Muncaster Environmental Planning Inc.

November 25, 2022

Mr. Eric Brisson, President
12213559 Canada Inc
996-B St-Augustin
Embrun ON
K0A 1W0

Dear Mr. Brisson:

RE: 5497 Manotick Main Street Retail Development
Environmental Impact Statement and Tree Conservation Report - Updated

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 5497 Manotick Main Street in the Village of Manotick, City of Ottawa. The site is on the east side of Manotick Main Street, immediately north of the retail strip mall at 5511 Manotick Main Street and opposite the intersection with Highcroft Drive. The overall site is approximately 0.23 hectares, with 27.2 metres of frontage on Manotick Main Street.

For the purposes of this report Manotick Main Street is assumed to be in a north-south orientation in the vicinity of the site. This report has been updated to address agency comments, including April 21st, 2022 comments from the City of Ottawa.

Background and Project Description

The 0.23 hectare site is currently includes an occupied residence, with surface parking between the residence and Manotick Main Street. An extended lawn is between the residence and the Rideau River, with a gentle slope east towards the river. Several intermediate-aged and larger trees are in the east portion of the lawn, west of a wooden retaining wall adjacent to the Rideau River. The site is surrounded by the developed portions of Manotick, with the many portions of the Rideau River riparian corridor treed.

The proposed development is for a three storey residential building with a mix of 10 surface parking spaces and 16 underground parking spaces (see Map 2). Twenty-one residential units will be a mix of one bedroom (10) and two bedroom (11) units.

The site and adjacent lands are designated *Village* on Schedule A of the City of Ottawa Official Plan and are zoned Village Mixed-Use (*VM9*). There are no lands designated *Rural Natural Features Area*, *Major Open Space*, *Natural Environment Area*, or *Significant Wetlands* in the general vicinity of the site. No components of the City's Natural Heritage System are on or adjacent to the site, as shown on the Schedule L2 overlay. There are no natural areas, as identified in the former Region's Natural Environment System Strategy, in proximity to the site, with the closest Natural Area being the moderately-rated Century Road Complex about three kilometres to the south. Unstable slopes are shown along the Rideau River on Schedule K of the Official Plan. No potential aquatic habitat is mapped or was observed to the west of the Rideau River on or adjacent to the site.

Methodology

This combined EIS and TCR was prepared in accordance with Section 4.7.8 of the City of Ottawa Official Plan following the City's 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 residence 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 2021 before the breeding bird period.

Colour aerial photography (1976 - 2018) 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 July 31st, 2020, from 10:20 to 12:15. The weather conditions included sunny skies, light air, and an air temperature of 25° C.

The field survey and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty-two years of experience in completing natural environment assessments. Michelle Muncaster assisted with the field survey.

Existing Conditions

Rideau River

The west channel of the Rideau River is immediately to the east of the site, with the floodplain extending onto the site as shown by a dashed blue line on Figure 1. In the vicinity of the site, the west channel varies between approximately 25 and 50 metres in width. This provides for a variety of morphological features in the general area, including glide, pool, side channel and riffle features. Submergent, floating and emergent aquatic vegetation adds to the quality and quantity of available spawning, nursery and feeding habitat.

The west channel of the Rideau River begins south of Manotick and continues on the west sides of Long and Nicolls Islands. The west channel joins the main Rideau River downstream, north of Nicolls Island. Despite environmental stresses on the aquatic ecosystem such as water level fluctuations, 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.

Specifically, along the west shore of the west channel of the Rideau River immediately to the east of the site, the exposed substrate includes a combination of boulders, cobble, gravel and fines providing a diversity of available aquatic habitat (Photo 1). Submergent, floating and emergent aquatic vegetation such as large-fruited bur-reed, Canada waterweed, eel grass, and sedges add to the aquatic habitat structure. Rock protection is common along the shoreline. The water was clear. There is a clear rise in elevation west of the shoreline and the natural riparian vegetation extended for a maximum of half a metre west of the water's edge on July 31st, before mowed areas. The vegetation in this 0.5 metre wide area is a mixture of wetland and upland vegetation including reed canary grass, joe-pye-weed, blue vervain, boneset, common burdock, wild grape, heal-all, yellow sweet-clover, field sow-thistle, ground ivy, and evening primrose (Photos 1 and 2).

Terrestrial Habitat

The topography of the site includes a gentle slope to the east towards the river (Photo 3). A wooden retaining wall is approximately five metres west of the Rideau River shoreline. The top-of-slope is approximately another five metres west of the retaining wall, so about ten metres west of the shoreline (Photo 4), and in the general location of the floodplain limit. The native soils on the site are primarily a combination of thick deposits of sandy silt and silty clay (St. Lawrence, 2020).

Outside of the Rideau River corridor, the site is isolated from an environmental perspective due to extensive residential, commercial, and other developments along Manotick Main Street, Bridge Street, and side streets. There are no natural areas to the west of the site and thus no significant linkages are occurring through the site away from the Rideau River corridor.

In addition to the dominant blue grass, scattered ground flora in the mowed areas include common burdock, common mullein, bull thistle, chicory, bird's-foot trefoil, daisy fleabane, ground ivy, Canada thistle, and common dandelion. A 40cm dbh crimson red maple and a 50cm

dbh silver maple cultivar are east of Manotick Main Street, in the northwest and southwest corners of the site, respectively. A 28cm dbh apple is in the south-central portion of the site. The apple tree was in poor condition with dying upper branches and extensive suckering.

Several mature deciduous trees are among the east mowed area within the Rideau River setback (Photos 3 and 4). Due to the canopy cover this area is shown on Figure 1 as a cultural woodland. The largest trees are silver maples up to 60 cm diameter at breast height (dbh), with sugar maple and black cheery in the 45cm to 50cm dbh range. Most of these trees appear to be in good condition, with reduced leaf-out noted on some of the black cherry.

A mixed hedgerow along south edge of the site includes Scot's pine, Manitoba maple, red pine, and red maple cultivars in the 30cm – 40cm dbh range, with smaller European mountain ash, black walnut, green ash, and white cedar (Photo 5). Tartarian honeysuckle, black currant, gray dogwood, and common buckthorn shrubs are among the hedgerow trees.

There are no property trees associated with the site. As noted on Map 1, several trees are just to the north of the north property line, including a 36cm dbh Scot's pine 1.5 metre to the north of the property line, east of Manotick Main Street. In addition to the critical root zone of the pine extending onto the site, a couple of branches also extend south to over the site (Photo 6). In the central portion of the north property line, Scot's pine up to 40cm dbh are also approximately 1.5 metres to the north of the site. To the east, sugar maples between 42cm and 50cm dbh are between 1.5 and 1.8 metres north of the property line, along with a 47cm dbh black cherry. These trees appear to be in generally good condition.

An upland sugar maple deciduous forest begins approximately two metres to the south of the east edge of the site, between the east rear of the mall surface parking south of the site and the Rideau River. In addition to the dominant sugar maple, Manitoba maple, black cherry, and white ash are also present. The larger trees were in the 30cm to 36cm dbh range and appeared to be in generally good condition, except for a maple with many potential wildlife cavities.

Wildlife observed on and adjacent to the site included double-crested cormorant, mallard, American crow, belted kingfisher, blue jay, cedar waxwing, black-capped chickadee, song sparrow, American goldfinch, woodchuck, and grey squirrel.

Photo 1 – Typical littoral zone and shoreline along the Rideau River with short transition to upland habitat. View looking east

Photo 2 – Another view, this one south, of the littoral zone, shoreline and transition to upland habitat

Photo 3 – West of the Rideau River the site is dominated by an occupied residence and large mowed area, with several deciduous trees in the mowed area approaching the river. View looking east from east of the residence.

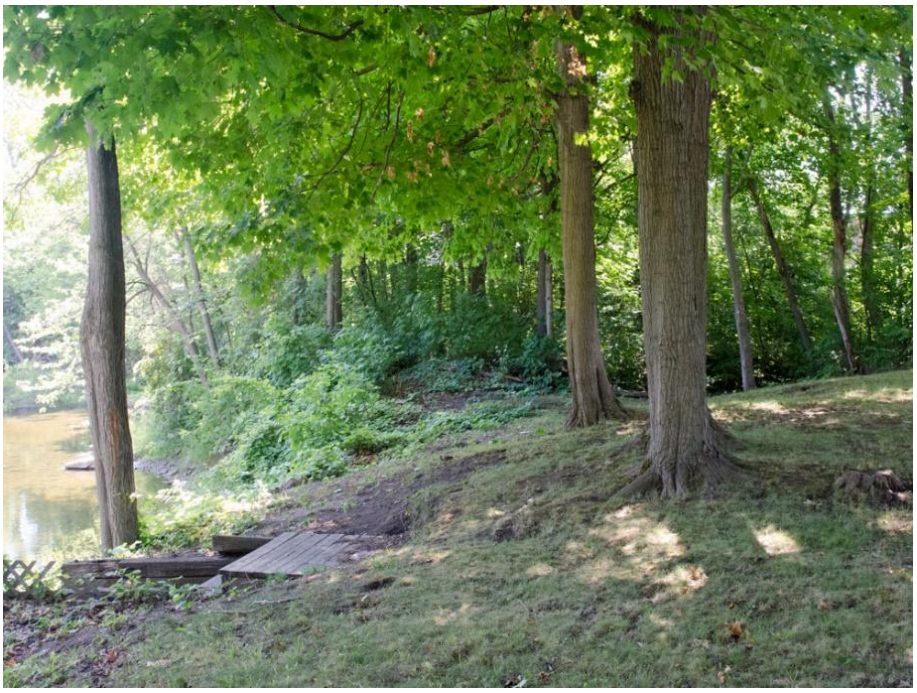

Photo 4 – Setback closest to the Rideau River with mowed area, deciduous trees and wooden retaining wall. View to the south to the maple deciduous forest south of the site

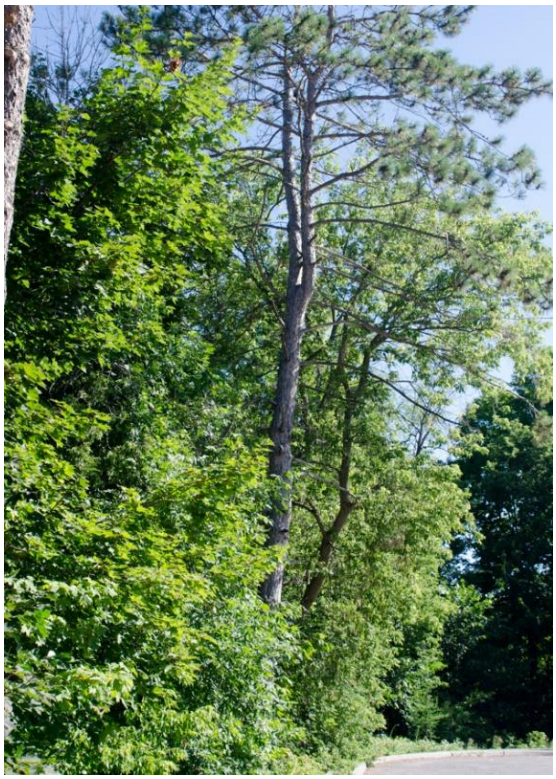

Photo 5 – Scots pine and other trees in the mixed hedgerow along the south edge of the site. View looking northeast from the adjacent mall parking area

Photo 6 – Overhanging pine branches from tree about 1.5 metres north of the property. View looking east, with existing residence on the right side of photo

Species at Risk

No Species at Risk were observed during the late July field survey. On July 23rd, 2020 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 – 68). No Species at Risk observations were identified for this square, with snapping turtle, a Species of Special Concern, noted. 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 and Blanding's turtle are likely found in the Rideau River. No wetlands or potential turtle habitat extend more than 0.5 metres west of the river shoreline.

The breeding birds listed in the Ontario Breeding Bird Atlas for the 10 km squares 18VR40 identified bank swallow, barn swallow, eastern meadowlark, and bobolink as Species at Risk in the overall 10 km square including the site. Eastern meadowlark and bobolink utilize larger grassland areas such as hayfields, habitat not present on or adjacent to the site. 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 were present. Chimney swift, another potential Species at Risk, nests in larger brick chimneys without a metal liner. The chimney on the existing residence is vented, preventing potential bird access to the inside.

Given that a residence will be demolished, bats are a potential concern. However, the residence is in the range of sixty years old, continues to be occupied, and appeared to be well maintained. An inspection of the exterior of the building revealed no potential areas of entry for bats or other wildlife, including the vented chimney described above or potential access to the attic.

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, barn swallow, 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, with one potential cavity to the south. There will be no site disturbances within approximately 40 metres of this tree. 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 the site, with a upland deciduous forest to the south. The forest to the south is small, at approximately 0.2 hectares, contains no interior habitat or large tree structure of note, and no other features for which the forest may be considered significant woodlands were observed.

Significant valleylands are defined in Section 2.4.2, Policy 1c. of the City of Ottawa Official Plan as valleylands with slopes greater than 15% and a length of more than 50 m, with water present for some period of the year, excluding man-made features such as pits and quarries. The site is generally gently sloped to the Rideau River and there are no slopes on or adjacent to the site approaching 15 %. 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 MNRF (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 MNRF (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, commercial, and other developments along Manotick Main Street, Bridge Street, and side streets. There are no natural areas to the west of the site and thus no significant linkages are occurring 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 and no structures will be within 30 metres of the shoreline.

No Species at Risk were observed on or adjacent to the site during the late July morning survey. 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 normal high water mark 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 east 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 within 30 metres of the Rideau River.

As the top of slope is within approximately ten metres of the Rideau River shoreline, the 30 metre setback from the shoreline will be greater than a 15 metres setback from the top of slope. Natural buffers between the creek 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 setback is to be allowed to naturalized and not mowed.

Tree Retention

Due to the proposed development footprint and associated servicing, tree retention is not anticipated to be feasible for the portion of the south mixed hedgerow greater than 30 metres from the Rideau River shoreline. However, the intermediate-sized and larger deciduous trees in the east portion of the site will all be retained, as shown on Map 2. There will be no site disturbances within the critical root zones of these trees.

The deciduous forest to the south of the site will not be impacted. No site disturbances will occur in the vicinity of the forest as it is adjacent to the east portion of the site, within the 30 metres setback from the Rideau River.

Mitigation measures are provided below for the protection of the critical root zone of trees to the north of the west portion of the site. Discussions are required with the adjacent landowner to identify the need for tree removal and as needed to develop a planting plan to replace the removed trees with new plantings post-construction.

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. Use of invasive non-native plant material is strongly discouraged.

The following is a summary of the recommended mitigation measures:

- No site disturbances will occur within the 30 metre setback area of the Rideau River. A gentle slope and vegetated setback with trees closer to the shoreline will provide excellent protection for the adjacent Rideau River habitat;
- The balance of 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 in the east portion of the setback will be retained, and are well east of the surface parking area;
- The critical root zones of trees to the north of the site will extend onto the site by between one and 2.5 metres. The larger trees to the north are adjacent to the east portion of the site and no site disturbances will occur within the critical root zones of these trees. Any exposed roots of the adjacent trees to the west are to be cut cleanly or covered with filter cloth, burlap or woodchips and kept moist until the roots can be buried permanently. If the adjacent landowner agrees, these trees can be removed pre-construction;
- 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 mixed-use development;
- Snow removal and disposal is an ongoing issue for many properties located adjacent to urban 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. As the surface parking is now proposed to be west of the new building, there is no potential for snow to be piled within the setback area to the east of the building;
- Prior to any site alterations properly keyed in silt fencing is to be installed along the work area perimeter. 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 fencing 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, Conservations and Parks and work that may impact the species suspended immediately;
- No tree removal is to occur in the 30 metre setback.

  Additional native trees will be planted in the portion of the setback area that is currently open. Where the silt fencing as described above is not in place trees and shrubs to be retained are to be protected with sturdy temporary construction fencing at least 1.3 metres in height installed along the critical root zones of the trees to be retained or as far from the trunk as possible if the critical root zone distance (ten times the trunk diameter) cannot be met. 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. 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.

  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 has been completed;
- 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;
- Yard waste and snow removal are not to be deposited in the 30 metre setback area;
- 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, 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, due to the clay soils, tree planting should be limited to trees with low water demand. Trees species to avoid in this situation include poplars, willows, and Manitoba maple;

- 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

A three storey residential building is proposed for the site. The development will be on full municipal services. 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 will take place within 30 metres of the shoreline.

Many intermediate sized and larger deciduous trees will be retained within the east portion of the setback. This features and functions of the gently sloped vegetated 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.

References

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Portt, C.B., G. Coker and C. K. Minns. 2001. Riverine Habitat Characteristics of Fishes of the Great Lakes Watershed. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2481.

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St. Lawrence Testing & Inspection Co. Ltd. 2020. 5497 Manotick Main St., Manotick, ON. Geotechnical Subsurface Investigation. Report No. 20C309. June 30, 2020. 5 pp & append.

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

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.

Bernie Muncaster, M.Sc.
Principal

\5497 Manotick Main Street EISTCR

Legend

- Site
- Rideau River Floodplain
- Normal High Water Mark (per OLS)
- Wood Retaining Wall

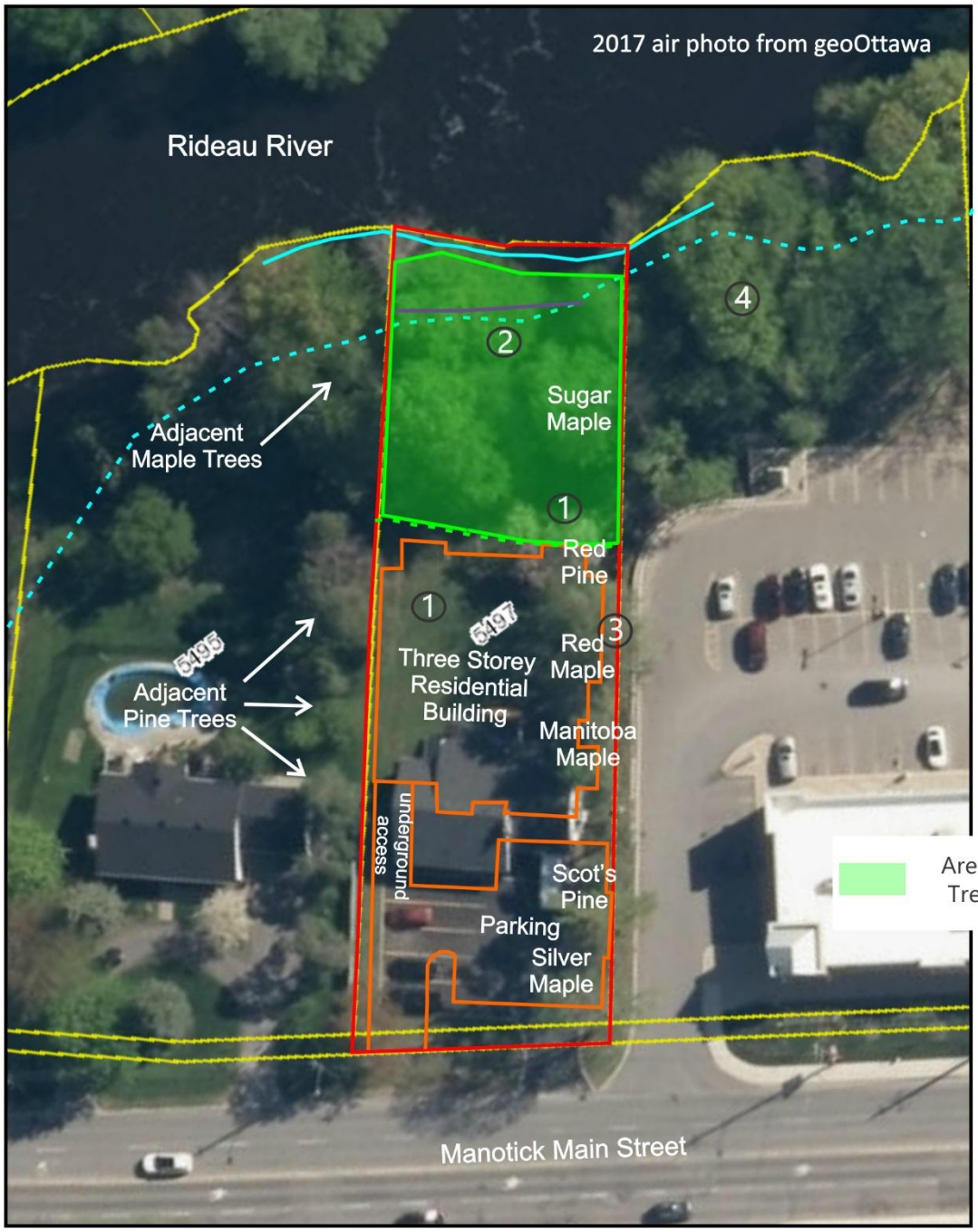
Vegetation Communities

1. Cultural meadow
2. Cultural woodland
3. Mixed hedgerow
4. Upland sugar maple deciduous forest

Approx. Scale 1: 700

0 10 20 30 METRES

Map 1 **FILE: 20 - 20** May 26, 2022	**NATURAL ENVIRONMENT FEATURES** **5497 Manotick Main Street** **Manotick, City of Ottawa**	Prepared for: Oligo Group Prepared by: Muncaster Environmental Planning Inc.



Legend

- Site
- Rideau River Floodplain
- Normal High Water Mark (per OLS)
- Wood Retaining Wall
- 30 Metre Setback & West Edge of Category 2 Blanding's Habitat

Vegetation Communities

1. Cultural meadow
2. Cultural woodland
3. Mixed hedgerow
4. Upland sugar maple deciduous forest

Approx. Scale 1: 700

0 10 20 30 METRES

Map 2

FILE: 20 - 20

May 26, 2022

PROPOSED CONSERVED VEGETATION

5497 Manotick Main Street
Manotick, City of Ottawa

Prepared for: Oligo Group

Prepared by: Muncaster Environmental Planning Inc.