



Combined Environmental Impact Statement &
Tree Conservation Report (Revised)
788 March Road, Ottawa, Ontario



December 2018
Prepared for 10731854 Canada Inc.

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EXECUTIVE SUMMARY

McKinley Environmental Solutions (MES) was retained by 10731854 Canada Inc. (the Owner) to prepare a Combined Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) for the proposed development of the 788 March Road property (the Site). The Site is located at 788 March Road, Ottawa, ON (PIN 045170801 and 045171988) and is approximately 1.45 ha in size. The current zoning is General Mixed Use. The Site is located southeast of the corner of March Road and Klondike Road, with approximately 151 m of frontage on March Road and approximately 82 m of frontage on Klondike Road. The Site elevation is approximately 78 m ASL at March Road, sloping down to approximately 72 m ASL at Shirley's Brook. The Site is predominantly surrounded by existing developed properties. A tributary of Shirley's Brook runs along the eastern Site boundary, beyond which is a church and manicured lawn. The Site itself includes a small degraded Cultural Woodlot, Cultural Meadow and a Deciduous Hedgerow. The Cultural Woodlot is a small and degraded feature, and does not qualify as a Significant Woodlot under either the City of Ottawa's criteria for the urban area, or the provincial assessment criteria. The most significant natural heritage feature found in the vicinity of the Site is the tributary of Shirley's Brook and its riparian corridor.

The Site will be developed to include a six (6) storey residential building with approximately 196 units. The Site will be developed in two (2) phases, with the northern half of the Site developed first (Phase 1 - 95 units) and the southern half of the Site developed second (Phase 2 - 101 units). Phase 1 will include approximately twelve (12) surface parking spaces and Phase 2 will include approximately fourteen (14) surface parking spaces. Two (2) levels of underground parking will be included below the building. Vehicle entrances to the Site will be provided from Klondike Road and March Road, with pedestrian access from March Road. The Site Plan includes a 30 m setback from the normal high-water mark of Shirley's Brook. All existing vegetation within the 30 m setback will be retained. The Site will receive municipal sewer and water. Stormwater will be directed to the existing March Road storm sewer, which outlets to the existing SWMP Pond No.1 - West. The existing SWMP Pond No.1 - West was sized to provide quantity and quality control for the Site.

Previous studies have demonstrated that Shirley's Brook provides Category 2 habitat for Blanding's Turtle (threatened). Category 2 habitat includes the watercourse itself and the surrounding 30 m of terrestrial habitat. The proposed 30 m vegetated setback from the normal high-water mark of Shirley's Brook will avoid all areas of Category 2 habitat. The development area of the Site falls within the definition of Category 3 habitat, which is designated primarily to provide a potential corridor for Blanding's Turtle movement. However, the Category 3 habitat found within the Site has little functional habitat value, due to the fact that all surrounding areas are developed. The loss of

non-functional Category 3 habitat is not considered significant. Any potential impact to Blanding's Turtles will be mitigated by the construction of a new Blanding's Turtle exclusion system along the eastern development boundary. The exclusion system will provide a benefit to the species by helping to mitigate the existing risk of road mortality on March Road and Klondike Road. No other significant Species at Risk issues were noted for the Site.

Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the development of the 788 March Road property is not anticipated to have a significant negative effect on the natural features and functions.



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1.0 INTRODUCTION

1.1 Reading the Integrated Tree Conservation Report (TCR)

This report is presented as a Combined Environmental Impact Statement (EIS) and Tree Conservation Report (TCR). Readers who are principally interested in the TCR may choose to read only those portions of the report where the section headings are marked **(TCR)**. This includes Sections 1.3, 1.4, 1.6, 2.0.1, 3.2, 3.3, and 4.1. Readers who are interested in the EIS should read the entire report, as information included in the TCR sections is not reiterated.

1.2 Scoping the Environmental Impact Statement

This EIS was undertaken following the City of Ottawa's Environmental Impact Statement Guidelines. Following the City guidelines, the Environmental Impact Statement (EIS) includes the following:

- Documentation of existing natural features on and around the Site;
- Identification of potential environmental impacts of the project;
- Recommendations for ways to avoid and reduce any negative impacts; and
- Proposal of ways to enhance natural features and functions.

This EIS was prepared with guidance from the *Natural Heritage Reference Manual* (OMNRF 2005). The major objective of this EIS is to demonstrate that the proposed project will not negatively affect the significant features and functions of the Site, and that impacts will be minimized through mitigation measures.

1.3 Site Overview and Background (TCR)

The Site is located at 788 March Road, Ottawa, ON (PIN 045170801 and 045171988) and is approximately 1.45 ha in size. The current zoning is General Mixed Use. The Site is located southeast of the corner of March Road and Klondike Road, with approximately 151 m of frontage on March Road and approximately 82 m of frontage on Klondike Road. The Site elevation is approximately 78 m ASL at March Road, sloping down to approximately 72 m ASL at Shirley's Brook. The Site is predominantly surrounded by existing developed properties. The area west of the Site includes March Road, beyond which is a developed commercial property. The area north of the Site includes Klondike Road, beyond which is an existing developed commercial property. A tributary of Shirley's Brook runs along the eastern Site boundary, beyond which is a church and manicured lawn. The area south of the Site includes a vacant property that consists of a manicured lawn and gravel pad. The Site itself includes a small degraded Cultural Woodlot, Cultural Meadow and a Deciduous

Hedgerow. The most significant natural heritage feature found in the vicinity of the Site is the tributary of Shirley's Brook and its riparian corridor, which are located along the eastern Site boundary.



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FIGURE 1: SITE OVERVIEW

788 March Road, Ottawa, Ontario

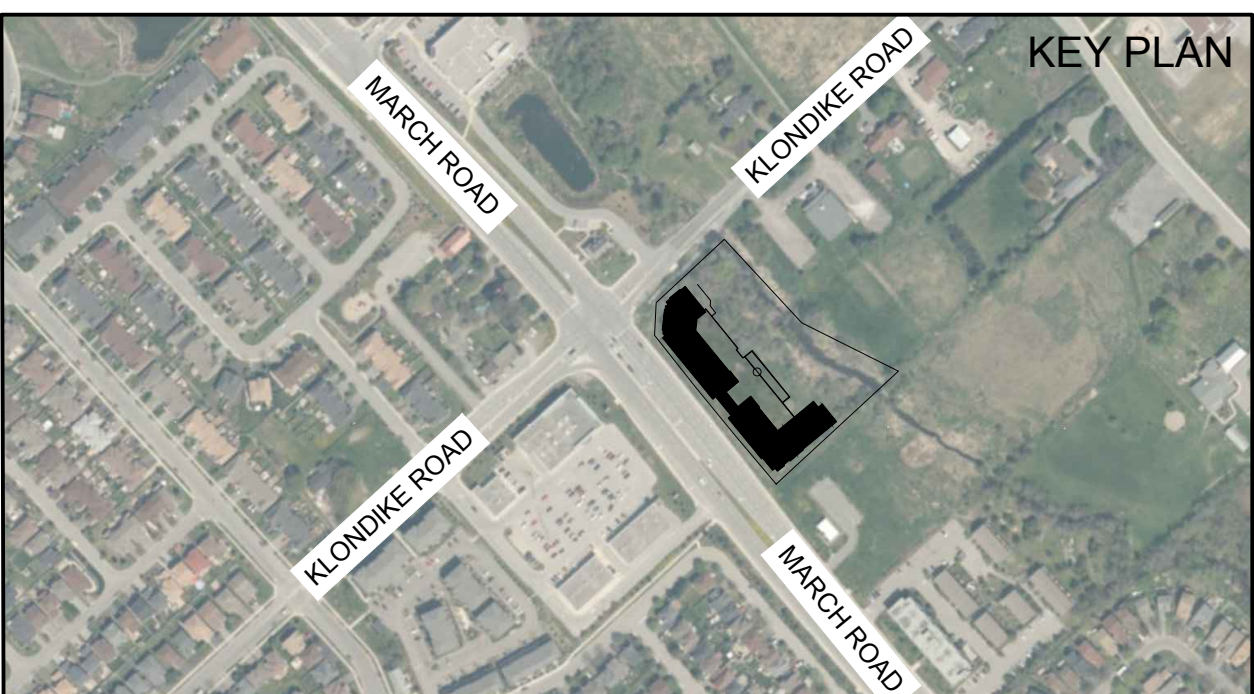
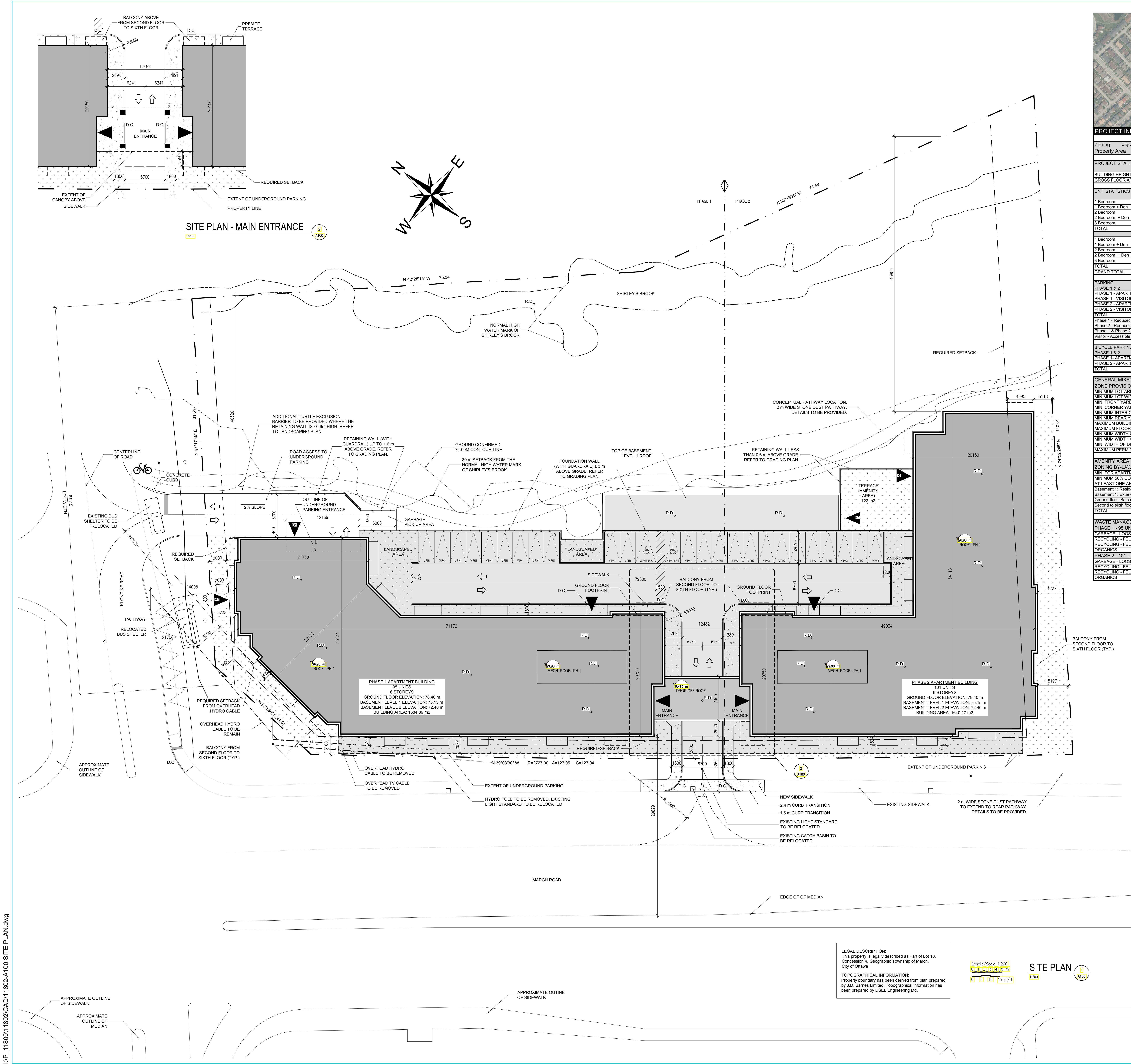
Combined Environmental Impact Statement & Tree Conservation Report (Revised)



Please Note:
This is not a
legal land
survey. All
dimensions
and locations
are shown as
approximate.

1.4 Description of Undertaking (TCR)

The proposed Site Plan is included below. The Site will be developed to include a six (6) storey residential building with approximately 196 units. The Site will be developed in two (2) phases, with the northern half of the Site developed first (Phase 1 – 95 units) and the southern half of the Site developed second (Phase 2 – 101 units). Phase 1 will include approximately twelve (12) surface parking spaces and Phase 2 will include approximately fourteen (14) surface parking spaces. Two (2) levels of underground parking will be included below the building. Vehicle entrances to the Site will be provided from Klondike Road and March Road, with pedestrian access from March Road. The Site Plan includes a 30 m setback from the normal high-water mark of Shirley's Brook. All existing vegetation within the 30 m setback will be retained. The Site will receive municipal sewer and water. Stormwater will be directed to the existing March Road storm sewer, which outlets to the existing SWMP Pond No.1 – West. The existing SWMP Pond No.1 - West was sized to provide quantity and quality control for the Site.



PROJECT INFORMATION

Zoning	City of Ottawa zoning By-law No. 2008-250
Property Area	12210.01 sq. m 131 429 sq. ft.

PROJECT STATISTICS	APARTMENT BUILDING PHASE 1 & PHASE 2
BUILDING HEIGHT (m)	20.81m
GROSS FLOOR AREA	16175.56m ²

UNIT STATISTICS	APARTMENT BUILDING PHASE 1	APARTMENT BUILDING PHASE 2
1 Bedroom	24	24
1 Bedroom + Den	13	13
2 Bedroom	35	35
2 Bedroom + Den	17	17
3 Bedroom	6	6
TOTAL	95	95
1 Bedroom	24	24
1 Bedroom + Den	35	35
2 Bedroom	30	30
2 Bedroom + Den	5	5
3 Bedroom	6	6
TOTAL	101	101
GRAND TOTAL	196	196

PARKING	REQUIRED	PROVIDED
PHASE 1 & 2	120	124
PHASE 1 - APARTMENT BUILDING - 95 UNITS	0.20	19
PHASE 1 - VISITORS	1.20	121
PHASE 2 - APARTMENT BUILDING - 101 UNITS	0.20	20
PHASE 2 - VISITORS	0.20	20
TOTAL	274	270
Phase 1 - Reduced parking stalls (Sec.106 up to 40%)	46	2
Phase 2 - Reduced parking stalls (Sec.106 up to 40%)	48	3
Phase 1 & Phase 2 - Accessible parking	7 (3 Type A + 4 Type B)	7
Visitor - Accessible parking	2 (1 Type A + 1 Type B)	2

BICYCLE PARKING	REQUIRED	PROVIDED
PHASE 1 & 2	50	48
PHASE 1 - APARTMENT BUILDING - 95 UNITS	0.50	51
PHASE 2 - APARTMENT BUILDING - 101 UNITS	0.50	51
TOTAL	99	99

GENERAL MIXED USE ZONE - GM	REQUIRED	PROVIDED
ZONE PROVISION	NO MINIMUM	12210.01m ²
MINIMUM LOT AREA	NO MINIMUM	64.62m
MIN. FRONT YARD SETBACK	3m	3.74m
MIN. CORNER YARD SETBACK	3m	3.10m
MINIMUM INTERIOR SIDE YARD SETBACK	3m	40.33m
MINIMUM REAR YARD SETBACK	1.2m	1.2m
MAXIMUM BUILDING HEIGHT	18m	20.81m
MAXIMUM FLOOR SPACE INDEX	2	1.33
MINIMUM WIDTH OF LANDSCAPE AREA	3m	3.10m
MINIMUM WIDTH OF DRIVE AISLE FOR PARKING LOT	6.7m	6.7m
MIN. WIDTH OF DRIVE AISLE FOR PARKING GARAGE	6.0m	6.0m
MAXIMUM PERMITTED PROJECTIONS	2.0m	1.3m

AMENITY AREA	REQUIRED	PROVIDED
ZONING BY-LAW SECTION 137	1176m ²	1840 m ²
MIN. FOR APARTMENT DWELLINGS: 6m ² UNIT	588m ²	618 m ²
MINIMUM 50% COMMUNAL	54m ²	496 m ²
AT LEAST ONE AREA + 5m ²	-	224 m ²
Basement 1: Resident Common Amenity Area	-	224 m ²
Basement 1: Exterior terrace	-	1018 m ²
Ground floor Balconies / Terraces	-	1176m ²
Second to sixth floor: Balconies	-	1840 m ²
TOTAL	1176m ²	1840 m ²

WASTE MANAGEMENT	REQUIRED	PROVIDED
PHASE 1 - 95 UNITS	0.11/UNIT	10.45y ³
GARBAGE - LOOSE	0.018/UNIT	1.1y ³
RECYCLING - FEL GLASS METAL PLASTIC	0.038/UNIT	3.61y ³
RECYCLING - FEL FIBER	240/50 UNIT	1.9L
ORGANICS	240/50 UNIT	2.20L
PHASE 2 - 101 UNITS	0.11/UNIT	11.11y ³
GARBAGE - LOOSE	0.018/UNIT	1.819y ³
RECYCLING - FEL GLASS METAL PLASTIC	0.038/UNIT	3.639y ³
RECYCLING - FEL FIBER	240/50 UNIT	2.02L
ORGANICS	240/50 UNIT	2.20L

SIGNS SHALL BE PROVIDED FOR ALL VISITOR PARKINGS, BARRIER FREE PARKINGS & FIRE ROUTES. ALL THE SIGNS SHALL FOLLOW THE SPECIFICATIONS OF THE CITY OF OTTAWA.

THE PARKING SIGNS WILL BE LABELED AS:

- "VISITOR ONLY"
- "RESIDENT ONLY"
- "ACCESSIBLE PARKING"
- AND REINFORCED "UNAUTHORIZED VEHICLES TOWED AWAY"

GENERAL NOTE: WHEN RETAINING WALLS ARE GREATER THAN 1 METER IN HEIGHT THE DESIGN WILL BE DONE BY A STRUCTURAL ENGINEER.

SNOW STORAGE NOT PROVIDED ON SITE. SNOW WILL BE REMOVED FROM SITE.

PARKING, DRIVEWAY, PATHWAY AND TERRACE LIGHTING TO BE PROVIDED WITH LIGHTING FIXTURES LOCATED ON BUILDINGS.

LEGEND
PROPERTY LINE
EXISTING OVERHEAD CABLES
GUARDRAILS
BUILDING AREA
LANDSCAPING, REFER TO LANDSCAPE DRAWINGS.
BUILDING ENTRANCE / EXIT (GROUND FLOOR)
BUILDING EXIT (BASEMENT LEVEL 1)
TRAFFIC DIRECTION
EXISTING CYCLE PATH
BICYCLE PARKING
CAR PARKING
R: RESIDENTIAL (WITH PHASES)
V: VISITOR
BARRIER FREE PARKING (TYPE B)
R: RESIDENTIAL (WITH PHASES)
V: VISITOR
BARRIER FREE PARKING (TYPE A)
R: RESIDENTIAL (WITH PHASES)
V: VISITOR

LEGAL DESCRIPTION:
This property is legally described as Part of Lot 10, Concession 4, Geographic Township of March, City of Ottawa

TOPOGRAPHICAL INFORMATION:
Property boundary has been derived from plan prepared by J.D. Barnes Limited. Topographical information has been prepared by DSEL Engineering Ltd.

Scale/Note: 1:200
0 5 10 15 p/m

SITE PLAN

NOTES GENERALES / General Notes

1. Ces documents d'architecture sont la propriété exclusive de NEUF architectes et ne peuvent être utilisés, reproduits ou copiés sans autorisation écrite au préalable.
2. Les dimensions appaissant aux documents doivent être vérifiées par l'entrepreneur avant le début des travaux. / All dimensions which appear on the documents must be verified by the contractor before starting the work.
3. Veuillez éviter l'archivage de tous documents enroulés ou dérangés, entre ces documents et ceux des autres professionnels. / The architect must be notified of all errors, omissions and discrepancies between these documents and those of other professionals.
4. Les dimensions sur ces documents doivent être basées et non mesurées. / The dimensions on these documents must be read and not measured.

PLANNING / Planneur
FOTENN Planning and Urban design
235, Volonté Street, Ottawa, ON K2P 1G3
1-877-735-5789 fotenn.com

ARCHITECTURE / Architecte
FOTENN Planning and Urban design
235, Volonté Street, Ottawa, ON K2P 1G3
1-877-735-5789 fotenn.com

INGENIERIE TRANSPORT / Engineering Transportation
PARSONS
1000, Carleton Place, Ottawa, ON K2H 1T2
1-877-735-5789 parsons.com

CIVIL / CIVIL
DSEL
100, New Road, Suite 100, Ottawa, ON K2H 1G3
1-877-735-5789 dsel.com

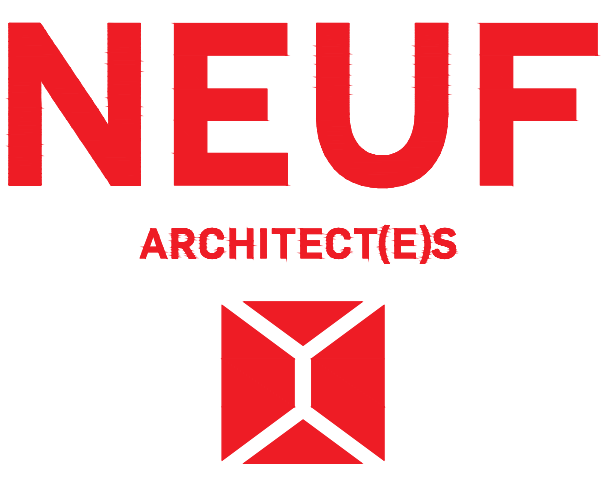
ARCHITECTES / Architects
NEUF architecte(s)
800, Saint-Jacques Street, Ottawa, ON K2H 1G3
1-877-735-5789 neufarchitecte.com

MECANIQUE / Mechanical
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ELECTRIQUE / Electrical
Smith + Andersen
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1-877-735-5789 smithandanderson.com

STRUCTURE / Structural
LEVOUX-CYR
1000, Carleton Place, Suite 100, Ottawa, ON K2H 1T2
1-877-735-5789 levoxcyr.com

SCAU / SCAU



CLIENT / Client
10731854 CANADA INC.
47, Concession Street, Suite 100, Ottawa, ON K2H 1G4

OUVRAGE / Project
788 MARCH ROAD

EMPLACEMENT / Location
OTTAWA

NO.	REVISION	DATE (aa.mm.jj)
1	FOR PRELIMINARY	2018-06-18
2	ISSUED FOR COORDINATION	2018-06-22
3	ISSUED FOR COORDINATION	2018-07-06
4	ISSUED FOR COORDINATION	2018-11-29
5	ISSUED FOR COORDINATION	2018-12-08

Preliminary
do not use for construction

DESIGNER / Drawn by
M.S. / E.C.

VERIFIER / Checked by
A.C.

DATE (aa.mm.jj)
18.12.07

ÉCHELLE / Scale
AS SHOWN

SITE PLAN

1.5 Agency Consultation

The proponent has discussed the current development proposal with the City of Ottawa and the Mississippi Valley Conservation Authority (MVCA). An Information and Records Request Response was received from the Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District (Appendix B). As noted below, the OMNRF Kemptville District has also reviewed the Ontario Endangered Species Act (ESA) submission for the project.

1.6 Regulatory Requirements (TCR)

The following is a summary of the anticipated natural heritage regulatory requirements:

- **Ontario Endangered Species Act (ESA) – Development Review:** As discussed below in Section 3.7, previous studies have demonstrated that Shirley's Brook provides Category 2 habitat for Blanding's Turtle. Category 2 habitat includes the watercourse itself and the surrounding 30 m of terrestrial habitat. The proposed 30 m vegetated setback from the normal high-water mark of Shirley's Brook will avoid all areas of Category 2 habitat. Category 3 habitat extends an additional 220 m beyond the limit of Category 2 habitat. The development area of the Site falls within the definition of Category 3 habitat. However, the Category 3 habitat found within the Site has little functional habitat value, due to the fact that all surrounding areas are developed. The proposed Site Plan will protect all areas of Category 2 habitat, while removing non-functional areas of Category 3 habitat. The project has been submitted to the OMNRF Kemptville District through submission of the Ontario Endangered Species Act Information Gathering Form (IGF) and the Alternatives Assessment Form (AAF). The OMNRF has completed their review of these materials and has confirmed that significant impacts to Blanding's Turtle and their habitat are anticipated to be avoided, pending that the mitigation measures outlined in the IGF and AAF are implemented appropriately. The mitigation measures described in the IGF and AAF are the same as those included in this Combined EIS and TCR. Therefore, an Overall Benefit Permit under the Ontario Endangered Species Act is not required. An email from the OMNRF confirming this determination is included in Appendix C. Other than the habitat of Blanding's Turtle, no other significant Species at Risk (SAR) issues were noted for the Site.
- **Ontario Endangered Species Act (ESA) – Pathway Review:** As discussed below in Section 4.2.2, a Conceptual Pathway location is shown on the Site Plan. Conceptually, a 2 m wide City of Ottawa stone dust pathway is shown east of the development area. The pathway occurs at the edge of the 30 m setback from the normal high-water mark of Shirley's Brook, with small portions of the pathway overlapping the setback area. The Conceptual Pathway location has been discussed with the OMNRF, and the OMNRF confirmed that due to the fact that portions of the pathway are proposed within Category 2 Blanding's Turtle habitat, the pathway will ultimately require review under the Ontario Endangered Species Act. The OMNRF acknowledged that the pathway

review process may be undertaken separate of the development, and that the Endangered Species Act review for the pathway should be addressed as a follow-up requirement, once the detailed pathway design is available and the pathway construction is ready to proceed. Further detail is provided below in Section 4.2.2.

- **Ontario Regulation 153/06:** Ontario Regulation 153/06 regulates activities that would alter shorelines, watercourses, and wetlands. As noted above, the Site Plan includes a 30 m vegetated setback from the normal high-water mark of Shirley's Brook. However, the project falls within the regulated area surrounding Shirley's Brook, and therefore a permit from the Mississippi Valley Conservation Authority (MVCA) under O.Reg 153/06 is anticipated to be required.
- **Fisheries Act:** As noted above, no alteration to Shirley's Brook is proposed. As such, a review under the Fisheries Act should not be required.
- **Tree Removal Permit:** The City of Ottawa will require obtainment of a Tree Removal Permit under the Urban Tree Conservation By-law No. 2009-200 prior to the commencement of tree clearing. The Tree Removal Permit is typically issued following acceptance of the TCR.

2.0 METHODOLOGY

2.0.1 Vegetation Survey and Tree Inventory Methodology (TCR)

A site visit to inventory plants and measure tree sizes was completed by Dr. McKinley on August 29th, 2017. Weather conditions during the site visit included sunny conditions and a temperature of 16 °C.

The following terms are used throughout this report:

- Diameter at Breast Height (dbh) means the measurement of the trunk of a tree at a height of 120 cm above grade for trees 15 cm diameter or greater, and at a height of 30 cm above grade for trees less than 15 cm diameter.
- The Critical Root Zone (CRZ) is 10 centimeters from the trunk of the tree for every centimeter of trunk dbh. The CRZ is calculated as $dbh \times 10 \text{ cm}$.

Vegetation communities within the Site were classified following the Ecological Land Classification (ELC) methodology (OMNRF 1998; Lee 2008). Tree measurements were completed in areas of continuous tree cover (the Cultural Woodlot) by undertaking TCR sampling plots, whereas linear transects were employed to inventory the Deciduous Hedgerow. Plots were measured 5 m by 10 m to give a total survey area of 50 m² (for each plot). Plots were distributed evenly within the treed portion of the Site to achieve the desired density of 1 plot per hectare. Hedgerows are too narrow to allow sampling using plots. Instead, transects were employed to sample the Deciduous Hedgerow. Each transect was 20 m long and every tree with 10 cm dbh or greater along the transect was measured. Trees within each plot/transect that were 10 cm dbh or greater were measured with the use of a D-tape, which is a calibrated dbh tape.

2.0.2 EIS Methodology

The presence of natural heritage features was assessed by completing the following:

- Site surveys to describe vegetation communities and inventory trees (see above);
- Site surveys to assess the potential for habitat of Species at Risk (SAR), wetlands, fish habitat, Significant Wildlife Habitat (SWH) features, and other significant habitat features to be present;
- Review of the Kanata North Urban Expansion Area (KNU EA) Existing Conditions Report (MEP 2016), the KNU EA Community Design Plan (CDP) (Novatech 2016a), and the KNU EA Environmental Management Plan (EMP) (Novatech 2016b), as well as associated background environmental reports;
- Examination of aerial imagery to evaluate landscape features;
- Natural Heritage Information Center (NHIC) database review;
- Obtainment of an Information and Records Request Response from the OMNRF (Appendix B);
- Review of the background geotechnical report (Geofirma 2018); and
- Review of Official Plan designations.

During the plant survey the Site was searched for endangered Butternut Trees, although none were found. The extent of Blanding's Turtle habitat was defined based on known occurrences of the species in the region, as documented by MEP (2016). Due to the fact that Blanding's Turtles have previously been documented in Shirley's Brook within 2 km of the Site, Shirley's Brook within the vicinity of the Site is automatically designated as Blanding's Turtle habitat (OMNRF 2014b). It was therefore not necessary to complete an updated survey for the species within the vicinity of the Site, as Shirley's Brook would continue to be considered habitat for the species, regardless of the outcome of an updated survey.

3.0 EXISTING CONDITIONS

3.1 Geological Conditions

The Site elevation is approximately 78 m ASL at March Road, sloping down to approximately 72 m ASL at Shirley's Brook. The development area is well drained, with no surface water noted. The Site is located within the Clay Plains physiographic region with dolostone and sandstone bedrock of the Beekmantown Group (Geofirma 2018). Geofirma (2018) note that the Site consists of a layer of topsoil approximately 0.3 m thick, underlain with clay and silt to approximately 5 m to 6 m belowground surface. Geofirma (2018) assessed the slope down to Shirley's Brook and concluded that there is low potential for slope instability, with no significant erosion and no evidence of past instability.

3.2 Site History (TCR)

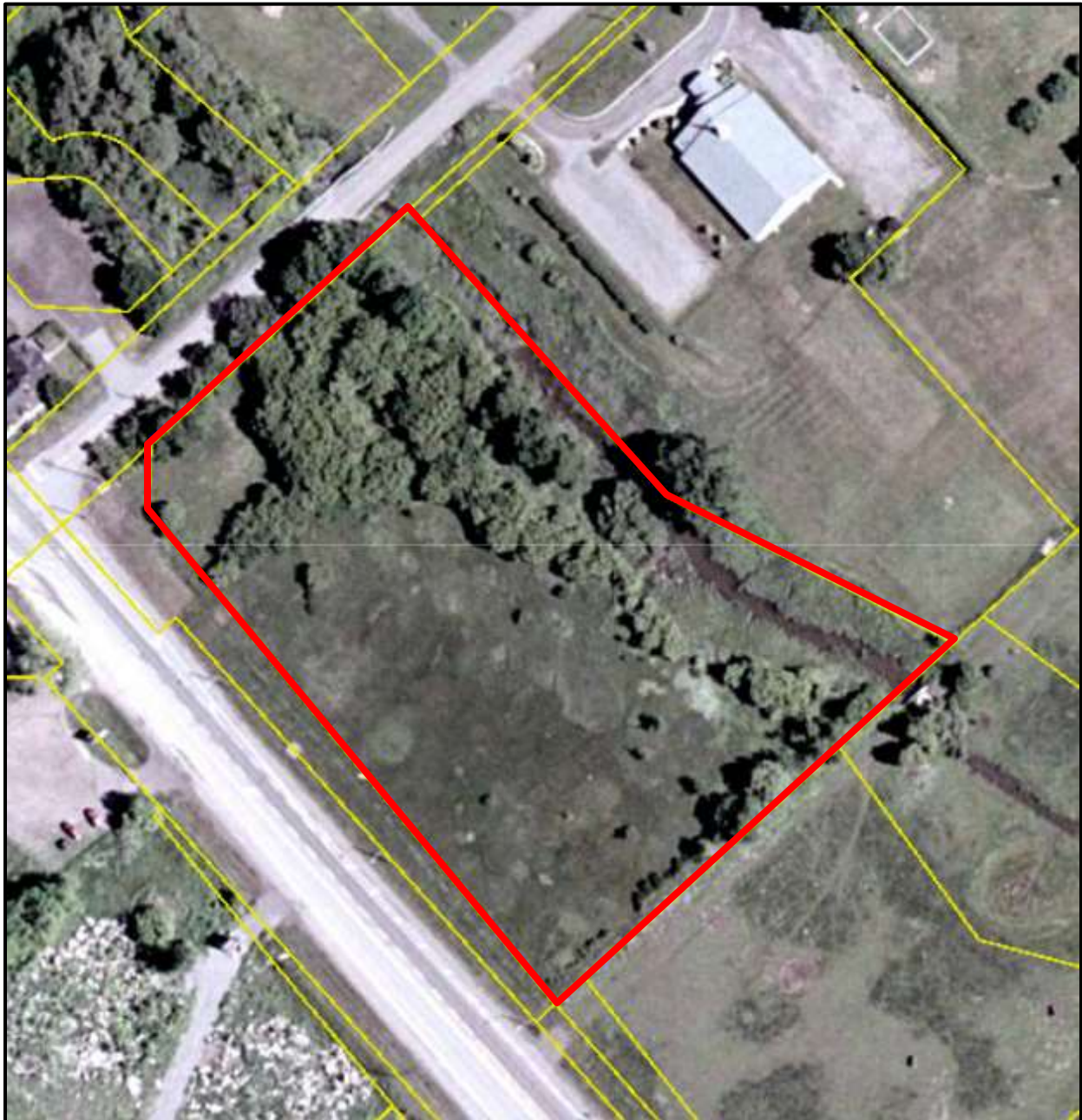
Air photos from 1976, 1991 and 2005 are included below (Photos from City of Ottawa 2018). Recent air photos are included in the report figures. The oldest available historic air photo (from 1976), shows that the Site was farmed at that time. In 1976, tree cover appears to be limited to hedgerows along the northern and southern property boundary. Tree cover is also present along the west side of Shirley's Brook in the northern part of the Site. This suggests that while individual trees that are currently found on Site may have begun growing prior to 1976 (particularly in the northern part of the Site), the majority of tree cover that is currently found within the Cultural Woodlot began growing after 1976. The large Bur Oak found east of Shirley's Brook appears to be present in 1976. A farm house and agricultural buildings are also present in the northwest corner of the Site in 1976. By 1991, trees in the northern part of the Site appear larger, but the overall extent of tree cover is similar to 1976. The farm house appears to have been demolished by 1991, although a barn remains visible. By 2005, the Site appears to be fallow and tree cover has expanded along the edge of Shirley's Brook and in the northern part of the Site. Much of the Cultural Woodlot that is currently found at the Site can be seen growing in 2005. The large Bur Oak found east of Shirley's Brook continues to be present. All buildings within the Site were demolished by 2005.



Historic Air Photograph 1: Historic Air Photo from 1976 (Site limits shown in red). Note the Site appears to be farmed and tree cover appears to be limited to hedgerows along the northern and southern property boundary in 1976. Tree cover is also present along the west side of Shirley's Brook in the northern part of the Site. The large Bur Oak found east of Shirley's Brook appears to be present in 1976. A farm house and agricultural buildings are also present in the northwest corner of the Site in 1976 (Photos from City of Ottawa 2018).



Historic Air Photograph 2: Historic Air Photo from 1991 (Site limits shown in red). Note the Site appears to be farmed and tree cover appears to be limited to hedgerows along the northern and southern property boundary in 1991. Tree cover is also present along the west side of Shirley's Brook in the northern part of the Site. The large Bur Oak found east of Shirley's Brook appears to be present in 1991. The farm house appears to have been demolished by 1991, although a barn remains (Photos from City of Ottawa 2018).



Historic Air Photograph 3: Historic Air Photo from 2005 (Site limits shown in red). Note the Site appears to be fallow and tree cover has expanded along the edge of Shirley's Brook and in the northern part of the Site. The large Bur Oak found east of Shirley's Brook continues to be present. All buildings within the Site have been demolished by 2005 (Photos from City of Ottawa 2018).

3.3 Vegetation Communities (TCR)

3.3.1 Plant Communities

Vegetation communities found within the Site are shown in Figure 2. Refer to Appendix A for a list of plants found within the Site. The Site includes the following terrestrial vegetation communities:

- **Cultural Meadow:** The majority of the western part of the Site is occupied by an overgrown Cultural Meadow. Historic air photos indicate that the Cultural Meadow was farmed until sometime in the 1990s, although it appears to have been fallow since the early 2000s. The Cultural Meadow is dominated by Brome and Meadow Grasses, Timothy, Green Foxtail, Canada Goldenrod, and Common Tansy. Groundcover also includes Common Ragweed, Lamb's Quarters Pigweed, Canada Thistle, Bull Thistle, Queen Anne's Lace, Daisy Fleabane, Common Milkweed, Prickly Lettuce, Ox-eye Daisy, Curled Dock, and Sow Thistle. The Cultural Meadow has negligible tree cover, which includes a few small dead White Ash and White Elm stems. Shrub cover includes Wild Red Raspberry, Common Buckthorn, and Hawthorn.
- **Deciduous Hedgerow:** A sparse Deciduous Hedgerow is present along the southern Site boundary. The Deciduous Hedgerow includes Manitoba Maple, Bur Oak, and American Elm up to 30 cm dbh. However, the majority of the hedgerow is dominated by Hawthorn and Common Buckthorn shrubs.
- **Cultural Woodlot:** A highly degraded Cultural Woodlot is located in the northern part of the Site. The woodlot is dominated by invasive Manitoba Maple, which account for approximately 80% of stems. Manitoba Maple average approximately 30 cm to 50 cm dbh, although a few larger trees up to 80 cm dbh are present (discussed below). Large Manitoba Maple are not typically considered significant trees, due to the fact that they are an invasive species. The remainder of stems within the woodlot include White Ash, Sugar Maple, Bur Oak, and American Elm, with most stems 30 cm to 40 cm dbh in size. Larger old White Ash are either dead or dying due to the effects of the invasive Emerald Ash Borer. Shrub cover includes a high proportion of invasive Common Buckthorn as well as Staghorn Sumac, Skunk Currant, Riverbank Grape, and Wild Red Raspberry. Groundcover is dominated by invasive species including Dog Strangling Vine and Garlic Mustard. Groundcover also includes many weedy species that are common in highly disturbed woodlots including Virginia Creeper, Common Burdock, Lamb's Quarter's Pigweed, Queen Anne's Lace, White Sweet Clover, Canada Goldenrod, and Canada Violet.
- **Large Trees:** Several Manitoba Maples up to 80 cm dbh are present within the eastern part of the Cultural Woodlot. As noted above, the largest specimens found along the west side of Shirley's Brook have been present since at least 1976. However, these trees are not considered significant, due to the fact that Manitoba Maple is an invasive species. A 71 cm dbh Sugar Maple is present in the northeastern part of the Site at the edge of the Cultural Woodlot, adjacent to

the riparian corridor. The largest Manitoba Maples and the 71 cm dbh Sugar Maple are present within approximately 15 m of Shirley's Brook, and hence will fall within the 30 m vegetated setback from Shirley's Brook. A 107 cm dbh Bur Oak is present immediately adjacent to the eastern Site boundary, east of Shirley's Brook. The large Bur Oak has been present at the Site since at least 1976, although its size suggests that it is older. The Bur Oak is located on the opposite side of Shirley's Brook (relative to the development), and hence the tree will be retained. As shown in the historic air photos (above), the majority of older trees found within the Site are located close to Shirley's Brook. As such, the majority of older trees will be retained within the 30 m vegetated setback from the watercourse.



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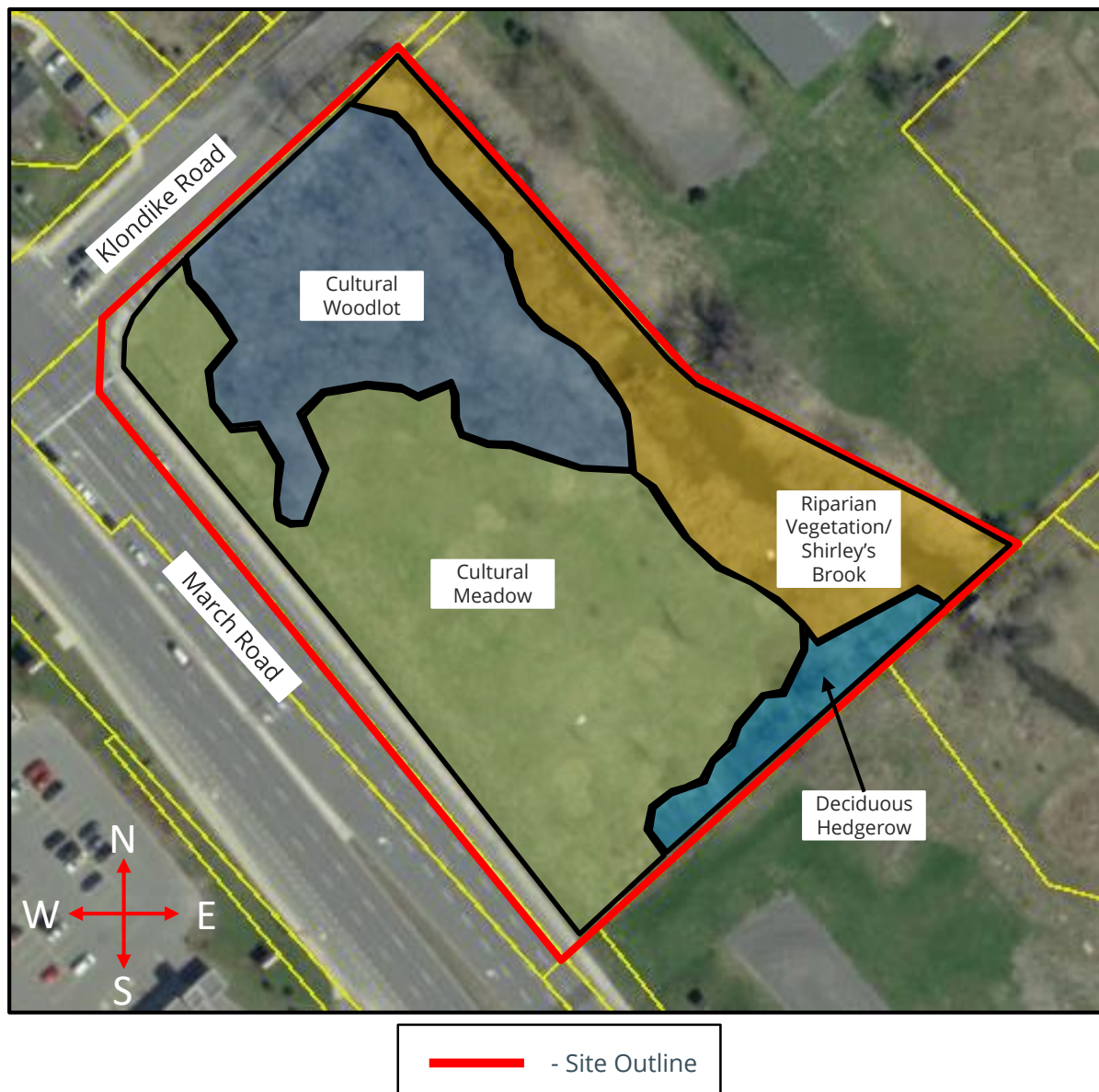
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FIGURE 2: VEGETATION COMMUNITIES

788 March Road, Ottawa, Ontario

Combined Environmental Impact Statement & Tree Conservation Report (Revised)



Please Note:
This is not a
legal land
survey. All
dimensions
and locations
are shown as
approximate.



Photograph 1: Looking north along March Road (left). The Cultural Meadow (right) and the Cultural Woodlot (background) are shown (August 29th, 2017).



Photograph 2: Looking northeast at the Cultural Meadow and the Cultural Woodlot (background) (August 29th, 2017).



Photograph 3: Looking west from the culvert at Klondike Road (right). The Cultural Woodlot is on the left, a pool in Shirley's Brook at the Klondike Road culvert is shown in the foreground (August 29th, 2017).



Photograph 4: Looking southeast at the Deciduous Hedgerow (August 29th, 2017).

3.3.2 Significant Woodlot Assessment

The Cultural Woodlot is a highly degraded feature that is dominated by invasive trees (Manitoba Maple) with a high proportion of invasive groundcover (Dog Strangling Vine, Garlic Mustard, etc.). The following is a summary of the provincial Significant Woodlot criteria for the Cultural Woodlot (OMNRF 2005):

- **Woodland Size Criteria** – The Study Area is within the Ottawa West Minor Watershed, which has approximately 38% forest cover (City of Ottawa 2011). In planning areas with 30-60% forest cover, woodlots 60 ha or larger would qualify under the size criteria. The Cultural Woodlot is <0.5 ha in size, and therefore the Cultural Woodlot is too small to qualify under the woodland size criteria.
- **Interior Forest Habitat** – Forested areas 100 m from an opening that is 20 m or greater in size are considered interior forest habitat. The Cultural Woodlot is surrounded by openings on all sides, and there is no area within the woodlot that is more than 100 m from an opening. As such, there is no interior forest habitat provided by the Cultural Woodlot.
- **Proximity to Other Woodlands/Habitats** – Woodlots within 30 m of another significant feature meet this criteria. As discussed below, the only significant feature within 30 m of the Cultural Woodlot is Shirley's Brook. Shirley's Brook will be protected by maintaining a 30 m vegetated setback from the normal high-water mark.
- **Water Protection** – The only water feature within close proximity to the Cultural Woodlot is Shirley's Brook. Again, Shirley's Brook will be protected by maintaining a 30 m vegetated setback from the normal high-water mark.
- **Linkages** – The Site is bordered by existing development on its northern, western and southern sides. Shirley's Brook is the only significant natural heritage feature in the vicinity. The Site itself is not located between any two (2) adjacent natural heritage features, and as such, it is unlikely to provide a habitat linkage function. Shirley's Brook may provide a corridor for wildlife movement. The potential for Shirley's Brook to provide a corridor for wildlife movement will be preserved by the proposed 30 m vegetated setback from the normal high-water mark.
- **Woodlot Diversity** – As described above, the plant diversity within the Cultural Woodlot is low, and the feature is dominated by invasive species (Manitoba Maple, Common Buckthorn, Garlic Mustard, Dog Strangling Vine, etc.). Disturbed regrowth Cultural Woodlots are common throughout the region in degraded agricultural lands. The Cultural Woodlot does not contain exceptional plant diversity, and no regionally rare forest plant species were noted.
- **Uncommon Characteristics** – Uncommon forest types, environmental features, or plant communities may contribute to woodlot significance. Also, forest stands older than 100 years would be considered significant. As discussed above in Section 3.2, historic air photos indicate that the majority of tree cover within the Cultural Woodlot is relatively recent, with most of the

feature not being present in the 1976 and 1991 historic air photos. However, as noted above, individual older trees are present. As discussed above, the majority of older trees found within the Site will be preserved within the 30 m vegetated setback from Shirley's Brook.

- **Economic and Social** – Woodlots which contribute special economic or social functions can qualify under this criteria. The Cultural Woodlot is located on private property, and no evidence of recreational usage has been noted. The Cultural Woodlot is degraded and dominated by invasive species, and hence does not provide significant aesthetic value.

In summary, available evidence suggests that the Cultural Woodlot does not qualify as a Significant Woodlot under any of the provincial assessment criteria. The Site is within the urban area of the City of Ottawa, and hence the City of Ottawa's urban criteria for Significant Woodlots also applies. The City of Ottawa's urban area criteria recognizes woodlots greater than 0.8 ha in size and older than 40 years of age as potential Significant Woodlots. As noted above in Section 3.2, historic air photos show that the majority of the Cultural Woodlot began growing after 1976 and hence is younger than 40 years of age. The Cultural Woodlot is also <0.5 ha in size. Therefore, the Cultural Woodlot does not qualify as a Significant Woodlot under either the provincial criteria or the City of Ottawa's urban area criteria.

The most significant functions of the Cultural Woodlot have to do with its proximity to Shirley's Brook and the potential for water protection. As discussed below, the preservation of a 30 m vegetated setback from the normal high-water mark is anticipated to be sufficient to protect the habitat functionality of Shirley's Brook. The 30 m vegetated setback is also anticipated to protect the majority of older trees found within the Site.

3.4 Wetlands and Watercourses

The Site is well drained and does not include any wetland areas or watercourses within the western part of the Site. A tributary of Shirley's Brook and its associated riparian corridor is found along the eastern Site boundary. The headwaters of Shirley's Brook are in the South March Highlands, west of Terry Fox Drive in Kanata (Ottawa). The watercourse flows from the South March Highlands to Shirley's Bay, where it outlets to the Ottawa River. Shirley's Brook passes through both developed and natural areas throughout Kanata.

In the vicinity of the Site, Shirley's Brook has a wetted width of 2 m to 3 m with water depth ranging from approximately 30 cm to 50 cm. At the time of the site visit (August 2017), the watercourse was well hydrated but mostly stagnant, although it likely experiences flow during precipitation events. Two (2) large box culverts are present within the vicinity of the Site. The southern culvert is an older box culvert present adjacent to the southeast corner of the Site. The northern culvert is a modern concrete box culvert present at Klondike Road. Both culverts are large enough to allow movement of Blanding's Turtle and other wildlife. A large pool is present in the watercourse at the Klondike Road culvert (the northern culvert). Shirley's Brook in the vicinity of the Site is sufficiently hydrated that it is likely to provide year-round habitat for fish, turtles, and other aquatic wildlife.

Shirley's Brook in the vicinity of the Site has a silt/clay substrate with abundant woody debris cover and aquatic vegetation. No significant evidence of erosion or bank undercutting was noted. Aquatic plants found within Shirley's Brook included Water Shield, Common Duckweed, Common Cattail, Tall Ironweed, and Purple Loosestrife. Plants found within the riparian corridor included Tall Ironweed, Reed Canary Grass, Spotted Joe Pye Weed, Spotted Touch Me Not, Purple Loosestrife, and Common Stinging Nettle growing on the slope around the watercourse. The west side (development side) of the riparian corridor included a sparse row of Manitoba Maple up to 30 cm dbh in size. Several Crack Willow are also present on the west side of the watercourse. The east side of the riparian corridor includes a single large Bur Oak (107 cm dbh, discussed above) as well as sparsely growing Manitoba Maple up to 30 cm dbh and Black Walnut up to 20 cm dbh (discussed below). A Lilac hedge and several planted White Spruce are also present along the edge of the eastern side of the riparian corridor (planted along the edge of the adjacent church property). Although trees are present within the riparian corridor, there is very little vegetation overhanging the watercourse, and the majority of the stream length adjacent to the Site is unshaded. The proposed 30 m vegetated setback will maintain the existing tree cover surrounding the watercourse, including the majority of older trees found within the Site.



Photograph 5: Looking north along Shirley's Brook from the southern box culvert. Note the large Bur Oak on the east side of Shirley's Brook is visible on the right (August 29th, 2017).



Photograph 6: Looking south along Shirley's Brook from the northern box culvert (Klondike Road). Riparian vegetation in the northern part of the Site is shown. Note the large Bur Oak on the east side of Shirley's Brook is visible in the center of the photograph (August 29th, 2017).



Photograph 7: The southern box culvert along Shirley's Brook (August 29th, 2017).



Photograph 8: The northern box culvert along Shirley's Brook at Klondike Road (August 29th, 2017).

3.5 Adjacent Lands and Significant Features

The Site is predominantly surrounded by existing developed properties. The area west of the Site includes March Road, beyond which is a developed commercial property. The area north of the Site includes Klondike Road, beyond which is an existing developed commercial property. Shirley's Brook runs along the eastern Site boundary, beyond which is a church and manicured lawn. The area south of the Site includes a vacant property that consists of a manicured lawn and gravel pad. Shirley's Brook is the only significant natural heritage feature located adjacent to the Site.

3.6 Wildlife and Significant Wildlife Habitat

The Site is located close to March Road and Klondike Road, and hence is continuously disturbed by human activity and a high volume of vehicle traffic. Comparatively few wildlife species were observed within the Site including Ring Billed Gull, American Crow, Blue Jay, American Robin, Song Sparrow, European Starling, Grey Catbird, Eastern Grey Squirrel, White Tailed Deer, and Groundhog. Each of these are comparatively common species found in suburban areas. Evidence of American Beaver activity and Green Frogs were observed within Shirley's Brook.

Shirley's Brook may provide amphibian breeding habitat, fish habitat, and habitat for threatened Blanding's Turtle (discussed below). As such, Shirley's Brook can be considered Significant Wildlife Habitat (SWH). No stick nests, migratory bird stopover points, heron rookeries, reptile hibernacula, caves, bedrock fissures, wetlands, or any other features which may qualify as SWH were noted within the Site (OMNRF 2014a).

3.7 Species at Risk

3.7.1 Blanding's Turtle

Ontario Ministry of Natural Resources and Forestry (OMNRF) policy dictates that potentially suitable habitat that occurs within 2 km of a documented Blanding's Turtle sighting is automatically considered habitat for the species (OMNRF 2014b). Sightings of Blanding's Turtle along the tributaries of Shirley's Brook have previously been documented (MEP 2016). This includes documented sightings of the species approximately 820 m and 1,500 m northwest of the Site. Although these sightings were not in close proximity to the Site, they occurred along Shirley's Brook within 2 km, which automatically designates Shirley's Brook as habitat for the species.

The General Habitat Description for Blanding's Turtle (OMNRF 2014b) recognizes three (3) types of habitat:

- **Category 1 Habitat:** Category 1 habitat includes areas where Blanding's Turtle overwinter and nesting areas. Blanding's Turtle typically overwinter in wetlands (as opposed to flowing watercourses) (OMNRF 2014b). There are no wetlands or ponds within the Site or in the immediate vicinity, and the pool of standing water that is found at the Klondike Road culvert is likely too small to allow Blanding's Turtle overwintering. Nesting habitat includes areas of loose sandy fill or gravel where turtles can dig into the substrate to lay their eggs (OMNRF 2014b). There are no natural sand or gravel areas and no artificial stockpiles within the Site. The majority of the ground surface within the Site is occupied by dense vegetation (the Cultural Meadow and the Cultural Woodlot). Therefore, it is unlikely that Category 1 habitat exists within the Site.
- **Category 2 Habitat:** Category 2 habitat includes wetlands and watercourses within 2 km of known Blanding's Turtle occurrences. Category 2 habitat includes the watercourse/wetlands themselves, as well as adjacent terrestrial areas up to 30 m from the water's edge (OMNRF 2014b). The main function of Category 2 habitat is to provide core foraging, basking and living areas that are utilized throughout the majority of the active season (OMNRF 2014b). Shirley's Brook and the surrounding area within 30 m of the watercourse are considered Category 2 habitat. The proposed setback of 30 m from the normal high-water mark of Shirley's Brook will avoid all areas that fall within the definition of Category 2 habitat.
- **Category 3 Habitat:** Category 3 habitat includes terrestrial areas extending up to 250 m from the edge of wetlands and watercourses (e.g. an additional 220 m from the edge of the Category 2 habitat, which includes a 30 m buffer from the normal high-water mark). The main function of Category 3 habitat is to provide corridors that allow Blanding's Turtles to move overland between adjacent Category 1 and 2 habitat features (OMNRF 2014b). The Site is less than 250 m wide, and therefore the entire development area falls within the definition of Category 3 habitat.

However, the Category 3 habitat that overlaps the development area is unlikely to provide any significant habitat function, as the Site is surrounded by developed areas on three (3) sides. The Category 3 habitat within the Site is unlikely to provide significant benefit to Blanding's Turtles, as it does not provide a corridor that connects to any adjacent habitat features. The only aquatic feature in the area is Shirley's Brook, and turtles will continue to be able to enter/exit the portion of the watercourse that exists adjacent to the Site via the existing box culverts that are found along the watercourse, regardless of whether the Category 3 habitat within the Site is developed. As such, although the majority of the Site falls within the definition of Category 3 habitat, the Category 3 habitat provides little functional habitat value.

The loss of non-functional Category 3 habitat is not considered significant. It should be noted that under existing conditions, no fencing is in place that would prevent Blanding's Turtles (and other wildlife) from leaving Shirley's Brook to access March Road and Klondike Road. By providing an avenue of movement to the existing roadways, the Category 3 habitat that is present within the Site exposes Blanding's Turtles (and other wildlife) to significant road mortality risk. Road mortality is considered one of the primary causes of the decline of Blanding's Turtles in Ontario (SARO 2018). As discussed below, although development of the Site will remove areas of non-functional Category 3 habitat, any potential impact to Blanding's Turtles will be mitigated by the construction of a new Blanding's Turtle exclusion system along the eastern development boundary. The exclusion system will provide a benefit to the species, by helping to mitigate the existing risk of road mortality on March Road and Klondike Road.

As discussed above in Section 1.6, the OMNRF has reviewed the project and has confirmed that significant impacts to Blanding's Turtle and their habitat are anticipated to be avoided, pending that the mitigation measures outlined in the Information Gathering Form (IGF) and the Alternatives Assessment Form (AAF) are implemented appropriately. The mitigation measures described in the IGF and AAF are the same as those included in this Combined EIS and TCR. Therefore, an Overall Benefit Permit under the Ontario Endangered Species Act is not required. An email from the OMNRF confirming this determination is included in Appendix C. As discussed below, no other significant Species at Risk (SAR) issues were noted for the Site.

3.7.2 Additional Species at Risk

The Natural History Information Center (NHIC) records for the nine (9) grids that include and surround the Site were reviewed. This included an area 3 km x 3 km in size and all published Species at Risk (SAR) records were noted. An Information and Records Request Response was received from the OMNRF (Appendix B). In addition to Blanding's Turtle (discussed above), the following is a list of SAR which were identified as having the potential to be found in the vicinity of the Site:

- Barn Swallow - Threatened
- Chimney Swift – Threatened
- Bank Swallow - Threatened
- Bobolink – Threatened
- Eastern Meadowlark – Threatened
- Little Brown Bat – Endangered
- Northern Long Eared Bat – Endangered
- Black Tern – Special Concern
- Common Nighthawk – Special Concern
- Northern Map Turtle – Special Concern
- Snapping Turtle – Special Concern
- Butternut Trees – Endangered

The following is a summary of the potential for these species to occur within the Site:

- **Barn Swallow:** Barn Swallows may be found nesting in many anthropogenic structures including old barns and sheds, culverts, and under bridges (SARO 2018). There are no structures found within the Site at the current time, and therefore Barn Swallows are not likely to be a significant concern for future development. The box culverts that are found along Shirley's Brook (adjacent to the Site) were examined during the Site visit, and no evidence of Barn Swallow nests was noted. It should also be noted that the box culverts found adjacent to the Site are not proposed to be altered as part of the undertaking.
- **Chimney Swift:** Chimney Swift nest in open chimneys with rough interior surfaces made from brick and/or stone (SARO 2018). There are no chimneys found within the Site, and therefore Chimney Swifts are unlikely to be a significant concern for future development.
- **Bank Swallow:** Bank Swallows are found nesting in natural and artificial silt and sand deposits with vertical faces (SARO 2018). There are no significant areas of exposed sand or silt within the Site, and therefore Bank Swallows are unlikely to be found nesting within the Site. Although Bank Swallow can be found nesting along watercourse banks, the banks within the Site are heavily vegetated and do not include significant exposed areas of silt or sand. The OMNRF Information and Records Request Response (Appendix B) did not identify Bank Swallows as a

concern. Therefore, Bank Swallows are unlikely to be a significant concern for future development.

- **Bobolink and Eastern Meadowlark:** Eastern Meadowlark and Bobolink are associated with grasslands, old pastures, hayfields, and meadows (SARO 2018). Although the Cultural Meadow found within the Site represents a suitable form of habitat, it is too small (<2 ha) to be utilized by Bobolink and Eastern Meadowlark for nesting. Eastern Meadowlark and Bobolink are known to be area sensitive species, and generally they require continuous areas of suitable habitat that are a minimum of 5 ha in size (OMNRF 2014c; OMNRF 2014d). Surveying for these species is not typically undertaken in areas of suitable habitat <2 ha in size. The entire Site is only approximately 1.45 ha in size, and the Cultural Meadow is <1 ha. Therefore, Eastern Meadowlark and Bobolink are not likely to be a significant concern for future development.
- **Little Brown Bat and Northern Long Eared Bat:** No caves, bedrock fissures, mining shafts, abandoned buildings, or other features which may function as bat hibernacula habitat were noted within the Site. The OMNRF (2011) guidelines for bat surveying are outlined in the *Bats and Bat Habitats: Guidelines for Wind Power Projects*. These guidelines state that deciduous and mixed forest habitats have the potential to provide maternity roosting sites. The only forested area found within the Site is the Cultural Woodlot, however, it is <0.5 ha in size and it provides no interior forest habitat (forest >100 m from an opening). Therefore, it is not suitable for bat roosting.
- **Black Tern:** Black Terns build their nests in shallow marshes (SARO 2018). As discussed above, there are no large wetland habitats found within the vicinity of the Site. The wetland vegetation found along Shirley's Brook is much too small for Black Terns to nest. Therefore, Black Terns are unlikely to be a significant concern for the proposed development.
- **Common Nighthawk:** Common Nighthawk are a species of special concern, and therefore their habitat is not regulated under the Ontario ESA. Common Nighthawk habitat consists of open areas with little or no ground vegetation including rock barrens, lakeshores, mining areas, and recent burns (SARO 2018). As described above, the majority of the Site is vegetated with either tree cover or the Cultural Meadow. Therefore, Common Nighthawk are unlikely to be a significant concern for the proposed development.
- **Northern Map Turtle:** Northern Map Turtle are a species of special concern, and therefore their habitat is not regulated under the Ontario ESA. They are also primarily a riverine species, and typically they would not be found within a small flowing watercourse such as Shirley's Brook (SARO 2018). Most sightings of Northern Map Turtle in the region are associated with the Ottawa River (SARO 2018). Therefore, Northern Map Turtle are unlikely to be a significant concern for the proposed development.
- **Snapping Turtle:** Snapping Turtle are a species of special concern, and therefore their habitat is not regulated under the Ontario ESA. Snapping Turtle are generally common in many aquatic

habitat areas, and they are likely found within Shirley's Brook (SARO 2018). Due to their similar ecology and habitat, the habitat protection and mitigation measures discussed below in relation to Blanding's Turtle would apply equally to Snapping Turtle.

- **Butternut Trees:** Butternut Trees are found in many treed areas throughout the Ottawa Region. However, no Butternut Trees were noted within the Site during the site visit. As noted above, Black Walnuts were observed within the riparian corridor east of Shirley's Brook. Black Walnut appear superficially similar to Butternut Trees. As shown below, the Black Walnut were fruiting at the time of the site visit. The round, smooth and hairless fruit of Black Walnut is a diagnostic feature which distinguishes the species from Butternut Trees. The Black Walnut were assessed and identified by a certified Butternut Health Assessor (Dr. McKinley, BHA #625).

In summary, the presence of the habitat of threatened Blanding's Turtle was the only significant Species at Risk (SAR) concern identified for the Site.



Photograph 9: Example of a Black Walnut found in the riparian corridor east of Shirley's Brook (August 29th, 2017).



Photograph 10: Example of the Black Walnut fruit, photographed at the Site. The round shape and hairless fruit distinguishes Black Walnut from Butternut (August 29th, 2017).

3.8 Linkages

The Site is bordered by existing development on its northern, western and southern sides. Shirley's Brook is the only significant natural heritage feature in the vicinity. The Site itself is not located between any two (2) adjacent natural heritage features, and as such, it is unlikely to provide a habitat linkage function. Shirley's Brook may provide a corridor for wildlife movement. The potential for Shirley's Brook to provide a corridor for wildlife movement will be preserved by the proposed 30 m vegetated setback from the normal high-water mark.

4.0 DESCRIPTION OF ENVIRONMENTAL IMPACTS AND MITIGATION

4.1 Terrestrial Habitat and Tree Removal (TCR)

Trees will be retained throughout the 30 m vegetated setback from the normal high-water mark of Shirley's Brook. As noted above, the largest Manitoba Maples and the 71 cm dbh Sugar Maple are present within approximately 15 m of Shirley's Brook, and hence will fall within the 30 m vegetated setback from Shirley's Brook. The 107 cm dbh Bur Oak is located on the opposite side of Shirley's Brook (relative to the development), and hence the tree will be retained. As such, the majority of older trees will be retained within the 30 m vegetated setback from the watercourse. All existing riparian vegetation will also be retained within the 30 m vegetated setback.

Development of the Site will remove the portions of the Cultural Woodlot and the Deciduous Hedgerow which occur more than 30 m from the normal high-water mark of Shirley's Brook. As discussed above, trees to be removed primarily include young specimens, with a high proportion of invasive species (80% Manitoba Maple). In general, tree removal will affect highly degraded areas with little ecological value. Therefore, the loss of tree cover within the development area is not anticipated to be ecologically significant.

4.1.1 Tree Preservation Measures

The following tree mitigation measures should be implemented to help protect and preserve retained trees:

- Mark the edge of the tree clearing area to ensure only designated trees are removed. Protect the critical root zone (CRZ) of retained trees, where the CRZ is established as being 10 cm from the trunk of a tree for every centimeter of trunk dbh. The CRZ is calculated as $\text{dbh} \times 10 \text{ cm}$;
- Ensure that existing trees are not removed from within the Shirley's Brook setback;
- When trees to be removed overlap with the CRZ of trees to be retained, cut roots at the edge of the CRZ and grind down stumps after tree removal. Do not pull out stumps. Ensure there is not root pulling or disturbance of the ground within the CRZ;
- If roots must be cut, roots 20 mm or larger should be cut at right angles with clean, sharp horticultural tools without tearing, crushing, or pulling;
- Do not place any material or equipment within the CRZ of any tree;
- Do not attach any signs, notices, or posters to any tree;
- Do not damage the root system, trunk, or branches of any tree; and
- Ensure that exhaust fumes from all equipment are directed away from any tree canopy.

4.1.2 Replanting

As noted above, the riparian corridor surrounding Shirley's Brook already includes significant woody vegetation. As such, reforestation of the 30 m vegetated setback is not considered necessary, and the preservation of existing trees within the setback should provide sufficient tree coverage. Trees that are planted within the development area will occur in close proximity to the 30 m vegetated setback. As such, plantings should emphasize the use of native trees and shrubs, which may include those identified in Appendix A. Planting of Ash trees should be avoided due to the high likelihood that any planted Ash trees will become infested with Emerald Ash Borer. The planting locations and specific planting requirements will be confirmed by a detailed Landscaping Plan.



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4.2 Watercourses

4.2.1 Shirley's Brook Setback

As noted above, the Site Plan includes a minimum 30 m wide vegetated setback from the normal high-water mark of Shirley's Brook. Existing vegetation within the setback will be preserved. The purpose of the 30 m setback is to provide a buffer which will help to slow, filter and absorb overland stormwater flow, while also providing habitat for wildlife and wildlife movement. Trees growing within the setback help to protect the watercourse from edge effects including noise, pollution, and other forms of human disturbance. Trees also provide shade which helps to cool surface water temperatures, while they also help to prevent erosion, stabilize banks, and enhance absorption and filtration of overland stormwater flow. As discussed above, the riparian corridor surrounding Shirley's Brook already includes significant tree cover. Geofirma (2018) assessed the slope down to Shirley's Brook and concluded that there is low potential for slope instability, with no significant erosion and no evidence of past instability.

As specified in Section 4.7.3 of the City of Ottawa Official Plan, current policy recommends that the setback from watercourses should be the greater of either 15 m from the top of slope or 30 m from the normal high-water mark of the watercourse. For the Site, the 30 m setback from the normal high-water mark is the greater of the two setbacks. Therefore, the proposed setback conforms to Section 4.7.3 of the City of Ottawa Official Plan. As described above in Section 3.7.1, the 30 m setback also serves to preserve all areas of Category 2 Blanding's Turtle habitat.

The limit of the 30 m setback from the normal high-water mark will be marked prior to the commencement of construction. As discussed below in Section 4.4.2, silt fencing will be required at the construction stage, both to serve as temporary Blanding's Turtle exclusion fencing, and also to protect Shirley's Brook from potential sediment and erosion impacts (discussed below). This fencing will also serve to identify the boundary between the development area and the 30 m setback. Wherever feasible, all construction activities will be undertaken within the Site and construction activities within the 30 m setback from the normal high-water mark will be avoided. If the placement of footings or other construction activities require work to occur within the 30 m setback from the normal high-water mark, any disturbance/excavation will be kept to a minimum. If construction activities result in disturbance to the lands within the 30 m setback, all disturbed areas are to be restored to pre-development conditions. This must include restoring the existing grade and restoration of vegetation by plantings native species following completion of work. Where necessary, restoration activities should be supervised by a landscape architect.

4.2.2 City of Ottawa Pathway

A Conceptual Pathway location is shown on the Site Plan. Conceptually, a 2 m wide City of Ottawa stone dust pathway is shown east of the development area. The pathway occurs at the edge of the 30 m setback from the normal high-water mark of Shirley's Brook, with small portions of the pathway overlapping the setback area. The detailed design of the pathway is not currently available, and it is understood that the final pathway design and layout will be determined in future by the City, and may depend upon pathway connections in adjacent properties, accessibility requirements, and other City of Ottawa design criteria. The Conceptual Pathway location has been discussed with the Ontario Ministry of Natural Resources and Forestry (OMNRF) (phone discussion with Aaron Foss, OMNRF Kemptville District, December 3rd, 2018) and the OMNRF confirmed that due to the fact that portions of the pathway are proposed within Category 2 Blanding's Turtle habitat, the pathway will ultimately require review under the Ontario Endangered Species Act. The OMNRF advised that the pathway review should be undertaken at a later stage once the detailed design of the pathway is available. The OMNRF acknowledged that the pathway review process may be undertaken separate of the development, due to the fact that the development and pathway may be constructed according to different timelines, the pathway will be installed partially on City of Ottawa land, and the pathway may involve construction on several properties at once (e.g. 788 March Road, 760 March Road and other properties to the south of 760 March Road). As such, the Endangered Species Act review for the pathway should be addressed as a follow-up requirement, once the detailed pathway design is available and the pathway construction is ready to proceed. Similarly, Mississippi Valley Conservation Authority (MVCA) requirements for the pathway should also be reviewed once a detailed design is available.

4.2.3 Servicing and Stormwater Management

The Site will receive municipal sewer and water. Stormwater will be directed to the existing March Road storm sewer, which outlets to the existing SWMP Pond No.1 – West. The existing SWMP Pond No.1 - West was sized to provide quantity and quality control for the Site.

4.2.4 Sediment and Erosion Controls

As discussed below in Section 4.4.2, Blanding's Turtle temporary exclusion fencing (re-enforced silt fencing) will be required during construction. This fencing will also serve to mitigate potential sediment and erosion impacts on Shirley's Brook. During construction, existing conveyance systems can be exposed to significant sediment loadings. Although construction is only a temporary situation, a Sediment and Erosion Control Plan will be required to ensure the existing conveyance systems are not negatively impacted by sediment and erosion. The Sediment and Erosion Control Plan will include the following:

- Groundwater in trenches (if present) will be pumped into a filter mechanism, such as a trap made up of geotextile filters and straw, prior to release to the environment;
- Bulkhead barriers will be installed at the nearest downstream manhole in each sewer which connects to an existing downstream sewer (e.g. existing sewers along March Road, if required). These bulkheads will trap any sediment carrying flows, thus preventing any construction-related contamination of existing sewers;
- Seepage barriers will be constructed in any temporary drainage ditches;
- Construction vehicles will leave the site at designated locations. Exits will consist of a bed of granular material, in order to minimize the tracking of mud off-site;
- Any stockpiled material will be properly managed to prevent those materials from entering the sewer systems; and
- Until landscaped areas are sodded or until streets are asphalted and curbed, all catch basins and manholes will be constructed with a geotextile filter sock located between the structure frame and cover.

4.3 Adjacent Lands and Significant Features

As discussed previously, the Site is predominantly surrounded by existing developed properties. The area west of the Site includes March Road, beyond which is a developed commercial property. The area north of the Site includes Klondike Road, beyond which is an existing developed commercial property. Shirley's Brook runs along the eastern Site boundary, beyond which is a church and manicured lawn. The area south of the Site includes a vacant property that consists of a manicured lawn and gravel pad. Shirley's Brook is the only significant natural heritage feature located adjacent to the Site. Shirley's Brook is addressed by the setbacks described above in Section 4.2.



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4.4 Wildlife and Species at Risk

4.4.1 Blanding's Turtle Mitigation and Regulatory Requirements

As discussed above, the 30 m vegetated setback from the normal high-water mark of Shirley's Brook will preserve all areas of Category 2 habitat. Therefore, no loss of Category 2 habitat is anticipated to result from the proposed development. As discussed in Section 3.7.1, the entire development area falls within the definition of Category 3 habitat. However, the Category 3 habitat that overlaps the development area is unlikely to provide any significant habitat function, as the Site is surrounded by developed areas on three (3) sides. The Category 3 habitat within the Site is unlikely to provide significant benefit to Blanding's Turtles, as it does not provide a corridor that connects to any adjacent habitat features. The only aquatic feature in the area is Shirley's Brook, and turtles will continue to be able to enter/exit the portion of the watercourse that exists adjacent to the Site via the existing box culverts that are found along the watercourse, regardless of whether the Category 3 habitat within the Site is developed. As such, although the majority of the Site falls within the definition of Category 3 habitat, the Category 3 habitat provides little functional habitat value.

The loss of non-functional Category 3 habitat is not considered significant. It should be noted that under existing conditions, no fencing is in place that would prevent Blanding's Turtles (and other wildlife) from leaving Shirley's Brook to access March Road and Klondike Road. By providing an avenue of movement to the existing roadways, the Category 3 habitat that is present within the Site exposes Blanding's Turtles (and other wildlife) to significant road mortality risk. Road mortality is considered one of the primary causes of the decline of Blanding's Turtles in Ontario (SARO 2018). Although development of the Site will remove areas of non-functional Category 3 habitat, any potential impact to Blanding's Turtles will be mitigated by the construction of a new Blanding's Turtle exclusion system along the eastern development boundary (discussed below). The exclusion system will provide a benefit to the species by helping to mitigate the existing risk of road mortality on March Road and Klondike Road.

As discussed above in Section 1.6, the OMNRF has reviewed the project and has confirmed that significant impacts to Blanding's Turtle and their habitat are anticipated to be avoided, pending that the mitigation measures outlined in the Information Gathering Form (IGF) and the Alternatives Assessment Form (AAF) are implemented appropriately. The mitigation measures described in the IGF and AAF are the same as those included in this Combined EIS and TCR. Therefore, an Overall Benefit Permit under the Ontario Endangered Species Act is not required. An email from the OMNRF confirming this determination is included in Appendix C.

4.4.2 Blanding's Turtle Fencing and Exclusion System

General mitigation for wildlife during construction, including timing requirements for Blanding's Turtle, are outlined below in Section 4.4.3. In addition to the requirements listed in Section 4.4.3, an exclusion system along the eastern development boundary will be required to prevent Blanding's Turtle from entering the development area (both during construction and post-development). This will include both temporary fencing (at the construction stage) and a permanent exclusion system. The temporary fencing/exclusion system will be installed from the southeast corner of the development, north along the eastern development boundary, until the system connects with Klondike Road in the northeast corner of the development. The exclusion system will be placed between the development edge and the edge of the 30 m setback from the normal high-water mark of Shirley's Brook.

Temporary fencing installed at the construction stage typically consists of wire re-enforced silt fencing that is buried at the bottom. The permanent exclusion system may consist of several different configurations, as described by OMNRF guidance documents (Gunson et al. 2016). Generally, permanent Blanding's Turtle exclusion systems must consist of barriers a minimum of 60 cm tall that are buried into the ground and which are impassable to Blanding's Turtles of all sizes. The barrier materials are typically required to be durable with little maintenance for a minimum of fifteen (15) years. Products typically used may include some combination of stone retaining walls or gabion baskets 60 cm tall, chain link fencing with plastic inserts, and/or purpose built Blanding's Turtle exclusion fencing constructed from plastic sheeting or wire mesh.

The Site Plan shows retaining walls (with guard rails) along the eastern edge of the parking areas which will vary in height between approximately 1 m to 1.6 m tall. The retaining walls are over 60 cm tall, except adjacent to Klondike Road, where the wall gradually tapers down to the road grade. In this area, a supplemental landscaping barrier will be added to address the area where the retaining wall is less than 60 cm tall. The supplemental barrier will be shown on the landscaping plan, and may include a raised planting bed and/or landscaping wall/fence that is a minimum of 60 cm tall. The supplemental landscaping feature is only required for the approximately 5 m to 7 m long section of the retaining wall that will taper down below a height of 60 cm, adjacent to Klondike Road. In combination with the building façade (which itself provides a barrier to turtle movement), the retaining walls and supplemental landscaping barrier form a continuous barrier along the eastern development boundary. OMNRF guidance documents identify that retaining walls that are a minimum of 60 cm tall qualify as a suitable turtle movement barrier (Gunson et al. 2016). Retaining walls are considered superior to the various forms of fencing, as they are highly durable and are unlikely to be damaged by residents, their pets, or wildlife. The combination of retaining walls, the supplemental landscaping barrier, and the building façade is considered sufficient to block turtles

from leaving the Shirley's Brook corridor to enter the future development. In future, this arrangement will reduce the likelihood that turtles may reach Klondike Road and March Road. Beyond the limits of the development, additional fencing may be required in future to tie the 788 March Road Blanding's Turtle exclusion system into adjacent fencing that may be installed in the future, either along Klondike Road or within the adjacent property that may be developed to the south (760 March Road). Where feasible, additional fencing should be provided in future to tie-in the turtle barriers found within 788 March Road to future fencing on adjacent properties.

4.4.3 General Wildlife Mitigation

Potential impacts to Blanding's Turtle and other wildlife at the construction stage may include the following:

- Removal of habitat features and displacement of wildlife from existing habitat areas;
- Potential injury or mortality of adults in terrestrial habitats due to vehicle impacts, during excavations, or during land clearing; and
- Interruption of movement to essential foraging, breeding, or overwintering areas due to site hoarding or sediment and erosion control fencing.

Mitigation for wildlife during tree clearing and construction is summarized here. These recommendations include provisions from the City of Ottawa (2015) *Protocol for Wildlife Protection During Construction*, as well as requirements specific to Blanding's Turtle:

- **Pre-Stressing:** Prior to tree removal, the area should be pre-stressed by traversing the Site with a loud noise such as an excavator horn. This will encourage wildlife to leave the area;
- **Tree Clearing Direction:** Tree clearing should be undertaken in the direction of Shirley's Brook, in order to direct wildlife towards the retained habitat areas surrounding the watercourse;
- **Temporary Exclusion Fencing:** The temporary Blanding's Turtle exclusion fencing (re-enforced silt fencing) will also serve to mitigate potential erosion and siltation impacts (see above);
- **Inspections:** Temporary Blanding's Turtle exclusion fencing should be inspected by a designated staff member prior to commencement of work to ensure that the arrangement will reduce the likelihood of wildlife entering the work area. Any wildlife or significant wildlife habitat features that are encountered will be identified and marked;
- **Sweeps:** Prior to vegetation clearing, preconstruction sweeps of vegetated areas will be undertaken to ensure wildlife are not present. Construction staff will be required to review the mitigation measures included in this report. A designated staff member will be required to conduct daily sweeps each morning prior to commencement of work to ensure wildlife have not

entered the work area. The designated staff member will also periodically inspect the temporary exclusion fencing to ensure there are no gaps or holes in the fence;

- **SAR Encounters:** If SAR are encountered in the work area, construction in the vicinity must be stopped immediately and measures must be taken to ensure the SAR is not harmed. The project biologist and the OMNRF must be contacted to discuss how to proceed prior to commencement of work;
- **General Provisions:** General provisions for Site management include the following:
 - Do not harm, feed, or unnecessarily harass wildlife;
 - Drive slowly and avoid hitting wildlife;
 - Keep the Site tidy and free of garbage and food wastes. Secure all garbage in appropriate sealed containers;
 - Ensure proper Site drainage so that standing water does not accumulate on Site. This will reduce the likelihood that turtles and other wildlife may enter the Site;
 - Any stockpiles should be properly secured with silt fencing to prevent wildlife from accessing areas of loose fill; and
- **Timing Windows:**
 - The core migratory bird breeding season is April 15th to August 15th each year;
 - The Blanding's Turtle active season is defined by OMNRF as April 15th to October 15th each year. The temporary exclusion fencing must be installed prior to work that would occur during the Blanding's Turtle active season; and
 - Therefore, initial site clearing, stripping, and installation of temporary exclusion fencing should be undertaken between October 16th and April 15th.

5.0 CUMULATIVE EFFECTS

Cumulative effects were considered in the design of the mitigation measures outlined in Section 4.0, particularly in the creation of SAR mitigation measures. The majority of the Site is degraded, and therefore the proposed development will not significantly contribute to the cumulative loss of wetlands or forest habitat.

6.0 MONITORING

Construction stage monitoring requirements are outlined in Section 4.4.3 (above). Monitoring will include pre-construction sweeps to inspect fencing and vegetation prior to clearing, and daily sweeps by construction staff. No post-construction monitoring requirements have been identified.



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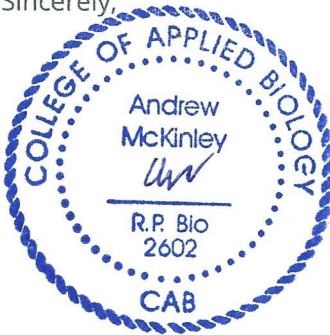
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7.0 CLOSURE

Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the development of the 788 March Road property is not anticipated to have a significant negative effect on the natural features and functions.

We trust that the above information is sufficient; should you have any questions or require further information, please do not hesitate to contact the undersigned, at your convenience.

Sincerely,



Dr. Andrew McKinley, EP, RP Bio.
Senior Biologist, McKinley Environmental Solutions

8.0 REFERENCES

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Konze, K. and McLaren, M. (1998) Wildlife Monitoring Programs and Inventory Techniques for Ontario. NEST Technical Manual TM-009.

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Ontario Ministry of Natural Resources and Forestry (OMNRF) (2014b) General Habitat Description for Blanding's Turtle.

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Species at Risk Ontario (SARO) (2018) Species at Risk Ontario. Retrieved February 5th, 2018 at <<http://www.ontario.ca/environment-and-energy/species-risk-ontario-list>>

APPENDIX A

Master Plant List



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TABLE A: VEGETATION

Common Name	Scientific Name	Provincial S rank	Brunton Significance Ranking for the City of Ottawa (Brunton, 2005)	Vegetation Type
Water Shield	<i>Brasenia schreberi</i>	S5	Common	Aquatic
Common Duckweed	<i>Lemna minor</i>	S5	Common	Aquatic
Common Cattail	<i>Typha latifolia</i>	S5	Common	Aquatic
Tall Ironweed	<i>Vernonia gigantea</i>	S1	n/a	Aquatic
Brome Grass	<i>Bromus</i> sp.		n/a	Grass
Reed Canary Grass	<i>Phalaris arundinacea</i>	SE5	Common (locally abundant introduction)	Grass
Timothy	<i>Phleum pratense</i>	SNA	Common	Grass
Meadow grass sp.	<i>Poa</i> sp.		Common	Grass
Green Foxtail	<i>Setaria viridis</i>	SNA	Common	Grass
Garlic-mustard	<i>Alliaria petiolata</i>	SNA	Common	Herbaceous
Common Ragweed	<i>Ambrosia artemisiifolia</i>	S5	Common	Herbaceous
Common Burdock	<i>Arctium minus</i>	SNA	Common	Herbaceous
Common Milkweed	<i>Asclepias syriaca</i>	S5	Common	Herbaceous
Lamb's Quarters Pigweed	<i>Chenopodium album</i>	SNA	Common	Herbaceous
Canada Thistle	<i>Cirsium arvense</i>	S5	Common	Herbaceous
Bull Thistle	<i>Cirsium vulgare</i>	SNA	Common	Herbaceous
Queen Anne's Lace	<i>Daucus carota</i>	SNA	Common	Herbaceous
Daisy Fleabane	<i>Erigeron annuus</i>	S5	Common	Herbaceous
Spotted Joe Pye Weed	<i>Eutrochium maculatum</i>	S5	Common	Herbaceous
Spotted Touch Me Not	<i>Impatiens capensis</i>	S5	Common	Herbaceous
Prickly Lettuce	<i>Lactuca scariola</i>	SNA	Common	Herbaceous
Ox-eye Daisy	<i>Leucanthemum vulgare</i>	SNA	Common	Herbaceous
Purple Loosestrife	<i>Lythrum salicaria</i>	SNA	Common (invasive)	Herbaceous
White Sweet Clover	<i>Melilotus albus</i>	SNA	Common	Herbaceous
Curled Dock	<i>Rumex crispus</i>	SNA	Common	Herbaceous
Canada Goldenrod	<i>Solidago canadensis</i>	S5	Common	Herbaceous
Sow Thistle	<i>Sonchus arvensis</i>	SNA	Common	Herbaceous
Tansy	<i>Tanacetum vulgare</i>	S5	Common	Herbaceous
Common Stinging Nettle	<i>Urtica dioica</i>	SNA	Common	Herbaceous
Canada Violet	<i>Viola canadensis</i>	S5	Common	Herbaceous
Hawthorn	<i>Crataegus chrysocarpa</i>	S5	Common	Shrub

Common Buckthorn	Rhamnus cathartica	SNA	Common (aggressive invasive)	Shrub
Skunk Currant	Ribes glandulosum	S5	Common	Shrub
Wild Red Raspberry	Rubus idaeus	S5	Common	Shrub
Lilac	Syringa vulgaris	SNA	Common	Shrub
Manitoba Maple	Acer negundo	S5	Common	Tree
Sugar Maple	Acer saccharum	S5	Common	Tree
White Ash	Fraxinus americana	S5	Common	Tree
Black Walnut	Juglans nigra	S4	Rare	Tree
White Spruce	Picea glauca	S5	Common	Tree
Bur Oak	Quercus macrocarpa	S5	Common	Tree
Staghorn Sumac	Rhus hirta	S5	Common	Tree
Crack Willow	Salix fragilis	SNA	Common (invasive)	Tree
American or White Elm	Ulmus americana	S5	Common	Tree
Virginia Creeper	Parthenocissus vitacea	S5	Common	Vine
Dog Strangling Vine	Vincetoxicum rossicum	S5	Common	Vine
Riverbank Grape	Vitis riparia	S5	Common	Vine

Provincial ranks (assigned by NHIC)

S5 = Very common within the province with > 1000 occurrences, populations or records
S4 = Common within the province with 21 - 1000 occurrences, populations or records
S3 = Rare within the province with 6 - 20 occurrences, populations or records
SNA = Ranking not available
SE5 = Very common exotic with > 1000 occurrences, populations or records within the province
S? = Unranked, or if followed by a ranking, temporarily assigned (eg. S4?)

APPENDIX B

OMNRF Information Request Response



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Kemptville District

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Wed. Oct 18, 2017

Andrew McKinley
McKinley Environmental Solutions
PO Box 45505, 3151 Strandherd Dr.
Ottawa, Ontario
K2J 5N1
(613) 620-2255
mckinleyenvironmental@gmail.com

Attention: Andrew McKinley

Subject: Information Request - Consent-Variance-Zoning
Project Name: 788 March Road EIS
Site Address: 788 March Road, Ottawa, Ontario
Our File No. 2017_MAR-4243

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:

- Lake (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: American eel, blacknose shiner, bluntnose minnow, brook stickleback, central mudminnow, creek chub, Etheostoma sp., fathead minnow, finescale dace, largemouth bass, logperch, mottled sculpin, northern pike, northern redbelly dace, Notropis sp., pearl dace, pumpkinseed, Rhinichthys sp., rock bass, smallmouth bass, Sticklebacks, 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

If any in-water works are to occur, there are timing windows for which work in water should not take place (see below). Appropriate measures should be taken to minimize and mitigate impact on water quality and fish habitat, including:

- installation of sediment and 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 windows (no in-water works) in MNRF Kemptville District*:

Warmwater and cool water	→ March 15 – June 30
St. Lawrence River & Ottawa River	→ March 15 – July 15
Coldwater	→ October 1 – May 31
Big Rideau Lake & Charleston Lake	→ October 1 – June 30

* Please note: Additional timing restrictions may apply as they relate to endangered and threatened species for works in both water and wetland areas.

Timing windows when in-water work is restricted – based on species presence:

	FISH SPECIES	TIMING WINDOW (No in-water works)
Spring:	Walleye	March 15 to May 31
	Northern Pike	March 15 to May 31
	Lake Sturgeon	May 1 to June 30
	Muskellunge	March 15 to May 31
	Largemouth/Smallmouth Bass	May 1 to July 15
	Rainbow Trout	March 15 to June 15
	Other /Unknown Spring Spawning Species	March 15 to July 15

	FISH SPECIES	TIMING WINDOW (No in-water works)
Fall:	Lake Trout	October 1 to May 31
	Brook Trout	October 1 to May 31
	Pacific Salmon	September 15 to May 31
	Lake Whitefish	October 15 to May 31
	Lake Herring	October 15 to May 31
	Other /Unknown Fall Spawning Species	October 1 to May 31

Additional approvals and permits may be required under the Fisheries 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. 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:

- Barn Swallow (THR)
- Blanding's Turtle (THR)
- Bobolink (THR)
- Butternut (END)
- Chimney Swift (THR)
- Eastern Meadowlark (THR)
- Little Brown Bat (END)
- Northern Long-eared Bat (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:

- Black Tern (SC)
- Common Nighthawk (SC)
- Northern Map Turtle (SC)
- Snapping Turtle (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.kemptonville@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: Thu. Oct 18, 2018

Please be advised that the creation of a new lot under the *Planning Act* would not require an authorization under the ESA. However, any development activities that would be permitted through

the creation of a new lot (e.g. single detached dwelling or site alteration) may require an authorization from the Ministry if it would contravene Sections 9 or 10 of the Act.

Sincerely,

Jane Devlin
Management Biologist
jane.devlin@ontario.ca

Encl.\
-ESA Infosheet
-NHIC/LIO Infosheet

APPENDIX C

OMNRF Confirmation of Project Review



McKINLEY ENVIRONMENTAL SOLUTIONS

613-620-2255

mckinleyenvironmental@gmail.com

www.mckinleyenvironmental.com



Andrew McKinley <mckinleyenvironmental@gmail.com>

788 March Road Submission 1 of 3

McKinley Environmental <mckinleyenvironmental@gmail.com>

Mon, Sep 10, 2018 at 4:57 PM

To: Aaron Foss <Aaron.Foss@ontario.ca>

Hi Aaron,

Thanks very much - that is great news. I'm glad to hear we can proceed with this project without applying for an Overall Benefit Permit.

The proponent is simultaneously applying to the City for Site Plan Approval for the project, so the City will likely want to see the OMNRF's decision as part of that approval. I will forward your email to them and I think that should be enough, but I'll let you know if they need anything else. The EIS includes the same mitigation measures as described in the IGF/AAF, so typically the City will enforce those by including them as conditions of the Site Plan Approval.

Thanks for the help with this file.

-Andrew

On Mon, Sep 10, 2018 at 1:18 PM Foss, Aaron (MNRF) <Aaron.Foss@ontario.ca> wrote:

Hi Andrew,

We have reviewed both the IGF and the AAF for 788 March Rd.

Impacts to Blanding's turtles and their habitat should be avoided if they implement the mitigation measures described in these documents.

We believe that the value of the lands at this site for Blanding's Turtle is limited due to surrounding developments.

Any questions, feel free to contact me

Aaron Foss

Sr. Fish and Wildlife Technical Specialist

Ministry of Natural Resources and Forestry

Kemptville District

10-1 Campus Drive

Kemptville, ON K0G 1J0

Ph: 613-258-8386

From: McKinley Environmental [mailto:mckinleyenvironmental@gmail.com]

Sent: July 27, 2018 7:55 AM

To: Foss, Aaron (MNRF) <Aaron.Foss@ontario.ca>; Raphael (Ralph) Esposito <resposito@omnipex.ca>; Edward

Hayes <e.hayes@tempbridge.ca>

Subject: 788 March Road Submission 1 of 3

Hi Aaron,

A few months ago we had a discussion regarding the Site Plan Application for 788 March Road. Per the attached, the project involves a Site Plan Application to develop the vacant lot with a new 6 storey building.

The only Species at Risk issue that has been identified for the Site is the presence of a tributary of Shirley's Brook along the eastern property boundary, which has previously been identified as Blanding's Turtle habitat. The project has been designed to maintain a full 30 m vegetated setback from Shirley's Brook in order to preserve all areas of Category 2 Blanding's Turtle habitat. The development would result in the loss of Category 3 habitat, however, the Category 3 habitat area is comparatively small (around 1 ha) and it has been assessed to be non-functional, due to the fact that all surrounding areas are developed (other than Shirley's Brook). The proponent proposes to mitigate any potential impacts to Blanding's Turtle by installing new permanent Blanding's Turtle exclusion fencing along Shirley's Brook, which will help mitigate the existing risk of road mortality.

We believe that the fencing will mitigate any potential impacts associated with the Category 3 habitat loss, and hence that the project will not result in a significant impact to Blanding's Turtle or their habitat.

We previously discussed that the OMNRF would require us to submit the IGF and AAF for the project, in order to facilitate the review process and to aid in determining if the project can proceed without an Overall Benefit Permit.

Attached are the submission materials to facilitate OMNRF review. Due to the size of the attachments, I'm sending this over three (3) emails.

You should receive the following:

- 1- Information Gathering Form (attached to this email)
- 2 - Alternatives Assessment Form
- 3 - Combined EIS and TCR Report
- 4 - Appendix File (Figures)

We are looking forward to receiving your comments on the submission.

Thanks very much,

Andrew

--

Andrew McKinley, PhD, MA, BA (Hons), EP, RP Bio

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