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Combined Environmental Impact Statement & Tree Conservation Report
54 Springbrook Drive, Ottawa, Ontario

June 2020

Prepared for the Amberwood Village Recreation Association

McKINLEY ENVIRONMENTAL SOLUTIONS
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EXECUTIVE SUMMARY

McKinley Environmental Solutions (MES) was retained by the Amberwood Village Recreation Association (AVRA) to prepare a Combined Environmental Impact Statement and Tree Conservation Report for the proposed development of the Site. The Site includes an approximately 0.28 ha development area, which is located within the southeastern portion of the Amberwood Golf and Country Club (54 Springbrook Drive, Ottawa (Ontario)). The Site consists of a small Cultural Woodlot which is located between the golf course playing area and Trailway Circle. Several residential homes also border the Site. The Site is surrounded by the golf course playing area and existing development on all sides, and does not directly interface with any adjacent significant natural heritage features. The Stittsville Wetland Complex is located approximately 182 m west of the Site, and several Stormwater Management Ponds are located northwest of the Site within the Amberwood Golf and Country Club. The Cultural Woodlot that is found within the Site 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. As such, tree clearing associated with the proposed development is not anticipated to result in significant negative effects on the natural features and functions of the Site.

The development area of the Site potentially falls within the definition of Category 3 Blanding's Turtle habitat, which is designated primarily to provide a potential corridor for Blanding's Turtle movement. However, the potential Category 3 habitat found within the Site has little functional habitat value, due to the fact that all surrounding areas are developed. The potential loss of non-functional Category 3 habitat is not considered significant. As described in greater detail below, the current development proposal involves comparatively minor potential habitat impacts, which are very similar to other projects that have recently been reviewed by the Ministry of Environmental, Conservation, and Parks (MECP) and which have been determined to not require an Overall Benefit Permit under the Ontario Endangered Species Act (ESA). As such, it is recommended that the current project should not require submission to the MECP for review under the Ontario ESA. No other significant Species at Risk issues were noted for the Site.

The Site is proposed to be developed to accommodate five (5) residential lots, each of which will include a future single detached residential home. The Site will receive municipal sewer and water. Stormwater runoff will be directed to the existing stormwater management ponds within the Amberwood Golf and Country Club. Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the development of the Site 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 Combined Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) was undertaken following the City of Ottawa's Environmental Impact Statement Guidelines. Following the City guidelines, the Environmental Impact Statement 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 Combined EIS and TCR was prepared with guidance from the *Natural Heritage Reference Manual* (OMNRF 2010). The major objective of the Combined EIS and TCR is to assess whether the proposed project will negatively affect the significant features and functions of the Site, and to ensure that impacts will be minimized through mitigation measures.

1.3 Site Overview and Background (TCR)

The Site includes an approximately 0.28 ha development area, which is located within the southeastern portion of the Amberwood Golf and Country Club (54 Springbrook Drive, Ottawa (Ontario)) (Figure 1). As shown in Figure 1, the Site consists of a small Cultural Woodlot which is located between the golf course playing area and Trailway Circle. Several residential homes also border the Site. The Site is surrounded by the golf course playing area and existing development on all sides, and does not directly interface with any adjacent significant natural heritage features. As discussed below in Section 3.4, the Stittsville Wetland Complex is located approximately 182 m west of the Site, and several Stormwater Management Ponds are located northwest of the Site within the Amberwood Golf and Country Club.

1.4 Description of Undertaking (TCR)

The Draft Plan of Subdivision is included below. As shown in the Draft Plan of Subdivision, the Site is proposed to be developed to accommodate five (5) residential lots, each of which will include a future single detached residential home. The Site will receive municipal sewer and water. Stormwater runoff will be directed to the existing Stormwater Management Ponds within the Amberwood Golf and Country Club.

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FIGURE 1: SITE OVERVIEW

Combined Environmental Impact Statement & Tree Conservation Report
54 Springbrook Drive, Ottawa, ON

- Tree Survey Area
- Approximate Development Limits

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

METRIC
DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

AREA (SQ.M.)	SCHEDULE			
	PART	LOT	PLAN	PIN
554.8	1	PART OF BLOCK 'O'	M–250	PART OF 04459–0256
5.7	2			
490.6	3			
69.6	4			
466.7	5			
93.4	6			
514.1	7			
46.1	8			
560.4	9			
0.0	10			

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.

DATE _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _
JOHN H. GUTRI, O.L.S.

PLAN 4R–

RECEIVED AND DEPOSITED

DATE _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _
REPRESENTATIVE FOR LAND REGISTRAR FOR THE LAND TITLES DIVISION OF OTTAWA – CARLETON (N° 4)

PLAN OF SURVEY OF
PART OF BLOCK 'O'
REGISTERED PLAN M–250
CITY OF OTTAWA

SCALE 1 : 200
0 5 10 20 metres

FAIRHALL, MOFFATT & WOODLAND LIMITED
ONTARIO LAND SURVEYORS

NOTES

1. BEARINGS ARE GRID, DERIVED FROM OBSERVED REFERENCE POINTS (*) AND (*) BY REAL TIME NETWORK OBSERVATIONS AND ARE REFERRED TO THE CENTRAL MERIDIAN, 76°30'W LONGITUDE MTM ZONE 9, (NAD83 ORIGINAL).

2. DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR ********.

3. ALTERNATE AND REDUCED LENGTH MONUMENTS SET DUE TO UNDERGROUND UTILITY HAZARD.

LEGEND

- □ – SURVEY MONUMENT SET
- ■ – SURVEY MONUMENT FOUND
- SIB – STANDARD IRON BAR
- SSIB – SHORT STANDARD IRON BAR
- IB – IRON BAR
- (P) – REGISTERED PLAN
- (S) – SET
- (M) – MEASURED
- (857) – FAIRHALL, MOFFATT & WOODLAND LIMITED, O.L.S.
- PIN – PROPERTY IDENTIFIER NUMBER

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT, THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.

2. THE SURVEY WAS COMPLETED ON

_ _ _ _ _
DATE

_ _ _ _ _ _ _ _ _ _ _
JOHN H. GUTRI
ONTARIO LAND SURVEYOR

COORDINATES WERE DERIVED FROM REAL TIME NETWORK OBSERVATIONS (SMARTNET) MTM ZONE 9, NAD83 ORIGINAL.

COORDINATES HAVE BEEN DETERMINED TO AN URBAN ACCURACY IN ACCORDANCE WITH SECTION 14(2) OF O.REG 216/10.

POINT ID	NORTHING	EASTING
*	*	*
*	*	*
*	*	*
*	*	*

COORDINATES CANNOT IN THEMSELVES BE USED TO RE–ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

Fairhall Moffatt & Woodland
LIMITED
OTTAWA
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Surveying and Land Information Services
100–600 TERRY FOX DRIVE, KANATA, ONTARIO K2L 4B6
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JOB No. Z36100

E 350435, N 5014420

REFERENCE No. 3(a) – M–250

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z361_draft–rp.dwg (kg)

1.5 Agency Consultation

The proponent has received pre-consultation comments from the City of Ottawa and the Mississippi Valley Conservation Authority (MVCA). The pre-consultation comments were reviewed prior to the preparation of this Combined Environmental Impact Statement and Tree Conservation Report. The Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District *Potential Species at Risk List for the Geographic Township of March* (Appendix B) is referenced below in Section 3.7. As described in greater detail below, it is recommended that the current project should not require submission to the Ministry of Environment, Conservation, and Parks (MECP) for review under the Ontario Endangered Species Act.

1.6 Regulatory Requirements (TCR)

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

- **Ontario Endangered Species Act (ESA):** The potential presence of Species at Risk (SAR) and their habitat is discussed below in Section 3.7. As described in Section 3.7, the only potential SAR concern identified for the Site is the potential presence of Blanding's Turtles (threatened) habitat within the nearby Stittsville Wetland Complex. As described in Section 3.7.1, although there are no Category 1 and/or Category 2 habitat features within the Site, the Site potentially falls within the definition of Category 3 Blanding's Turtles habitat, as it occurs within 250 m of the Stittsville Wetland Complex. As described in Section 3.7.1, although the Site potentially falls within the definition of Category 3 habitat, the Site is unlikely to provide any significant habitat functions, as the Site occurs between an existing road (Trailway Circle), several existing residences, and the golf course playing area. The Site occurs at the periphery of the potential Category 3 habitat surrounding the Stittsville Wetland Complex and is unlikely to be utilized by Blanding's Turtles for overland movement, given that the Site is surrounded by existing development on all sides. The development of the Site will result in the removal of a comparatively small area of non-functional potential Category 3 habitat. In cases where developments have resulted in the removal of comparatively small areas of non-functional Category 3 habitat, both the Ontario Ministry of Natural Resources and Forestry (OMNRF) and the Ministry of Environment, Conservation, and Parks (MECP) have consistently determined that obtainment of an Overall Benefit Permit under the Ontario Endangered Species Act (ESA) was not required. Recent examples of this determination in the Ottawa area include the 788 March Road development (determination provided by the OMNRF in September 2018) and the 762 March Road development (determination provided by the MECP in October 2019). Compared to the current project, both the 788 March Road and the 762 March Road developments involved the removal of similar sized areas of non-functional Category 3 habitat (without significant impacts to adjacent Category 2 habitat features). In both cases, the OMNRF/MECP determined that

standard mitigation practices were sufficient, and that obtainment of a permit under the Ontario ESA was not required. Given the recent precedence in the Ottawa area, it is unlikely that the development of the current Site will require obtainment of a permit under the Ontario ESA to authorize the proposed impacts to the non-functional potential Category 3 Blanding's Turtle habitat. It should be noted that at the current time, the MECP review team for eastern Ontario has a significant project backlog, resulting in long review timelines. Due to the MECP's significant backlog and large volume of review requests, it is recommended that development proposals that are unlikely to require obtainment of an Overall Benefit Permit should not be routinely submitted to the MECP, as the review of comparatively low risk projects exacerbates the MECP's existing workload challenges. The current development proposal involves comparatively minor habitat impacts which are very similar to other projects that have recently been reviewed by the MECP and which have been determined to not require an Overall Benefit Permit under the Ontario ESA (e.g. 788 March Road and 762 March Road). As such, it is recommended that the current project should not require submission to the MECP for review under the Ontario ESA.

- **Ontario Regulation 153/06:** Ontario Regulation 153/06 regulates activities that would alter shorelines, watercourses, and wetlands. As described below in Section 3.4, there are no wetland and/or watercourse features within the Site. The Site occurs more than 30 m from the adjacent Stormwater Management Ponds (located within the Amberwood Golf and Country Club) and more than 120 m from the nearest part of the Stittsville Wetland Complex. As such, the Site is sufficiently separated from the existing Stormwater Management Ponds and the Stittsville Wetland Complex so that no impacts to these features are likely to occur which may require authorization under O.Reg 153/06. In their pre-consultation comments, the Mississippi Valley Conservation Authority (MVCA) noted that portions of the Site fall within their floodplain mapping. Requirements related to the floodplain will be addressed as part of the engineering submission.
- **Fisheries Act:** As described below in Section 3.4, the development of the Site is not anticipated to significantly impact any areas which may provide fish habitat. As such, a review under the Fisheries Act should not be required.
- **Tree Removal Permit:** The City of Ottawa has noted that a Distinctive Tree Permit will be required to remove any tree >50 cm diameter at breast height (dbh) in size. As described below in Section 4.1, development of the Site will result in the removal of four (4) trees which are >50 cm dbh in size.

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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 June 19th, 2020. Weather conditions during the Site visit included sunny skies and a temperature of 31 ºC.

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 x 10 cm.

Vegetation communities within the Site were classified following the vegetation community labels described by the Ecological Land Classification (ELC) manual (OMNRF 1998; Lee 2008). Due to the comparatively small size of the Site, tree sampling plots were not required. Instead, all trees 15 cm dbh or greater in size within the Tree Survey Area were identified and measured (Refer to Figure 1). Trees were measured with a D-tape, which is a calibrated dbh tape.

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2.0.2 EIS Methodology

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

- A Site survey to describe vegetation communities and inventory trees (see above);
- A Site survey to assess the potential for the habitat of Species at Risk (SAR), wetlands, fish habitat, Significant Wildlife Habitat (SWH) features, and other significant habitat features to be present;
- A Site survey to identify the presence of potentially distinctive trees, which includes any trees >50 cm dbh in size;
- Examination of aerial imagery to evaluate landscape features;
- Natural Heritage Information Center (NHIC) database review (OMNRF 2020);
- Review of the Ontario Ministry of Natural Resources and Forestry (OMNRF) *Potential Species at Risk List for the Geographic Township of March* (Appendix B);
- Review of the background geotechnical report (Paterson Group 2020); 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 the NHIC (OMNRF 2020).

3.0 EXISTING CONDITIONS

3.1 Geological Conditions

The Site elevation is approximately 112 m Above Sea Level (ASL) at Trailway Circle. The Site is generally flat and well drained, with no evidence of surface pooling noted. Paterson Group (2020) describe the topsoil thickness within the Site as approximately 0.7 m to 0.8 m thick. The topsoil is underlain by fill, which extends down to approximately 1.7 m below the ground surface. A glacial till deposit consisting of silty sand with some gravel and clay was identified underlying the fill. Bedrock occurs at a depth of 1.8 m to 2.1 m below the ground surface. Bedrock consists of limestone of the Bobcaygeon formation (Paterson Group 2020).

3.2 Site History (TCR)

Air photos from 1976 are available on Geo-Ottawa, however, they re-date the development of the Amberwood Golf and Country Club, as well as the surrounding houses and roads. As such, the 1976 air photos do not provide a useful reference, as they pre-date development of the region surrounding the Site. An air photo from 1991 is included below. As shown in the 1991 air photo, the Site was forested at that time. This suggests that trees found within the Site currently may be at least thirty (30) years of age.

Historic Air Photograph 1: Historic Air Photo from 1991. As shown in the 1991 air photo, the Site was forested at that time. This suggests that trees found within the Site currently may be at least thirty (30) years of age (Photo from City of Ottawa 2020).

3.3 Vegetation Communities (TCR)

3.3.1 Cultural Woodlot and Tree Inventory

The majority of the Site is occupied by a disturbed Cultural Woodlot. The Cultural Woodlot includes a mixture of native and non-native species, including trees which appear to have been planted as landscaping features, as well as natural regeneration. The number of stems and tree sizes are summarized below in Table A. Refer to Appendix A for a list of plants found within the Site. White Cedar is the most common tree species within the Cultural Woodlot, followed by Trembling Aspen, White Ash, Honey Locust, and White Birch. A few Sugar Maple, White Spruce, Red Pine, Weeping Willow, American Elm, Manitoba Maple, Bur Oak, Balsam Fir, and a single Domestic Apple are also present. It should be noted that virtually all of the White Ash trees are either dead or in very poor condition, as a result of the impacts of the invasive Emerald Ash Borer. Shrub and groundcover within the Cultural Woodlot reflects the generally disturbed condition of the feature. Shrub cover varies between sparse and moderately dense, and includes Common Buckthorn, Tartarian Honeysuckle, Lilac, Wild Red Raspberry, and Riverbank Grape. The groundcover is dominated by patches of Day Lily and Common Stinging Nettle. Canada Thistle, Bull Thistle, Prickly Lettuce, Canada Goldenrod, grasses, Dandelion, Red Clover, White Clover, Canada Violet, Common Blue Violet, and Virginia Creeper are also present. Escaped and/or intentionally planted garden plants are also present within the woodlot, including various cultivated flowers and hostas.

All trees within the Cultural Woodlot are <50 cm diameter at breast height (dbh) in size, with the exception of three (3) large Weeping Willows (82 cm, 88 cm, and >1 m dbh) that appear to have been planted along the edge of the golf course as landscaping features. There is also a 58 cm dbh Trembling Aspen. The locations of the four (4) large trees are shown below in Figure 2. Weeping Willow is a non-native species, and all three (3) stems appear to have been planted for landscaping purposes. As such, the Weeping Willows should not be considered significant distinctive trees. The Trembling Aspen is only marginally larger than 50 cm dbh in size (58 cm dbh). Trembling Aspen are a comparatively fast growing species, and specimens up to 60 cm dbh in size are common throughout the Ottawa area in secondary regrowth forest. As such, the Trembling Aspen also should not be considered a significant distinctive tree.

FIGURE 2: LARGE TREE LOCATIONS

Combined Environmental Impact Statement & Tree Conservation Report
54 Springbrook Drive, Ottawa, ON

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Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate. DBH = Diameter at Breast Height.

Table A: Tree Inventory Results		
Species	**Number of Stems**	**Diameter at Breast Height (dbh) Measurements**
White Cedar (Thuja occidentalis)	79	22 cm, 27 cm, 20 cm, 17 cm, 23 cm, 32 cm, 32 cm, 35 cm, 23 cm, 26 cm, 30 cm, 20 cm, 23 cm, 23 cm, 28 cm, 25 cm, 44 cm, 25 cm, 30 cm, 19 cm, 46 cm, 20 cm, 28 cm, 40 cm, 28 cm, 25 cm, 24 cm, 24 cm, 29 cm, 25 cm, 31 cm, 25 cm, 36 cm, 36 cm, 35 cm, 31 cm, 32 cm, 30 cm, 30 cm, 15 cm, 15 cm, 15 cm, 15 cm, 34 cm, 43 cm, 34 cm, 29 cm, 36 cm, 23 cm, 25 cm, 25 cm, 21 cm, 35 cm, 38 cm, 17 cm, 33 cm, 23 cm, 23 cm, 21 cm, 27 cm, 21 cm, 23 cm, 25 cm, 25 cm, 27 cm, 30 cm, 18 cm, 27 cm, 27 cm, 35 cm, 23 cm, 28 cm, 20 cm, 23 cm, 22 cm, 25 cm, 22 cm, 31 cm, 30 cm
Trembling Aspen (Populus tremuloides)	18	36 cm, 21 cm, 26 cm, 20 cm, 16 cm, 16 cm, 30 cm, 29 cm, 33 cm, 34 cm, 37 cm, 31 cm, 31 cm, 31 cm, 16 cm, 25 cm, 27 cm, **58 cm**
White Ash (Fraxinus americana)	17	22 cm, 23 cm, 36 cm, 21 cm, 24 cm, 20 cm, 44 cm, 27 cm, 42 cm, 44 cm, 28 cm, 25 cm, 30 cm, 38 cm, 33 cm, 16 cm, 24 cm, 31 cm, 35 cm, 18 cm, 15 cm
Honey Locust (Gleditsia triacanthos)	16	24 cm, 43 cm, 16 cm, 20 cm, 20 cm, 29 cm, 23 cm, 21 cm, 23 cm, 16 cm, 17 cm, 30 cm, 23 cm, 15 cm, 18 cm, 22 cm
White Birch (Betula papyrifera)	14	26 cm, 27 cm, 18 cm, 25 cm, 18 cm, 18 cm, 17 cm, 22 cm, 15 cm, 25 cm, 20 cm, 20 cm, 18 cm, 19 cm
Sugar Maple (Acer saccharum)	5	35 cm, 17 cm, 29 cm, 29 cm, 33 cm
White Spruce (Picea glauca)	5	20 cm, 23 cm, 19 cm, 28 cm, 31 cm

Species	Number of Stems	Diameter at Breast Height (dbh) Measurements
Red Pine (Pinus resinosa)	3	39 cm, 22 cm, 21 cm
Weeping Willow (Salix alba)	3	**82 cm, 88 cm, >1 m**
American Elm (Ulmus americana)	3	22 cm, 28 cm, 21 cm
Balsam Fir (Abies balsamea)	2	26 cm, 23 cm
Manitoba Maple (Acer negundo)	2	35 cm, 40 cm
Bur Oak (Quercus macrocarpa)	2	21 cm, 17 cm
Domestic Apple (Malus sylvestris)	1	26 cm

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Photograph 1: Looking north at the Cultural Woodlot from Trailway Circle (June 19th, 2020).

Photograph 2: Looking east at the Cultural Woodlot from the Amberwood Golf and Country Club (June 19th, 2020).

Photograph 3: Interior of the Cultural Woodlot (June 19th, 2020).

Photograph 4: Large Tree #1 (82 cm dbh Weeping Willow) (June 19th, 2020).

Photograph 5: Large Tree #2 (88 cm dbh Weeping Willow) (June 19th, 2020).

Photograph 6: Large Tree #3 (>1 m dbh Weeping Willow) (June 19th, 2020).

Photograph 7: Large Tree #4 (58 cm dbh Trembling Aspen) (June 19th, 2020).

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3.3.2 Significant Woodlot Assessment

The Site is within the urban area of the City of Ottawa, and hence the City of Ottawa's urban area criteria for Significant Woodlots apply. The City of Ottawa's urban area criteria recognizes woodlots which are both ≥0.8 ha in size and older than 60 years of age as Significant Woodlots (City of Ottawa 2019). The Cultural Woodlot is <0.5 ha in size, and therefore the feature does not qualify as a Significant Woodlot under the City of Ottawa's urban area criteria. The following is a summary of the provincial Significant Woodlot criteria for the Cultural Woodlot (OMNRF 2010):

- **Woodland Size Criteria** – The Site is within the Ottawa Carp Minor Watershed, which has approximately 34% forest cover (City of Ottawa 2011). In planning areas with 30% to 60% forest cover, woodlots 50 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 described above, the Site is surrounded by existing developed areas. As such, there are no significant natural heritage features within 30 m.
- **Water Protection** – As described below in Section 3.4, there are no wetland and/or watercourse features within 30 m of the Site. As such, the Cultural Woodlot is unlikely to provide a significant water protection function.
- **Linkages** – The Site is bordered by existing development on all sides. As such, the Cultural Woodlot is unlikely to provide a significant linkage function. The potential for the Cultural Woodlot to provide a corridor for Blanding's Turtle movement is discussed below in Section 3.7.1.
- **Woodlot Diversity** – As described above, the plant diversity within the Cultural Woodlot is low. 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. The Cultural Woodlot does not contain sufficient large trees to be older than 100 years and also does not include any uncommon characteristics.
- **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.

In summary, available evidence suggests that the Cultural Woodlot does not qualify as a Significant Woodlot under any of the provincial assessment criteria.

3.4 Wetlands and Watercourses

The Site is well drained and does not include any wetlands or watercourses. No evidence of water pooling was noted within the Site. As shown below in Figure 3, the Site occurs approximately 94 m from the nearest part of the adjacent Stormwater Management Ponds (located within the Amberwood Golf and Country Club) and approximately 182 m from the nearest part of the Stittsville Wetland Complex. As such, the Site is sufficiently separated from the existing Stormwater Management Ponds and the Stittsville Wetland Complex so that no significant impacts to those features are likely to occur as a result of the proposed development. Due to the distance between the Stormwater Management Ponds/Stittsville Wetland Complex and the Site, the Stormwater Management Ponds/Stittsville Wetland Complex were not investigated in detail as part of the current assessment. The portion of the Stormwater Management Ponds that is closest to the Site was observed to include a shallow pond and naturalized marsh habitat. The nearest portion of the Stittsville Wetland Complex was observed to include a Cattail Marsh at its edge, beyond which is a treed swamp.

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FIGURE 3: ADJACENT FEATURES

Combined Environmental Impact Statement & Tree Conservation Report
54 Springbrook Drive, Ottawa, ON

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

Photograph 8: Looking north at the Stormwater Management Pond within the Amberwood Golf and Country Club (June 19th, 2020).

Photograph 9: Looking northwest at the edge of the Stittsville Wetland Complex (June 19th, 2020).

3.5 Adjacent Lands and Significant Features

As described above, the Site consists of a small Cultural Woodlot which is located between the Amberwood Golf and Country Club golf course playing area and Trailway Circle. Several residential homes also border the Site. The Site is surrounded by the golf course playing area and existing development on all sides, and does not directly interface with any adjacent significant natural heritage features. As noted above in Section 3.4, the Site is sufficiently separated from the existing Stormwater Management Ponds and the Stittsville Wetland Complex so that no significant impacts to those features are likely to occur as a result of the proposed development. There are no other significant natural heritage features found within and/or adjacent to the Site.

3.6 Wildlife and Significant Wildlife Habitat

The Site is surrounded by existing development on all sides, and hence is continuously disturbed by human activity and vehicle traffic. As described above, the Site and the surrounding area provide comparatively little natural habitat. As a result, comparatively few wildlife species were observed within the Site and the surrounding area. These included Canada Goose, Ring Billed Gull, American Crow, Blue Jay, American Robin, Song Sparrow, European Starling, and Red Squirrel. Each of these are comparatively common species found in suburban areas.

There are no wetland and/or watercourse features found within the Site and/or immediately adjacent to the Site. As such, there are no features which may provide fish habitat and/or amphibian breeding habitat. No stick nests, migratory bird stopover points, heron rookeries, reptile hibernacula, caves, bedrock fissures, wetlands, or any other features which may qualify as Significant Wildlife Habitat (SWH) were noted within the Site and/or immediately adjacent to the Site (OMNRF 2014a). The potential presence of Species at Risk habitat is discussed below in Section 3.7.

3.7 Species at Risk

3.7.1 Blanding's Turtle

Ministry of Environment, Conservation, and Parks (MECP) policy dictates that potentially suitable wetland and/or watercourse habitat that occurs within 2 km of a documented Blanding's Turtle sighting is automatically considered Category 2 habitat for the species (OMNRF 2014b). Sightings of Blanding's Turtles along Poole Creek have previously been documented (OMNRF 2020). As a result, suitable habitat areas within the Stittsville Wetland Complex have the potential to be designated as Category 2 Blanding's Turtle habitat. Category 2 habitat includes the watercourse/wetlands features 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). As discussed above in Section 3.4, the Site is located approximately 182 m from the nearest part of the Stittsville Wetland Complex. As such, the development of the Site will not result in any significant impacts to the Category 2 habitat features which may occur within adjacent portions of the Stittsville Wetland Complex. There are no features found within the Site and/or within 30 m of the Site that have the potential to provide Category 2 Blanding's Turtle habitat. There are also no features found within the Site and/or within 30 m of the Site that have the potential to provide Category 1 Blanding's Turtle habitat (overwintering and nesting sites).

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). Although there are no Category 1 and/or Category 2 habitat features within the Site, the Site potentially falls within the definition of Category 3 Blanding's Turtle habitat, as it occurs within 250 m of the Stittsville Wetland Complex. Although the Site potentially falls within the definition of Category 3 habitat, the Site is unlikely to provide any significant habitat functions, as the Site occurs between an existing road (Trailway Circle), several existing residences, and the Amberwood Golf and Country Club golf course playing area. The Site occurs at the periphery of the potential Category 3 habitat surrounding the Stittsville Wetland Complex and is unlikely to be utilized by Blanding's Turtles for overland movement, given that the Site is surrounded by existing development on all sides. The development of the Site will result in the removal of a comparatively small area of non-functional potential Category 3 habitat. Regulatory requirements related to the potential presence of Blanding's Turtle Category 3 habitat are discussed below in Section 4.4.1. As described in the following section, 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 (OMNRF 2020). The Ontario Ministry of Natural Resources and Forestry (OMNRF) *Potential Species at Risk List for the Geographic Township of March* was also reviewed (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 region:

- American Eel – Endangered
- Lake Sturgeon – Threatened
- Hickorynut - Endangered
- American Ginseng - Endangered
- Bank Swallow - Threatened
- Barn Swallow - Threatened
- Chimney Swift – Threatened
- Bobolink – Threatened
- Eastern Meadowlark – Threatened
- Eastern Whip Poor Will – Threatened
- Least Bittern - Threatened
- Loggerhead Shrike – Endangered
- Eastern Small Footed Myotis – Endangered
- Little Brown Bat – Endangered
- Northern Long Eared Bat – Endangered
- Tricolored Bat – Endangered
- Rusty Patched Bumblebee – Endangered
- Transverse Lady Beetle - Endangered
- Bald Eagle – Special Concern
- Black Tern – Special Concern
- Horned Grebe – Special Concern
- Canada Warbler – Special Concern
- Eastern Wood Pewee – Special Concern
- Wood Thrush – Special Concern
- Common Nighthawk – Special Concern
- Peregrine Falcon – Special Concern
- Rusty Blackbird – Special Concern
- Eastern Musk Turtle – Special Concern
- Northern Map Turtle – Special Concern

- River Redhorse – Special Concern
- Silver Lamprey – Special Concern
- Snapping Turtle – Special Concern
- Monarch Butterfly – Special Concern
- Butternut Trees – Endangered

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

- **American Eel and Lake Sturgeon:** American Eel and Lake Sturgeon are fish species that are found in association with the Ottawa River (SARO 2020). As described above, there are no wetland and/or watercourse habitats found within 30 m of the Site. Therefore, American Eel and Lake Sturgeon are unlikely to be a significant concern for the proposed development.
- **Hickorynut:** Hickorynut is a freshwater mussel found in association with the Ottawa River (SARO 2020). As described above, there are no wetland and/or watercourse habitats found within 30 m of the Site. Therefore, Hickorynut are unlikely to be a significant concern for the proposed development.
- **American Ginseng:** American Ginseng are found in association with mature Deciduous Forests (SARO 2020). As noted above in Section 3.3, the Cultural Woodlot found within the Site is highly degraded, and no American Ginseng were noted during the site survey. Therefore, American Ginseng are unlikely to be a significant concern for the proposed development.
- **Bank Swallow:** Bank Swallows nest in natural and artificial deposits of sand and silt with vertical faces (SARO 2020). There are no significant areas of exposed sand or silt within the Site and no stockpiles currently exist. As such, Bank Swallows are unlikely to be a significant concern for the proposed development.
- **Barn Swallow:** Barn Swallows may be found nesting in many anthropogenic structures including old barns and sheds, culverts, and under bridges (SARO 2020). There are no structures found within the Site at the current time, and therefore Barn Swallows are unlikely to be a significant concern for the proposed development.
- **Chimney Swift:** Chimney Swift nest in open chimneys with rough interior surfaces made from brick and/or stone (SARO 2020). There are no chimneys found within the Site, and therefore Chimney Swifts are unlikely to be a significant concern for the proposed development.
- **Bobolink and Eastern Meadowlark:** Bobolink and Eastern Meadowlark are found nesting in association with grasslands, old pastures, hayfields, and meadows (SARO 2020). As described above in Section 3.3, there are no grasslands or meadows found within the Site and/or in the surrounding area, and therefore Eastern Meadowlark and Bobolink are unlikely to be a significant concern for the proposed development.
- **Eastern Whip Poor Will:** Suitable breeding habitats for Eastern Whip Poor Will generally consist of a 'mosaic' of open, half treed, and closed conditions (SARO 2020). As discussed above in

Section 3.3, the Site generally does not provide the mosaic of half treed conditions preferred by Eastern Whip Poor Will. Therefore, Eastern Whip Poor Will are unlikely to be a significant concern for the proposed development.

- **Least Bittern:** Least Bittern breed in open marshes and wetlands. As described above in Section 3.4, there are no significant areas of marsh or open wetland habitat within the Site and/or within 30 m. Least Bittern are therefore unlikely to be a significant concern for the proposed development.
- **Loggerhead Shrike:** Loggerhead Shrike are found nesting in large pastures and grasslands with scattered low trees and thorny shrubs. They also nest and forage in alvars (SARO 2020). As discussed above in Section 3.3, the Site does not provide open pasture, alvar, and/or grassland habitat. Therefore, Loggerhead Shrike are unlikely to be a significant concern for the proposed development.
- **Eastern Small Footed Myotis, Little Brown Bat, Northern Long Eared Bat, and Tricolored 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. Maternity roosting generally occurs within forest patches with high densities of cavity and snag trees (OMNRF 2011). The Cultural Woodlot found within the Site is <0.5 ha in size and it provides no interior forest habitat (forest >100 m from an opening). No cavity and/or snag trees were noted within the Cultural Woodlot during the tree inventory. Therefore, the Cultural Woodlot is unlikely to be suitable for bat roosting.
- **Rusty Patched Bumblebee and Transverse Lady Beetle:** Rusty Patched Bumblebee is exceedingly rare in Ontario and the only sightings in the province since 2002 have been at the Pinery Provincial Park on Lake Huron (SARO 2020). There have been no records of Transverse Lady Beetle in Ontario since 1990 (SARO 2020). As such, Rusty Patched Bumblebee and Transverse Lady Beetle are unlikely to be a significant concern for the proposed development.
- **Bald Eagle:** Bald Eagles are a species of Special Concern, and therefore their habitat is not protected by the Ontario Endangered Species Act (ESA). Bald Eagles are primarily found nesting adjacent to large lakes and rivers (e.g. the Ottawa River) (SARO 2020). Due to the absence of large bodies of water in the vicinity of the Site, Bald Eagles are unlikely to be present. As such, Bald Eagles are unlikely to be a significant concern for the proposed development.
- **Black Tern and Horned Grebe**: Black Terns build their nests in shallow marshes (SARO 2020). Horned Grebe build their nests in marshes, ponds, and shallow bays (SARO 2020). As discussed above, there are no large wetland habitats or ponds found within the Site and/or within 30 m. Therefore, Black Terns and Horned Grebes are unlikely to be a significant concern for the proposed development.

- **Canada Warbler, Eastern Wood Pewee, Wood Thrush**: Canada Warbler, Eastern Wood Pewee, and Wood Thrush are all species that are found nesting within interior forest habitat (SARO 2020). As discussed above in Section 3.3, the Cultural Woodlot is <0.5 ha in size and it provides no interior forest habitat (forest >100 m from an opening). The Cultural Woodlot is likely too small and degraded to provide breeding habitat for Canada Warbler, Eastern Wood Pewee, and Wood Thrush, and therefore these species 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 2020). As described above, the majority of the Site is densely vegetated. Therefore, Common Nighthawk are unlikely to be a significant concern for the proposed development.
- **Peregrine Falcon:** Peregrine Falcons nest on steep cliff edges and at the top of tall buildings in urban areas (SARO 2020). There are no potentially suitable nest sites for Peregrine Falcons within the Site, and therefore they are unlikely to be a significant concern for the proposed development.
- **Rusty Blackbird**: Rusty Blackbirds breed in coniferous forest near wetlands (SARO 2020). As discussed above in Section 3.3, there are no coniferous forest habitats within the Site, and therefore Rusty Blackbird are unlikely to be a significant concern for the proposed development.
- **Eastern Musk Turtle, Northern Map Turtle, River Redhorse, Silver Lamprey**: Eastern Musk Turtle, Northern Map Turtle, River Redhorse, and Silver Lamprey are all species of Special Concern, and therefore their habitat is not regulated under the Ontario ESA. All four (4) species are primarily riverine species (SARO 2020). As described above, there are no wetland and/or watercourse habitats found within 30 m of the Site. Therefore, Eastern Musk Turtle, Northern Map Turtle, River Redhorse, and Silver Lamprey are unlikely to be a significant concern for the proposed development.
- **Snapping Turtle**: Snapping Turtles are a species of Special Concern, and therefore their habitat is not regulated under the Ontario ESA. Snapping Turtles are generally common in many aquatic habitat areas, and they may be found within the Stittsville Wetland Complex and the Stormwater Management Ponds within the Amberwood Golf and Country Club. However, as discussed above in Section 3.4, the Site is well separated from the Stittsville Wetland Complex and the Stormwater Management Ponds. Therefore, Snapping Turtles are unlikely to be a significant concern for the proposed development.
- **Monarch Butterfly:** Monarch Butterflies are found in meadow and grassland habitat in association with their milkweed host plants (SARO 2020). As described above in Section 3.3, there is no meadow or grassland habitat found within the Site, and no milkweed plants were

noted. As such, Monarch Butterflies are unlikely to be a significant concern for the proposed development.

- **Butternut Trees:** Butternut Trees are found in many treed areas throughout the Ottawa Region. However, no Butternut Trees were noted within the Site and/or within 50 m of the Site during the tree inventory. As such, Butternut Trees are unlikely to be a significant concern for the proposed development.

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

3.8 Linkages

The Site is bordered by existing development on all sides. As such, the Cultural Woodlot is unlikely to provide a significant linkage function. The potential for the Cultural Woodlot to provide a corridor for Blanding's Turtle movement is discussed above in Section 3.7.1.

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4.0 DESCRIPTION OF ENVIRONMENTAL IMPACTS AND MITIGATION

4.1 Terrestrial Habitat and Tree Removal (TCR)

All trees within the proposed development area will be removed in order to accommodate the construction of the five (5) new single detached homes. As described above in Section 3.3.2, the Cultural Woodlot is not a significant ecological feature. As such, the anticipated removal of trees and other vegetation to accommodate the development of the Site is not considered a significant ecological impact.

As described in Section 3.3.1, all trees within the Cultural Woodlot are <50 cm diameter at breast height (dbh) in size, with the exception of three (3) large Weeping Willows (82 cm, 88 cm, and >1 m dbh) that appear to have been planted along the edge of the golf course as landscaping features. There is also a 58 cm dbh Trembling Aspen. All four (4) large trees occur within the development area, and hence will be removed during construction. Weeping Willow is a non-native species, and all three (3) stems appear to have been planted for landscaping purposes. As such, the Weeping Willows should not be considered significant distinctive trees. The Trembling Aspen is only marginally larger than 50 cm dbh in size (58 cm dbh). Trembling Aspen are a comparatively fast growing species, and specimens up to 60 cm dbh in size are common throughout the Ottawa area in secondary regrowth forest. As such, the Trembling Aspen also should not be considered a significant distinctive tree. The anticipated removal of the three (3) large Weeping Willows and the one (1) large Trembling Aspen is not considered a significant impact to the features and functions of the Site.

Trees that occur adjacent to the development area within the Amberwood Golf and Country Club property, as well as trees that occur within the adjacent residential properties, will be retained during the development of the Site. Mitigation measures to protect retained trees are discussed below.

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 dbh x 10 cm;
- 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

New trees and shrubs may be planted as landscaping features surrounding the five (5) new single detached homes. 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.

4.2 Wetlands and Watercourses

As described above in Section 3.4, the Site is well drained and does not include any wetlands or watercourses. The Site occurs approximately 94 m from the nearest part of the adjacent Stormwater Management Ponds (located within the Amberwood Golf and Country Club) and approximately 182 m from the nearest part of the Stittsville Wetland Complex. As such, the Site is sufficiently separated from the existing Stormwater Management Ponds and the Stittsville Wetland Complex so that no significant impacts to those features are likely to occur as a result of the proposed development.

4.2.1 Servicing and Stormwater Management

The Site will receive municipal sewer and water. Stormwater runoff will be directed to the existing Stormwater Management Ponds within the Amberwood Golf and Country Club.

4.2.2 Sediment and Erosion Controls

As discussed below in Section 4.4.2, Blanding's Turtle temporary exclusion fencing (wire re-enforced silt fencing) will be required during construction. In addition to excluding wildlife from the construction work area, the silt fencing will also serve to mitigate potential sediment and erosion impacts to surrounding areas. 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 Trailway Circle, 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 described above in Section 3.5, the Site consists of a small Cultural Woodlot which is located between the Amberwood Golf and Country Club golf course playing area and Trailway Circle. Several residential homes also border the Site. The Site is surrounded by the golf course playing area and existing development on all sides, and does not directly interface with any adjacent significant natural heritage features. As noted above in Section 4.2, the Site is sufficiently separated from the existing Stormwater Management Ponds and the Stittsville Wetland Complex so that no significant impacts to those features are likely to occur as a result of the proposed development. There are no other significant natural heritage features found within and/or adjacent to the Site.

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4.4 Wildlife and Species at Risk

4.4.1 Blanding's Turtle Mitigation and Regulatory Requirements

As described above in Section 3.7.1, development of the Site will result in the removal of a comparatively small area of non-functional potential Category 3 Blanding's Turtle habitat. In cases where developments have resulted in the removal of comparatively small areas of non-functional Category 3 Blanding's Turtle habitat, both the Ontario Ministry of Natural Resources and Forestry (OMNRF) and the Ministry of Environment, Conservation, and Parks (MECP) have consistently determined that obtainment of an Overall Benefit Permit under the Ontario Endangered Species Act (ESA) was not required. Recent examples of this determination in the Ottawa area include the 788 March Road development (determination provided by the OMNRF in September 2018) and the 762 March Road development (determination provided by the MECP in October 2019). Compared to the current project, both the 788 March Road and the 762 March Road developments involved the removal of similar sized areas of non-functional Category 3 habitat (without significant impacts to adjacent Category 2 habitat features). In both cases, the OMNRF/MECP determined that standard mitigation practices were sufficient, and that obtainment of a permit under the Ontario ESA was not required. Given the recent precedence in the Ottawa area, it is unlikely that the development of the current Site will require obtainment of a permit under the Ontario ESA to authorize the proposed impacts to the non-functional potential Category 3 Blanding's Turtle habitat. It should be noted that at the current time, the MECP review team for eastern Ontario has a significant project backlog, resulting in long review timelines. Due to the MECP's significant backlog and large volume of review requests, it is recommended that development proposals that are unlikely to require obtainment of an Overall Benefit Permit should not be routinely submitted to the MECP, as the review of comparatively low risk projects exacerbates the MECP's existing workload challenges. The current development proposal involves comparatively minor habitat impacts which are very similar to other projects that have recently been reviewed by the MECP and which have been determined to not require an Overall Benefit Permit under the Ontario ESA (e.g. 788 March Road and 762 March Road). As such, it is recommended that the current project should not require submission to the MECP for review under the Ontario ESA.

4.4.2 General Wildlife Mitigation

As described above in Section 3.7.1, the Site is unlikely to provide any significant Blanding's Turtle habitat functions. As such, it is unlikely that any Blanding's Turtles will be encountered within the Site during construction. However, in an abundance of caution, construction stage mitigation measures which address potential impacts to Blanding's Turtles and other wildlife will be implemented. Mitigation for wildlife protection 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 will 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 will be undertaken in the direction of the Amberwood Golf and Country Club, in order to direct wildlife away from the existing roads and existing residential homes;
- **Temporary Exclusion Fencing:** It is recommended that the development area should be isolated from surrounding areas throughout the construction phase by installing temporary Blanding's Turtle exclusion fencing (wire re-enforced silt fencing) around the development perimeter. The temporary Blanding's Turtle exclusion fencing will serve to exclude Blanding's Turtles and other wildlife from the construction work area, while also serving to mitigate potential erosion and siltation impacts (described above);
- **Inspections:** The temporary Blanding's Turtle exclusion fencing will be inspected by a designated staff member prior to the 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 the commencement of work to ensure that 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;
- **Species at Risk (SAR) Encounters:** If Species at Risk (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 Ministry of Environment, Conservation, and Parks (MECP) must be contacted to discuss how to proceed prior to the recommencement 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 the MECP 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 15th and April 15th.

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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 the Species at Risk mitigation measures. As described above, the development is not anticipated to result in a significant loss of Blanding's Turtle habitat. 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 4.4.2 (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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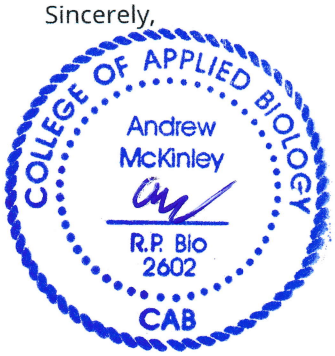
7.0 CLOSURE

Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the development of the Site 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

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APPENDIX A

Master Plant List

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TABLE A: PLANTS				
Common Name	**Scientific Name**	**Provincial S rank**	**Brunton Significance Ranking for the City of Ottawa (Brunton, 2005)**	**Vegetation Type**
Canada Thistle	Cirsium arvense	S5	Common	Herbaceous
Bull Thistle	Cirsium vulgare	SNA	Common	Herbaceous
Day Lily	Hemerocallis fulva	SNA	Common	Herbaceous
Prickly Lettuce	Lactuca scariola	SNA	Common	Herbaceous
Canada Goldenrod	Solidago canadensis	S5	Common	Herbaceous
Dandelion	Taraxacum officinale	SNA	Common	Herbaceous
Red Clover	Trifolium pratense	SNA	Common	Herbaceous
White Clover	Trifolium repens	SNA	Common	Herbaceous
Common Stinging Nettle	Urtica dioica	SNA	Common	Herbaceous
Canada Violet	Viola canadensis	S5	Common	Herbaceous
Common Blue Violet	Viola sororia	S5	Common	Herbaceous
Tartarian Honeysuckle	Lonicera tatarica	SNA	Common (aggressive invasive)	Shrub
Common Buckthorn	Rhamnus cathartica	SNA	Common (aggressive invasive)	Shrub
Wild Red Raspberry	Rubus idaeus	S5	Common	Shrub
Lilac	Syringa vulgaris	SNA	Common	Shrub
Balsam Fir	Abies balsamea	S5	Common	Tree
Manitoba Maple	Acer negundo	S5	Common	Tree
Sugar Maple	Acer saccharum	S5	Common	Tree
White Birch	Betula papyrifera	S5	Common	Tree
White Ash	Fraxinus americana	S5	Common	Tree
Honey Locust	Gleditsia triacanthos	S2	n/a	Tree
Domestic Apple	Malus sylvestris	n/a	Common	Tree
White Spruce	Picea glauca	S5	Common	Tree
Red Pine	Pinus resinosa	S5	Common	Tree
Trembling Aspen	Populus tremuloides	S5	Common	Tree
Bur Oak	Quercus macrocarpa	S5	Common	Tree
Weeping Willow	Salix alba	SNA	Common	Tree
White Cedar	Thuja occidentalis	S5	Common	Tree
American or White Elm	Ulmus americana	S5	Common	Tree
Virginia Creeper	Parthenocissus vitacea	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

Ontario Ministry of Natural Resources and Forestry (OMNRF) Potential Species at Risk List for the Geographic Township of March

McKINLEY ENVIRONMENTAL SOLUTIONS
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LONGUEUIL	MARCH	MARLBOROUGH
American Eel	American Eel	American Ginseng
American Ginseng	American Ginseng	Bald Eagle
Bank Swallow	Bald Eagle	Bank Swallow
Barn Swallow	Bank Swallow	Barn Swallow
Black Tern	Barn Swallow	Black Tern
Blanding's Turtle	Black Tern	Blanding's Turtle
Bobolink	Blanding's Turtle	Bobolink
Butternut	Bobolink	Bogbean Buckmoth
Canada Warbler	Butternut	Bridle Shiner
Channel Darter	Canada Warbler	Butternut
Chimney Swift	Chimney Swift	Chimney Swift
Common Nighthawk	Eastern Meadowlark	Common Nighthawk
Cutlip Minnow	Eastern Musk Turtle	Eastern Meadowlark
Eastern Meadowlark	Eastern Small-footed Myotis	Eastern Musk Turtle
Eastern Musk Turtle	Eastern Whip-poor-will	Eastern Prairie Fringed Orchid
Eastern Ribbonsnake	Eastern Wood-pewee	Eastern Small-footed Myotis
Eastern Small-footed Myotis	Hickorynut	Eastern Whip-poor-will
Eastern Wood Pewee	Horned Grebe	Eastern Wood-pewee
Evening Grosbeak	Lake Sturgeon	Grasshopper Sparrow
Golden Eagle	Least Bittern	King Rail
Hickorynut	Little Brown Myotis	Least Bittern
Lake Sturgeon	Loggerhead Shrike	Little Brown Myotis
Least Bittern	Monarch	Loggerhead Shrike
Little Brown Myotis	Northern Map Turtle	Monarch
Monarch	Northern Myotis	Northern Map Turtle
Northern Map Turtle	Peregrine Falcon	Northern Myotis
Northern Myotis	River Redhorse	Red-headed Woodpecker
River Redhorse	Rusty Blackbird	Snapping Turtle
Rusty Blackbird	Rusty-patched Bumble Bee	Spotted Turtle
Short-eared Owl	Silver Lamprey	Tri-colored Bat
Silver Lamprey	Snapping Turtle	Wood Thrush
Snapping Turtle	Transverse Lady Beetle	Yellow Rail
Spotted Turtle	Tri-colored Bat	
Tri-colored Bat	Wood Thrush	
West Virginia White	Yellow-banded Bumblebee	
Whip poor will		
Wood Thrush		