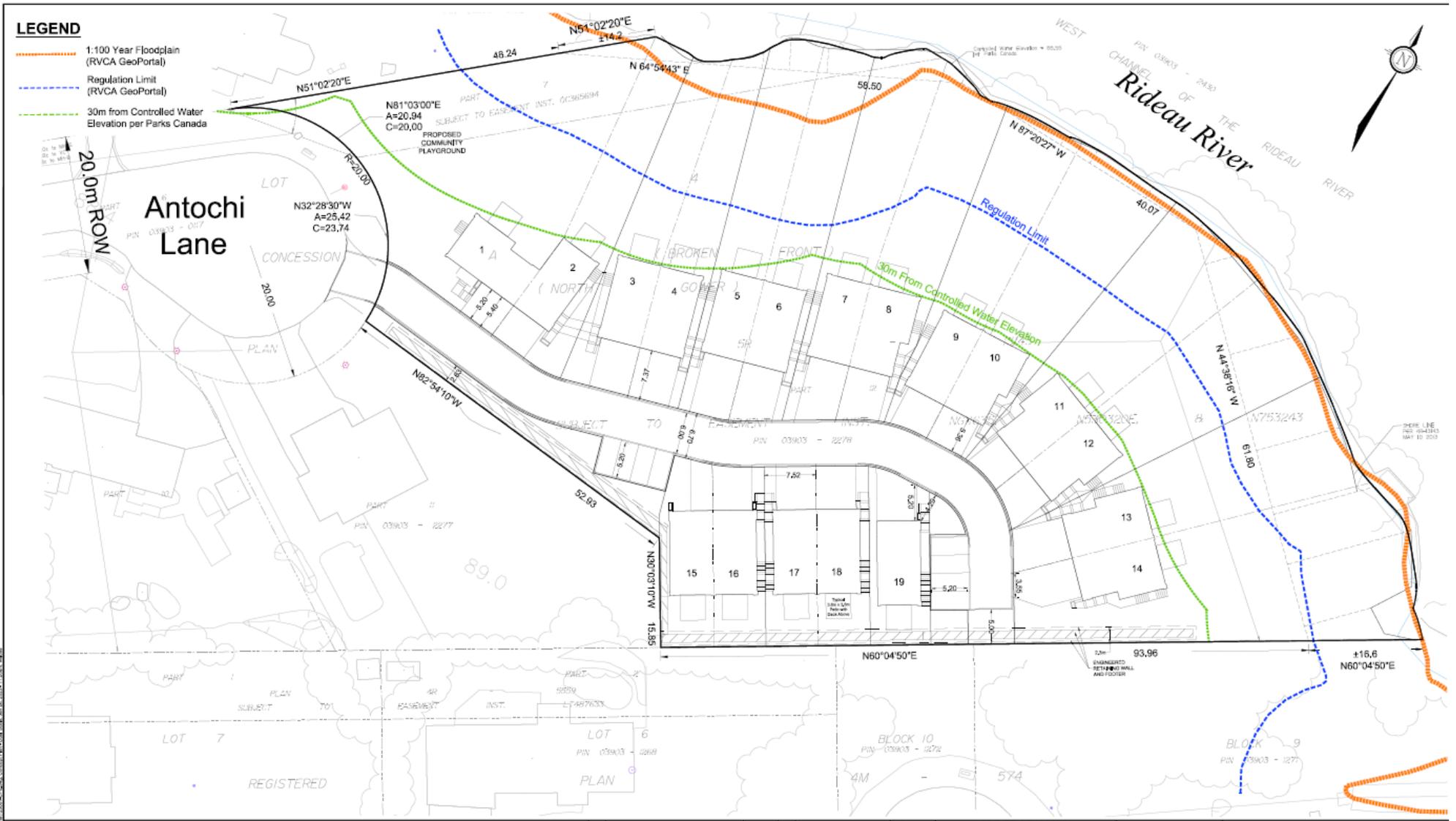
Prepared for: 1910753 Ontario Inc.

Prepared by: Muncaster Environmental Planning Inc.

ENVIRONMENTAL IMPACT STATEMENT

**1086 Antochi Lane
Manotick, City of Ottawa**

MAP 2 – CONCEPT PLAN





Legend

-  Site
-  Tree(s) Number
-  30 m Water Setback

Vegetation Communities

-  Cultural meadow
-  Mixed hedgerow
-  Deciduous hedgerow

 Areas of Proposed Tree Retention

Approx. Scale 1: 900



Map 3

FILE: 22 - 22

February 1, 2023

Prepared for: 1910753 Ontario Inc.

Prepared by:



PROPOSED CONSERVED VEGETATION

**1086 Antochi Lane
Manotick, City of Ottawa**