ENVIRONMENTAL IMPACT STATEMENT
and
TREE CONSERVATION REPORT

RURAL RESIDENTIAL and COMMERCIAL DEVELOPMENT

2727 CARP ROAD
CITY of OTTAWA

A report prepared for:

1384341 Ontario Ltd.

by *Muncaster Environmental Planning Inc.*

July, 2018

Bernie Muncaster, Principal, signed July 10th, 2018

TABLE OF CONTENTS

FIGURES

APPENDIX

1.0 INTRODUCTION

The 77.6 hectare site at 2727 Carp Road is in Concession III, on the north part of Lot 7 and the south part of Lot 8 of in the Geographic Township of Huntley between Carp Road and William Mooney Drive, approximately 300 metres north of Canvanmore Road. Rural residential developments in the last ten years are to the south of the west portion of the site along Huntley Manor Drive, to the west along Cedar Pond Road, and to the north along Sentinel Pine Way, Covered Bridge Way and Cyd Street. Seventy-eight rural residential lots that range in size from approximately 0.6 to two hectares are proposed for the site, along with four commercial blocks on the west side of Carp Road. A trailer storage yard was developed in 2016 on one of the commercial blocks.

Huntley Creek transverses the central-east portion of the site in a northwest to southeast orientation, crossing Carp Road adjacent to the southeast corner of the site. The balance of the site is dominated by agricultural fields, with mixed and coniferous forests in the west portion. A channel, assessed as a headwater feature enters the southwest portion of the site and flows east to Huntley Creek (Map 1). There are no buildings or other structures on the site, except for a farmhouse and associated garage west of Carp Road and the recently placed construction trailers.

The forest in the west portion of the site is not part of a natural area as defined by White (1997) in the former Region's Natural Environment System Strategy (NESS). The northwest portion of the Huntley Natural Area, identified as Natural Area 417 in the former Region of Ottawa-Carleton's Natural Environment System Strategy (White, 1997) is approximately 300 metres to the east of the southeast corner of the site, east of Carp Road. This 85 hectare Natural Area was assigned a low overall assessment, with none of the eight evaluation criteria scoring above average. Two evaluation criteria (rare vegetation community/landform representation, and vegetation community/landform diversity) were scored as moderate, with the balance of the evaluation criteria given a low score or not rated. No large-scale linkages were identified for the Huntley Natural Area by White (1997), with no endangered, threatened or rare species noted. No specific seasonal wildlife concentrations were reported and the extent of site fragmentation was considered moderated. White (1997) summarized the Huntley Natural Area as a range of mixed forest communities that appeared to have been much disturbed.

The south edge of the Carp South Natural Area, also identified as low significance in the NESS, is located approximately 400 metres to the north of the north portion of the site. Since 1997 rural residential developments have been constructed on portions of the Carp South Natural Area. Given the low sensitivity of the natural areas, distances to the north and east, and existing rural residential and other developments between the site and the natural areas, no impacts are anticipated on the Carp South or Huntley Natural Areas as a result of the proposed development.

The forests in the west portion of the site are part of the City's Natural Heritage System, as shown on the Schedule L3 Overlay of the Official Plan. Unstable slopes are identified along Huntley Creek on and adjacent to the site on Schedule K of the Official Plan.

No Provincially Significant Wetlands or Areas of Natural and Scientific Interest are in proximity to the site, with a portion of the Goulbourn Wetland Complex approximately 2.5 kilometres to the south of the site representing the closest Provincially Significant Wetland.

The site and adjacent lands to the north, west, and south are designated *General Rural Area* on Schedule A of the Official Plan, except lands along the Carp Road corridor, which are designated *Carp Road Corridor Rural Employment Area*. No lands in proximity to the site are designated *Natural Environment Area* or *Rural Natural Features Area*.

The Carp River Watershed/Subwatershed Study (Robinson, 2004) considered Huntley Creek to be a natural stream, with good water quality and coldwater fish habitat, with fair water quality based on the benthic invertebrate community present. The creek corridor was also considered to be a 'priority one stream reach' for control of livestock and manure runoff, and downstream of Carp Road, a Centre of Ecological Significance. Most of the site, except the northwest portion, was considered to be a high or moderate recharge area by Robinson (2004). A small portion of the forests in the southwest corner of the site were identified as woodlands greater than 50 years of age by Robinson (2004). No areas of rare vegetation or forest interior habitat were identified by Robinson (2004) on or adjacent to the site, however as discussed below 2.7 hectares of forest interior habitat is present in the west portion of the site.

1.1 Scoping the Environmental Impact Statement

This EIS was prepared in accordance with Section 4.7.8 of the City of Ottawa Official Plan (2010) following the EIS Guidelines and the Guidelines for City of Ottawa Tree Conservation Report, found at http://ottawa.ca/en/development-application-review-process-0/environmental-impact-statement-guidelines and http://ottawa.ca/en/env_water/tlg/trees/preservation/guidelines/index.html,with guidance from the Natural Heritage Reference Manual (OMNR, 2010). This report includes the components of an Environmental Impact Statement as identified in Section 4.7.8.11 a) through i) of the City of Ottawa Official Plan (City of Ottawa, 2010).

This report and some of the field surveys were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty years of experience in completing natural environment assessments. Michelle Lavictoire completed the breeding bird surveys and her employees completed the amphibian surveys and fish sampling, and fish habitat assessments. The purpose of the Tree Conservation Report component is to determine any tree stands that should be retained and protected. It is proposed to remove the woody vegetation not to be retained on the site in 2018 after the breeding bird season.

The major objective of this EIS is to determine whether significant natural heritage features are on or adjacent to the site and if so, will the proposed change in land use negatively affect these significant features and functions.

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

- what are the anticipated direct and indirect potential impacts on the Huntley Creek Corridor, including the woody vegetation in the riparian corridor and the aquatic habitat within Huntley Creek?;
- is there any aquatic habitat present on the site outside of the Huntley Creek corridor?;
- what are the features and functions of the woody vegetation in areas proposed for development, including an evaluation of significant woodlands?; and,
- are there any other significant natural heritage features such as Species at Risk utilization on or adjacent to the site?

2.0 METHODOLOGY

Following the approach in Section 4.7.8 of the City of Ottawa Official Plan (2010), this EIS identifies the natural environment features within and adjacent to the site. In addition to the Carp River Watershed/Subwatershed Study (CRWSS) (Robinson, 2004) and the Natural Environment System Strategy (White, 1997), other natural heritage information was collected and summarized through correspondence with Kemptville District Ministry of Natural Resources and Forestry (MNRF) (Appendix A) and the City of Ottawa, and a review of the Natural Heritage Make a Map, Ontario Breeding Bird Atlas and Ontario Reptile and Amphibian Atlas databases. Aerial photography (1976 - 2017) was used to assess the natural environment features in the general vicinity of the site.

Several sets of field surveys were completed:

Breeding Birds

Breeding bird surveys were completed on June 3rd and June 18th, 2016. The breeding bird surveys meet the following requirements:

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

Whip-poor-will

The MNRF *Draft Survey Protocol for Eastern Whip-poor-will (Caprimulgus vociferus) in Ontario* (OMNRF, May 2014) was followed. These methods are summarized below:

- Three surveys to be completed between mid-May and June 30 and during appropriate conditions [over 10°C calm winds (less than 3 on the Beaufort scale)], 50% or more visible moon face illuminated & moon over the horizon].
- Surveys to be completed at night (beginning 30 minutes after sunset and ending at least 15 minutes before sunrise, as long as the moon is above the horizon).
- Two of the surveys can be conducted on successive nights and only one of the surveys can be completed on a night with less than 50% illumination.
- When possible, completed two of the visits during late May and the first week in June.
- Survey points to be typically established no further than 500 m apart within appropriate habitats.
- The survey to consist of a 6-min listening period at each point. The surveyor to record: number of whip-poor-wills, their behaviour (i.e. calling, perched, flushed), movement, note whether the same bird has been heard at another point and approximate direction and distance.
- If a whip-poor-will is heard calling, then the surveyors should walk apart until a distance of 50-60 m is established between the two surveyors and the call(s) noted from these new locations. The purpose of this step is to help triangulate nests and/or defended area.
- Additional notes on any whip-poor-wills to be recorded in-between points.

In 2016, the whip-poor-will surveys were conducted on May 18th, May 26th, and June 15th, 2016. The survey points were placed in such a way as to determine if whip-poor-wills were present in or within 500 m of the Site. Four survey points were established (1-4) (Map 2)

Amphibians

The *Environment Canada Marsh Monitoring Program* (MMP) guide was followed as described below to complete amphibian surveys on April 21st, May 18th and June 16th:
:

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

The location of the amphibian survey stations is also shown on Map 2.

Fish Sampling and Fish Habitat Assessments

Fish community sampling was performed on May 4th, 2016 to document fish utilization in the west-east channel tributary to Huntley Creek. As the Huntley Creek corridor will be retained within a protected corridor and not disturbed, no sampling was done directly in the Creek. The fish community was sampled at the sites shown on Map 2 utilizing backpack electrofishing. No other channels with aquatic habitat potential were observed on the site.

The fish habitat features within the study area was described on April 15th and May 2nd based on the MTO *Environmental Guide for Fish and Fish Habitat October 2006*, the *Ontario Stream Assessment Protocol* and the *Evaluation, Classification and Management of Headwater Drainage Features Guidelines* created by Credit Valley Conservation and Toronto Region Conservation (approved July 2013, finalized January 2014). The Headwater Assessment Guideline is divided into three parts. Part 1 is the Evaluation and discusses various suggested study designs/methods. Part 2 determines the appropriate Classification following the outcome of Part 1. Finally, Part 3 outlines the Management Recommendations. In addition to this guideline, a collection of background review, fish habitat and community assessments and amphibian surveys were completed as described above. Information on the channel morphology was collected (channel width, wetted width, bankfull and wetted depths, cover type and abundance, and substrate type). Incidental observations of wildlife/plant species using the headwater features were also noted.

Background information regarding fish species was obtained by reviewing Distribution of Fish Species at Risk maps published by Mississippi Valley Conservation Authority (MVCA), a search of the Natural Heritage Information Centre (NHIC) databases, and a search of the Land Information Ontario databases.

Table 1 Summary of Dates, Times of Site Investigations

Date	Time (h)	Staff	Air Temperature (Min-Max) °C	Weather	Main Purpose
Sept 24, 2013	1315-1630	B. Muncaster	16.0	Clear skies, moderate breeze	Vegetation & Wildlife
April 15, 2016	1315-1500	S. St. Pierre C. Fontaine	15.0 (-2.1-14.6)	Clear skies, light air	Headwater Assessment
April 21, 2016	2115-2215	M. Lavictoire B. Pierson	17.0 (-0.6-22.8)	Clear skies, light air	Amphibian Survey
April 27, 2016	0930-1400	S.St.Pierre B.Pierson	1.0-6.0 (-3.7-8.8)	Clear skies, light breeze	Bat Cavity Search Basal Area Assessment
May 2, 2016	0945-1200	B. Pierson C. Fontaine	8.0-9.0 (2.4-9.3)	Clear skies, light breeze	Headwater Assessment

May 4, 2016	1015-1130	M. Lavictoire S. St.Pierre	10.0-12.0 (3.3-15.1)	95% cloud cover, light air	Fish Sampling
May 18, 2016	2215-2330	S. St. Pierre C. Fontaine	11.0-13.0 (5.2-17.4)	35% cloud coverage, light air, 93% moon visibility	Whip-poor-will Survey Amphibian Survey
May 26, 2016	0045-0130	S. St. Pierre C. Fontaine	14.0 (11.4-25.4)	5% cloud coverage, light air, 81% moon visibility	Whip-poor-will Survey
June 3, 2016	0800-1000	M. Lavictoire	17.0-19.0 (11.8-26.7)	Clear skies, light air to light breeze	Breeding Bird Survey
June 15, 2016	0045-0130	S. St. Pierre C. Fontaine	15.0 (9.9-28.8)	Clear skies, light breeze, 83% moon visibility	Whip-poor-will Survey
June 16, 2016	1045-1230	B. Muncaster	23.5 (11.9-28.8)	Clear skies, light air	Vegetation & Wildlife (Huntley Creek & East)
June 16, 2016	2245-2330	S. St.Pierre C. Fontaine	18.0-19.0 (11.9-28.8)	Clear skies, light air	Amphibian Survey
June 18, 2016	0715-0900	M. Lavictoire	14.0-25.0 (11.2-31.7)	Clear skies, light air	Breeding Bird Survey
July 5, 2016	1015-1100	S.St.Pierre B.Pierson	28.0 (12.9-32.3)	5% cloud cover, light air	Butternut Survey
August 11, 2016	0730-0845	S. St.Pierre C. Fontaine	24.0-25.0 (19.0-34.4)	10% cloud cover, light breeze changing to 10% cloud cover, light breeze	Headwater Assessment
February 8, 2017	11:50-13:30	B. Muncaster	- 3.0	Clear skies, light to moderate breeze	Vegetation & Wildlife (West Forest)
May 9, 2017	4.5	S.St.Pierre C.Fontaine	2.0-4.0 (-1.8-6.2)	90% cloud cover, light breeze changing to 100% cloud cover	Large Tree survey (Plots)
June 10, 2018	06:30-08:00; 10:45-12:30	B. Muncaster	16.0-21.0	Clear skies, calm to light breeze	Vegetation & Wildlife

M. Lavictoire – Michelle (Nunas) Lavictoire – B.Sc. Wildlife Biology, M.Sc. Natural Resources
B. Muncaster - Bernie Muncaster – B.Sc. Ecology, M.Sc. Biology
S. St. Pierre – Shaun St. Pierre – B. Sc. Biology and Fisheries and Wildlife Technologist
B. Pierson—Brittney Pierson—Honours B.Sc. Biology and Environmental Science
C. Fontaine - Cody Fontaine - Fisheries and Wildlife Technologist

Other wildlife and vegetation observations were gathered on all of the above surveys. Ecological units were defined based on species present, the wetness index of the species, dominant species, drainage observations, health, age, topography and soil conditions. Records of wildlife were made through direct sightings and observations of tracks and scat. Other aspects of the surveys included photographs of site representative features and observations on the level of disturbance from human activities and other disturbances such as non-native flora.

For the purposes of this report Carp Road is assumed to run in a north-south orientation.

3.0 EXISTING CONDITIONS

3.1 Geologic Conditions

The topography throughout the site is generally flat, with gentle slopes towards Huntley Creek from the west and east. Gemtec (2018) reported an elevation range of approximately 7.5 metres across the overall site.

The soils on the site are described as Jockvale, fine sandy loam with imperfect drainage. The Jockvale soils are neutral to medium acid fine sand or loamy fine sand (Schut and Wilson, 1987). Other soil associations represented on the site are North Gower silty loams with poor drainage and Manotick soils with imperfect drainage. Gemtec (2018) summarized the soils on the site as a surficial topsoil layer between 0.1 and 0.4 metres in thickness, variably underlain by sand, silty sand, clay, or silty clay. Sand and gravel or glacial till were present beneath portions of the sand and silty clay layers. The total overburden thickness was estimated by Gemtec (2018) between 5 and 12 metres. The overburden depth increases in a northeasterly direction. The sandy soils appear to increase infiltration and decrease surface water runoffs. No organic deposits or exposed bedrock were identified for the site by Gemtec (2018).

Water was encountered by Gemtec (2018) in several of the test pits at depths of about 1.3 to 4.2 metres below the existing ground surface. Gemtec (2018) noted that the elevation of Huntley Creek is approximately 1.5 metres below the water table of nearby monitoring wells. Based on test wells, Gemtec (2018) concluded the regional groundwater flow direction is to the northeast, but the local groundwater flow direction in the overburden is influenced by Huntley Creek and results in eastward and westward groundwater flows towards the creek.

3.2 Natural Environment Features - Huntley Creek and Open Habitats

As it is today, the majority of the site was in agricultural use on 1976 aerial photography, with the southwest portion wooded. Hedgerows were generally absent between the agricultural fields and trees were lacking along the Huntley Creek corridor. Since 1976 the extent of tree cover along the Huntley Creek corridor has increased noticeably and the deciduous hedgerows among the fields are more pronounced.

Cultural Meadow/Agricultural Fields

Cultivated fields are in the central and east portions of the site (Photos 1 - 3). Cultural meadow vegetation such as common mullein, common plantain, common milkweed, common brome grass, timothy, reed canary grass, June meadow grass, orchard grass, bluegrass, New England aster, common dandelion, wild carrot, thicket creeper, field horsetail, hoary alyssum, common mullein, yellow hawkweed, rough-fruited cinquefoil, narrow-leaved goldenrod, Canada goldenrod, small white aster, common strawberry, heal-all, field sow-thistle, Canada anemone, stinging nettle, white-sweet clover, red clover, wild grape, cow vetch, poison ivy, common burdock, common mugwort, evening primrose, and purple loosestrife were along and adjacent to the periphery of the agricultural fields. Staghorn sumac, red-osier dogwood, narrow-leaved

meadowsweet, red raspberry, pussy willow, Bebb's willow, red-osier dogwood, and slender willow shrubs were also adjacent to the fields and in the meadow habitats, with regenerating white birch, trembling aspen, balsam poplar, Manitoba maple, white cedar, white spruce, and ash stems were up to 10cm diameter at breast height (dbh).

Photo 1 – Typical cultivated field in the central portion of the site. View looking west to west forest (June 10th, 2018)

Photo 2 –Another cultivated field in the north-central portion of the site. View looking east to the Huntley Creek corridor (September 24th, 2013)

Photo 3 – Cultivated field adjacent to the east edge of the west forest. View looking north (September 24th, 2013)

Huntley Creek Corridor

The vegetation along Huntley Creek is dominated by white cedar groves (Photo 4), with areas of cultural woodlands (Photo 5). The large cedar trees were multi-stem examples up to 65cm dbh. Wind throw was significant in many areas of the cedar forests and stumps and access trails indicated historical logging in the north representation of this community along the corridor. There were a few scattered specimen white spruce and sugar maple trees, up to 70cm dbh, along the top-of-slope associated with Huntley Creek, along with a 63cm dbh butternut (Photo 22) described in the following section. Speckled alder, red raspberry, tartarian honeysuckle, prickly ash, white elderberry, and glossy buckthorn shrubs were also common, along with regenerating stems of white cedar, Manitoba maple, and white elm. Thicket creeper and wild grape growth were extensive on many of the shrubs and lower branches of the trees. Other ground flora included purple-flowering raspberry, bloodroot, Virginia waterleaf, false nettle, lady fern, ostrich fern, sensitive fern, thicket creeper, white snakeroot, tall meadow rue, wild sarsaparilla, meadow horsetail, common burdock, and tall buttercup.

Crack willow, white ash, green ash, Manitoba maple, and white cedar trees were common in the cultural woodlands along the Huntley Creek corridor, along with glossy buckthorn, prickly ash, pin cherry, and red raspberry shrubs. The largest trees were white ash and crack willow up to 50cm dbh. Many of the white ash were in poor health with greatly reduced leaf-out. Representative ground flora included Canada goldenrod, wild grape, thicket creeper, Canada anemone, yellow goat's-beard, daisy fleabane, and flowering dogbane.

The banks of Huntley Creek and adjacent areas were generally well vegetated with reed canary grass, spotted jewelweed, tall meadow-rue, false nettle, Canada anemone, stinging nettle, Philadelphia fleabane, and speckled alder shrubs. Some bank erosion was observed and rock protection had been placed on an outside bend downstream of the ford crossing of the creek in the central portion of the corridor. Canopy cover along Huntley Creek was good along most of the corridor, although much of the wetted width was not shaded where the creek was much wider upstream of a large beaver dam was in the southeast portion of the corridor (Photos 6 and 7). Recent beaver cuttings were common (Photo 8). The available substrate was a good combination of boulders, cobble, gravel, and fines and the water appeared generally clear. Many schools of forage fish were observed. Some silt covering was noted on the coarser material. Aquatic vegetation, undercut banks, and large and small woody debris provided additional in-stream structure. Caddisfly cases and stoneflies were common on the underside of the cobble, indicating good water quality. Yellow pond lily was common on the surface upstream of the beaver pond. Other aquatic vegetation included hard-stemmed bulrush, northern blue flag, variable-leaved pondweed, flat-stemmed pondweed, sago pondweed, and north water milfoil. There appeared to be a good variety of riffle, pool, and reach morphology associated with the creek.

Two dug ponds, likely for agricultural operations, were on either side of the creek in the southeast portion of the corridor. The pond on the west side of the corridor was surrounded by cultural woodland vegetation. The vegetation adjacent to the pond on the east side of the creek corridor appeared to be frequently mowed.

Photo 4 – Cedar coniferous forests are along much of the Huntley Creek corridor. This example is on the east side of the creek, in the central-east portion of the site

Photo 5 – Cultural Woodland along the southwest side of the Huntley Creek corridor in the southeast corner of the site. View looking northeast

Photo 6 – Huntley Creek widens considerably upstream of a beaver dam in the southeast portion of the site. View looking south, downstream towards the beaver dam

Photo 7 – Another view of Huntley Creek. This view is looking upstream, north, from a ford of the creek in the central-east portion of the site

Photo 8 – Recent beaver cuttings were common along the Huntley Creek corridor. This example was in the northwest portion of corridor

Deciduous and Coniferous Hedgerows

The deciduous hedgerows on the site were generally intermittent and were dominated by small to medium size trees, generally with a maximum size of 25cm dbh (Photos 9 and 10). White elm was dominant in many areas, with green ash, white ash, Manitoba maple, and trembling aspen common. Sugar maple, basswood, white cedar, white birch, large-toothed aspen and white spruce were also present in the hedgerows. Common buckthorn, hawthorn, serviceberry, slender willow, red raspberry, staghorn sumac, apple, and prickly ash shrubs were among the trees. Many of the elm and ash were in poorer condition, as indicated by stripped bark and broken limbs. Wild grape and thicket creeper vine coverage were common on many of the lower tree branches and shrubs in the hedgerows.

Where white cedar is dominant, the hedgerow is identified as a coniferous hedgerow on Map 1. In addition to a coniferous hedgerow of white cedar, Manitoba maples up to 60cm dbh were abundant around the farmhouse in the northeast portion of the site, west of Carp Road. Sugar maple up to 35cmm dbh and smaller white elm, apple, white ash, and trembling aspen were also in the vicinity of the farmhouse and driveway.

Wildlife species observed in the open areas and along the Huntley Creek corridor and hedgerows included Canada goose, mallard, American crow, common raven, killdeer, ruffed grouse, pileated woodpecker, northern flicker, alder flycatcher, eastern kingbird, tree sparrow, mourning dove, black-capped chickadee, common grackle, red-winged blackbird, grey catbird, great-crested flycatcher, Baltimore oriole, common yellowthroat, yellow warbler, chestnut-sided warbler, song

sparrow, white-throated sparrow, savannah sparrow, European starling, brown thrasher, northern cardinal, cedar waxwing, blue jay, American goldfinch, American robin, red squirrel, and white-tailed deer, with turkey vulture and ring-billed gull noted overhead. Woodchuck dens were common in the sandy soil. As indicated above recent beaver cuttings were common along the Huntley Creek corridor (Photo 8). Barn swallows were observed flying adjacent to and on the southeast corner of the site on June 10th, 2018. During the amphibian surveys American toad, spring peeper, and wood frog were heard along the west-east channel tributary to Huntly Creek west of the Huntly Creek corridor, with green frog heard and northern leopard frog seen near a dug pond adjacent to Huntley Creek on June 10th, 2018. A snapping turtle was observed along the south portion of the Huntley Creek corridor on June 10th, 2018

Photo 9 – Typical intermittent west-east deciduous hedgerow among the agricultural fields. This example is in the southeast portion of the site

Photo 10 – West-east deciduous hedgerow in the southwest portion of the site. View looking east (June 10th, 2018)

3.3 Natural Environment Features – West Forest

Upland White Pine-Maple Mixed Forest

Mature white pine and sugar maple trees highlight the northwest portion of the west forest (vegetation community '6' on Map 1, Photos 11 – 13). The largest of these trees were in the range of 100cm dbh for both species. White cedar, ironwood, and white spruce were also well represented, with the largest cedar and spruce trees approaching 80cm and 55cm dbh, respectively. White birch, balsam fir, and American beech were other common tree species, with white ash also present. The disturbance in this portion of the forest was limited. Wind throw damage was less than in other areas of the forest and the historical logging was selective. Extensive amounts of natural deadfall added to the ecological feature of the forest. Some of the larger maples appeared to be entering senescence, with major trunk decay and extensive fungi on the trunk.

This portion of the forest had good maple (Photo 14), ironwood, white pine, and balsam fir regeneration, with some ash regeneration. There was limited common buckthorn in the understory. Ground vegetation in the mixed forest included lady fern, oak fern, Canada mayflower, wild sarsaparilla, white trillium, moneywort, common burdock, and Pennsylvania sedge.

The following tree species were representative of the upland white pine-maple mixed forest:

Tree Species Coniferous Forest	dbh Range	Distribution
White cedar	4 – 85 cm	18 %
White pine	16 – 103 cm	25 %
White birch	12 – 42 cm	5 %
Ironwood	3 – 27 cm	10 %
American beech	20 – 35 cm	5 %
Sugar maple	3 – 97 cm	20 %
White spruce	15 – 45 cm	10 %
Balsam fir	3 - 48 cm	5 %
White ash	3 - 37 cm	2 %

Photo 11 – Mature white pine in the northwest portion of the west forest (September 24th, 2013)

Photo 12 – Another shot from the upland pine-maple mixed forest, with a mature white pine. This example was in the north-central portion of the west forest (September 24th, 2013)

Photo 13 – Mature sugar maple in the central-west portion of the west forest, east of William Mooney Road (September 24th, 2013)

Photo 14 - Regenerating sugar maple stems were abundant in the portion of the upland pine-maple mixed forest east of William Mooney Road (September 24th, 2013)

Upland White Cedar - Poplar Mixed Forest

Upland white cedar-poplar communities were common in the forest in the west portion of the site (vegetation community '5' on Map 1, Photo 15). Trembling aspen and white cedar were dominant, with white spruce and white birch well represented in areas. White pine, balsam fir, eastern hemlock, bur oak, white elm, white ash, black ash, sugar maple, and red maple were also noted in this younger forest community. The largest trees were a couple of very large red maples. Their large size suggests the area was historically pastured. The largest white pine and white cedar were in the 80 - 90cm dbh range. Common buckthorn and glossy buckthorn were extensive in many areas of the understory (Photo 17), with prickly gooseberry, red raspberry, and prickly ash also present. White spruce and maple regeneration was also in the understory. Ground vegetation in the mixed forest included wild sarsaparilla, eastern bracken, Canada mayflower, white trillium, lady fern, sensitive fern, ostrich fern, spotted jewelweed, scouring rush, dwarf raspberry, field horsetail, panicled aster, flat-topped aster, calico aster, foamflower, barren strawberry, Canada goldenrod, stinging nettle, poison ivy, enchanter's nightshade, bittersweet nightshade, helleborine, thicket creeper, and wild grape,

Wind throw was particularly extensive in many areas of this forest (Photo 16). Many of the tops of the cedar trees were toppled and blow-down of entire trees was common. A few of the larger white spruce trees had reduced needles and extensive insect damage on the trunk. Historical logging was common in the south portions of this forest.

Pockets of the southwest forest were lower lying and the micro habitats where sensitive fern, scouring rush, ostrich fern, spotted jewelweed, water horehound, purple loosestrife, and dwarf raspberry dominate the ground flora represent small areas of wetland habitat.

The following tree species were representative of the upland white cedar-poplar mixed forest:

Tree Species Mixed Forest	dbh Range	Distribution
White cedar	4 – 80 cm	25 %
Red maple	3 – 135 cm	4 %
White pine	17 – 88 cm	5 %
Sugar maple	3 – 48 cm	4 %
White birch	10 – 36 cm	8 %
Trembling aspen	10 - 66 cm	18 %
Eastern hemlock	13 – 44 cm	3 %
White spruce	6 - 53 cm	5 %
Balsam fir	3 - 57 cm	10 %
White elm	7 - 20 cm	3 %
Bur oak	12 cm	2 %
White ash	3 – 38 cm	8 %
Black ash	5 - 19 cm	2 %
Ironwood	6 – 20 cm	3 %

Photo 15 – Cedar-poplar mixed forest in the southeast portion of the west forest (September 24th, 2013)

Photo 16 – Wind throw was extensive in the mixed west forest. This example was in the southeast portion of the west forest (September 24th, 2013)

Photo 17 – Glossy buckthorn was thick in many areas of the cedar-poplar mixed forest. This example was in the south-central portion of the west forest (September 24th, 2013)

Upland Cedar Coniferous Forest

The southwest portion of the forest included an upland white cedar coniferous forest (vegetation community '7' on Map 1, Photo 18). In addition to the dominant white cedar, white birch was common in areas, with white spruce, green ash, white elm, large-toothed aspen, and sugar maple also present. Greater logging activity was evident in this area and the larger trees were generally less than 40cm dbh, with a few larger white cedar, balsam fir, and white spruce. Wind throw was also extensive in many areas. Glossy buckthorn was dominant in portions of the understory, with white cedar and balsam fir regeneration common. Ground flora in the coniferous forest included clintonia, wild grape, sensitive fen, and Pennsylvania sedge.

The following tree species were representative of the upland cedar coniferous forest:

Tree Species Poplar Deciduous Forest	dbh Range	Distribution
White birch	12 – 40 cm	10 %
Large-toothed aspen	18 – 35 cm	2 %
Green ash	8 – 25 cm	5 %
Balsam fir	3 – 51 cm	10 %
White cedar	3 – 57 cm	60 %

White spruce	15 – 50 cm	7 %
White elm	7 – 23 cm	4 %
Sugar maple	18 – 25 cm	2 %

Photo 18 – White cedar coniferous forest in the south portion of the west forest (February 7th, 2017)

Wildlife observed in the west forests included eastern chipmunk, red squirrel, common garter snake, northern leopard frog, American crow, black-capped chickadee, red-breasted nuthatch, northern flicker, downy woodpecker, common grackle, blue jay, grey catbird, great-crested flycatcher, house wren, winter wren, American robin, cedar waxwing, American goldfinch, ovenbird, chestnut-sided warbler, northern waterthrush, yellow-rumped warbler**,** black-throated green warbler, black-and-white warbler, common yellowthroat, red-eyed vireo, white-throated sparrow, chipping sparrow, and song sparrow**.** A few of the older sugar maples and white pines contained potential wildlife cavities. These cavity trees were generally within 100 metres of William Mooney Road. Smaller white cedars contained woodpecker cavities.

3.4 Natural Environment Features - Huntley Creek Tributary

Huntley Creek Tributary

The west-east channel in the southwest and south-central portions of the site is the stormwater outlet for a rural residential subdivision to the west of William Mooney Road. In addition, the channel collects runoff from William Mooney Road. The channel is straight and contains culverts to facilitate agricultural access.

As shown on Map 2, three sampling stations were established along the Huntly Creek tributary in the south-central and southwest portions of the site. The sampling was part of the headwaters features assessment completed on this channel by Bowfin (2018). Flow was present in the channel at all three sampling stations during the April and May surveys, but not the August survey (Photo 21). No fish were captured on May 4th, 2016 at the two upstream stations with one 52mm brook stickleback netted at the downstream site. The substrate in the channel consisted of fines, with in-water cover provided by vegetation including purple loosestrife, grass-leaved goldenrod, spotted joe-pye-weed, water plantain, and scouring rush. A few areas containing small and large woody debris were noted. Canopy cover was not present on the two downstream stations (Photo 20) but was extensive at the upstream site east of William Mooney Road (Photo 19). No signs of erosion were observed by Bowfin (2018) at any of the sampling stations along the channel.

Bowfin (2018) concluded a management recommendation of 'Conservation' for the west-east channel based on important riparian habitat within the west forest and valued fish habitat at the downstream sampling station (though only one brook stickleback was captured).

The 'Conversation' management recommendation provides the following options (Bowfin, 2018):

1. The channel may be maintained, relocated or enhanced. It is noted that should the channel be relocated then it is to be done using natural channel design;
2. Any groundwater or wetland contribution is to be maintained or replicated. If the catchment drainage will be removed as part of the development then the function should be restored through enhancement of lot level control (i.e. restore original catchment using clean roof drainage), as feasible;
3. Maintain or replace on-site flows using mitigation measures and/or wetland creation, if necessary;
4. Maintain or replace external flows; and,
5. Drainage feature must connect to downstream drainage.

Photo 19 – West to east channel in the southeast portion of the west forest. View looking east (September 24th, 2013)

Photo 20 – West-east channel looking downstream towards Huntly Creek from the south-central portion of the site (April 15, 2016)

Photo 11 – West-east channel within the west woods, looking upstream, west (August 11, 2016)

3.5 Species of Interest and Other Significant Features

Species at Risk and other Species of Interest

Two Species at Risk were observed during the field surveys – butternut and barn swallow, along with two species of special concern, eastern wood pewee (heard to the west of the northwest corner of the site) and snapping turtle (observed in the south portion of the Huntley Creek corridor. Correspondence from the MNRF dated October 4th, 2016 (Appendix A) identified butternut, Blanding's turtle, and eastern whip-poor-will as potential Species at Risk for the site, as well as two species of special concern, snapping turtle and eastern milksnake. Two butternuts were assessed as healthy Category Two trees along the Huntly Creek corridor, as described below. These butternuts will be retained along with the other woody vegetation in that portion of the corridor. The understory in the on-site forests appeared too thick for utilization by eastern whip-poor-will, which requires large wooded areas with open patches, and/or open woodlands or alvar and no eastern whip-poor-wills were heard on or adjacent to the site during three targeted nocturnal surveys. The only turtle observed on the site was a snapping turtle seen in the south portion of the Huntley Creek corridor and any turtle activity on the site is anticipated to be confined to the corridor. Blanding's turtle is not anticipated to utilize the corridor due to a lack of larger areas of wetland marsh and swamp habitat.

Eastern milksnake (no longer considered a species of special concern) is relatively common in portions of Ottawa but is not often seen. It is found in open woodlands, clearings and around farmhouses where it hunts its major prey item, mice. Only common garter snake was observed

during the field surveys. MNRF recommends searches of the site during appropriate weather conditions prior to site alterations for potential turtles and snakes.

Maternity roosts for the bat Species at Risk are typically found in mixed or deciduous forests using cavities in trees 25cm dbh or larger. Seventeen prism survey plots were randomly established in the west forest (based on as forest size of 17 hectares and not selecting plots in the coniferous forest) to search for cavity trees. On April 27th, 2016 during leaf-off conditions cavity trees were only observed in two of the plots to the east of William Mooney Road. This portion of the forest will be retained. The cavity trees were sugar maple and white pine between 42cm and 92cm dbh. The density of suitable tree cavities in the west forest (mixed forest communities only) was less than 10 per hectare, the density threshold for bat sampling for potential summer maternal colonies.

The Ontario Ministry of Natural Resources and Forestry's Make a Map database was reviewed. A search was conducted on the 1 km squares including the site and adjacent lands (18VR21– 16, 25, 26 and 36). The only Species at Risk reported for these squares was eastern whip-poor-will, which is discussed above and was not heard on or adjacent to the site. The breeding birds listed in the Ontario Breeding Bird Atlas for the 10 km square 18VR21 identified eastern whip-poor-will, eastern meadowlark, barn swallow, bank swallow and bobolink as Species at Risk in the overall 10 km square. Bobolink and eastern meadowlark utilize larger areas of grasslands, including hay fields. The cultivated fields do not represent suitable nesting habitat for these grassland Species at Risk. No open unlined chimneys that may be used by chimney swift were observed on the farmhouse in the northeast portion of the site, west of Carp Road (Photo 25). No barn swallow activity, including nesting, was observed at the garage (Photo 24) or other structures in the vicinity of the farmhouse. None of these structures will be removed at this time. Barn swallow activity was noted on June 10th, 2018 around the barns on the adjacent property and a pond in the southeast corner of the Huntley Creek corridor (Photo 23). No site alterations are anticipated in these areas. Bank swallow is a colonial nester; burrowing in eroding silt or sand banks and sand pit walls; habitat not observed on or adjacent to the site.

The potential Species at Risk in the City of Ottawa were also reviewed, with an emphasis on the endangered and threatened species historically reported in the overall City, including butternut, American ginseng, eastern prairie fringed-orchid, wood turtle, spiny softshell, Blanding's turtle, musk turtle, Henslow's sparrow, loggerhead shrike, bald eagle, golden eagle, least bittern, eastern whip-poor-will, chimney swift, eastern meadowlark, bank swallow, barn swallow, bobolink, little brown myotis, northern long-eared bat, olive hickorynut, eastern cougar and American eel. The habitat requirements of these species along with those listed as special concern were reviewed.

A 63cm dbh butternut (Photo 22) and a 1 cm dbh butternut were assessed along the Huntly Creek corridor (see Map 1) on July 5th, 2016 by Shaun St. Pierre, a certified Butternut Health Assessor (#281), with the butternut health assessment report submitted to MNRF in 2016. Both of these butternuts were assessed as healthy and are considered Category 2 butternuts. No other butternuts were observed on or adjacent to the site. If site disturbances will occur within 25 metres of these butternuts in the future (as no permit will be required for the removal or harm of the butternut, it is our understanding that compensation for butternut habitat is not considered and therefore the 50 metre distance is not applicable) these butternuts should be reassessed with a

current assessment at that time. If the butternuts have the potential to be harmed, they can be registered through the online process and compensated for with off-site plantings of pure seedlings. No site disturbances are permitted within 25 metres of these butternuts until thirty days have passed following submission of an updated butternut health assessment report to MNRF showing the butternuts as unhealthy or the on-line registry process has been completed.

Photo 22 – Healthy butternut on the east side of the Huntley Creek corridor in the central-east portion of the site. Tree will be retained as part of the greenspace along the corridor

Photo 23 – Pond and adjacent mowed areas in the southeast portion of the site, east of the Huntley Creek corridor. Barn swallow activity was noted around the barns in the rear of the photo, on adjacent property and the pond (June 10th, 2018)

Photo 24 - No evidence of barn swallow activity was observed in the on-site structures west of Carp Road. These structures will be retained at this time (June 10th, 2016)

Photo 25 – Chimney is vented on the farmhouse in the northeast portion of the site west of Carp Road (June 10th, 2018)

Significant Woodlands and Valleylands

The west forest extends to the north and south of the site slightly into the rear yards of adjacent rural residential developments, as well as the rear of severances along William Mooney Road. Based on the wooded area cover provided in the City of Ottawa's Characterization of Ottawa's Watersheds (March, 2011), the Carp Subwatershed has 34 percent wooded cover. Following OMNR (2010), the corresponding amount of forest interior habitat required for the woodland interior criteria is eight hectares, while the west forest has 2.7 hectares. The corresponding threshold size for woodland size is 50 hectares, while the west forest and adjacent contiguous forest cover has an area of approximately 23.5 hectares. Note the west forest is not contiguous with other forests to the southeast or west when a minimum patch width of 60 metres is applied (based on a size threshold of 10 hectares) and breaks in the forest canopy of greater than 20 metres along William Mooney Road.

The west forest is not within 30 metres of a significant natural heritage feature that is receiving an ecological benefit from the forest and does not provide a connecting link between other significant natural features. No water protection function is known for the west forest with no evidence of sensitive groundwater discharge. The east-west channel flows through the west forest but there was no evidence of contributions from the forest to the channel which appeared to be primarily conveying flow from the rural subdivision to the west of William Mooney Road. The west forest does not have a high native diversity with respect to species composition and terrain and no rare vegetation communities, habitats, tree, or plant species were observed. An

assessment of larger tree size structure sampled 18 fixed plots in the west forest, with all trees measured within the plots. The larger tree size structure is defined in OMNR (2010) as 10 or more trees per hectare greater than or equal to 50cm dbh or a basal area of 8 or more m^2/ha in tree that have a dbh of at least 40cm. The values calculated for the west forest were less than these thresholds, with an average of 3.02 trees per hectare greater than 49cm dbh and a basal area of 1.86 for trees greater than 39cm dbh per hectare. No significant economic or social functions appear associated with the west forest, with no evidence of recreational use. Based on the above analysis the west forest is not considered a significant woodlands using the criteria in OMNR (2010).

Although the forest has minimal forest interior habitat, bird species that often require a minimum forested area for successful breeding were observed including ovenbird, black-and-white warbler, black-throated green warbler, and winter wren.

The Huntley Creek corridor would be considered a significant valleylands due to the slope of the corridor cross-section, a watercourse supporting sensitive fish habitat, and well-treed valley slopes.

Significant Wildlife Habitat and Linkages

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

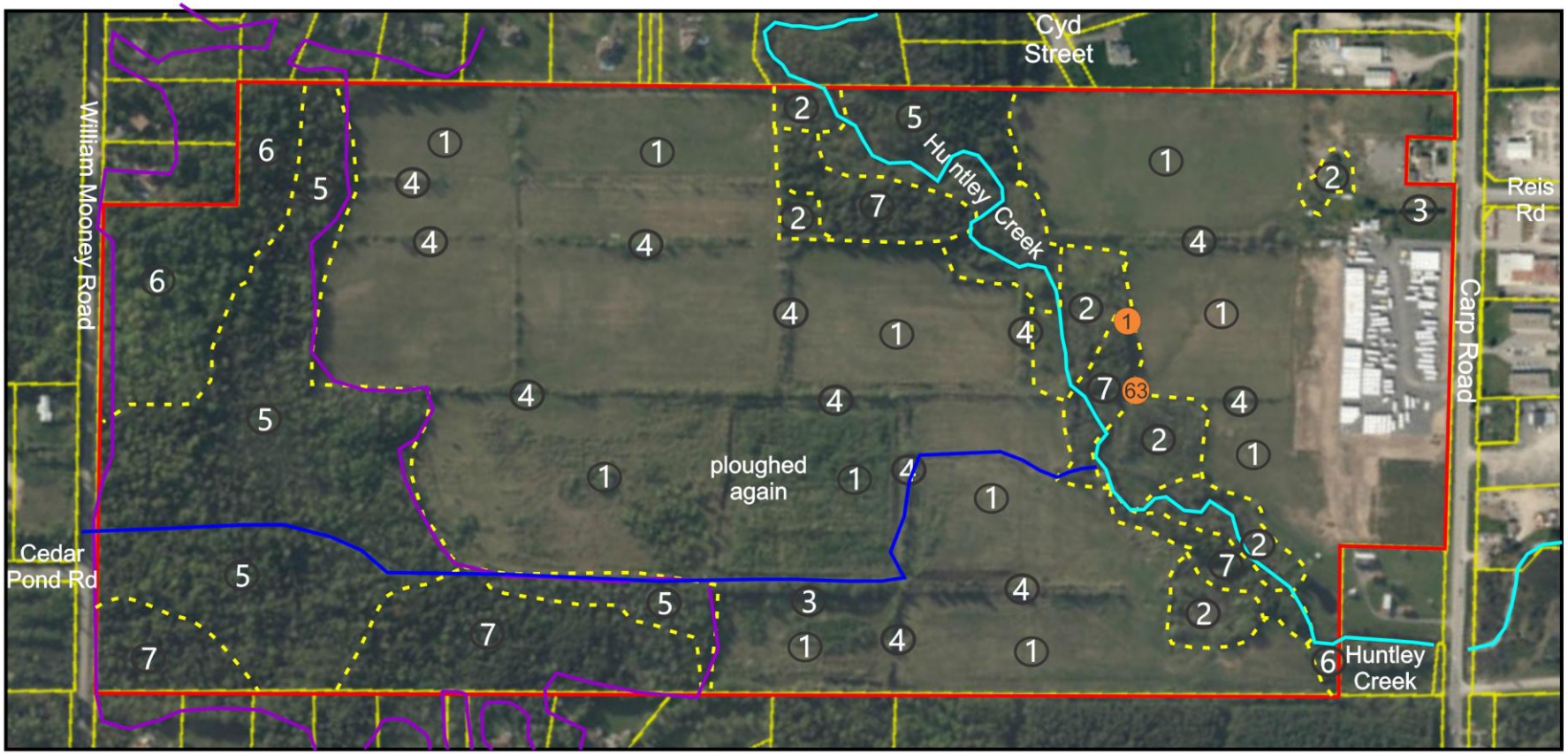
The Huntley Creek corridor would be considered significant wildlife habitat due to the presence of snapping turtle, a species of special concern. Although area sensitive breeding bird such as ovenbird, winter wren, and black-throated green warbler were observed in the west forest, the onsite and adjacent contiguous forest to the north and south do not meet the 30 hectare size threshold and interior forest habitat, defined in MNRF (2015) as at least 200 metres from forest edge habitat, is not present as required for the area-sensitive bird breeding habitat criterion in MNRF (2015).

No habitats of Species of Conservation Concern were present as the indicator species associated with marsh, open country, or shrub/early successional breeding bird habitat were not observed. No Provincially rare species were observed. No evidence of animal movement corridors, such as those for deer or amphibians, were noted.

Other field observations would not trigger a significant wildlife habitat designation with respect to the ELC communities present. For example the cultural habitats do not support waterfowl stopover or staging areas, colonial nesting bird breeding habitat, or other examples of seasonal concentration areas. No rare vegetation communities as noted in MNRF (2015) or rare or specialized habitats were observed. The amphibian observations were not in sufficient numbers or species diversity to meet the defining criteria in MNRF (2015). The forests and adjacent cultivated fields and cultural woodlands do not appear to support raptor wintering areas, old

growth forest is not present, and the forests are not large enough to meet the size criterion for deer winter congregation areas. No seeps or springs were observed. No potential bat hibernacula areas were observed. Areas of broken and fissured rock for potential use by snakes, including potential reptile hibernaculum, were not observed. The forests are too small to meet the criterion in MNRF (2015) for area-sensitive bird breeding habitat.

Linkage functions on the site are anticipated to focus on the Huntley Creek corridor, which has a minimum width in the range of 70 metres to the north of the site. However, the undisturbed corridor is much narrower to the east of the site, east of Carp Road. In addition, Carp Road and the Highway 417 corridor, approximately a kilometre to the west of the site, further reduce the effectiveness of the linkage functions, as do the many commercial, aggregate, and rural residential developments in the area.



Legend

- Site
- Natural Heritage System per Schedule L3
- Headwater Feature
- (1) Category 2 Butternut (# indicates cm dbh)

Vegetation Communities

1. Agricultural field
2. Cultural woodland
3. Mixed hedgerow
4. Deciduous hedgerow
5. Upland cedar-poplar-ash mixed forest
6. Upland pine-maple mixed forest
7. Upland cedar coniferous forest

2017 airphoto base from geoOttawa

Approx. Scale 1:6,600

0 50 100 150 200 METRES

June 10, 2018	FILE: 03 - 10	Map 1

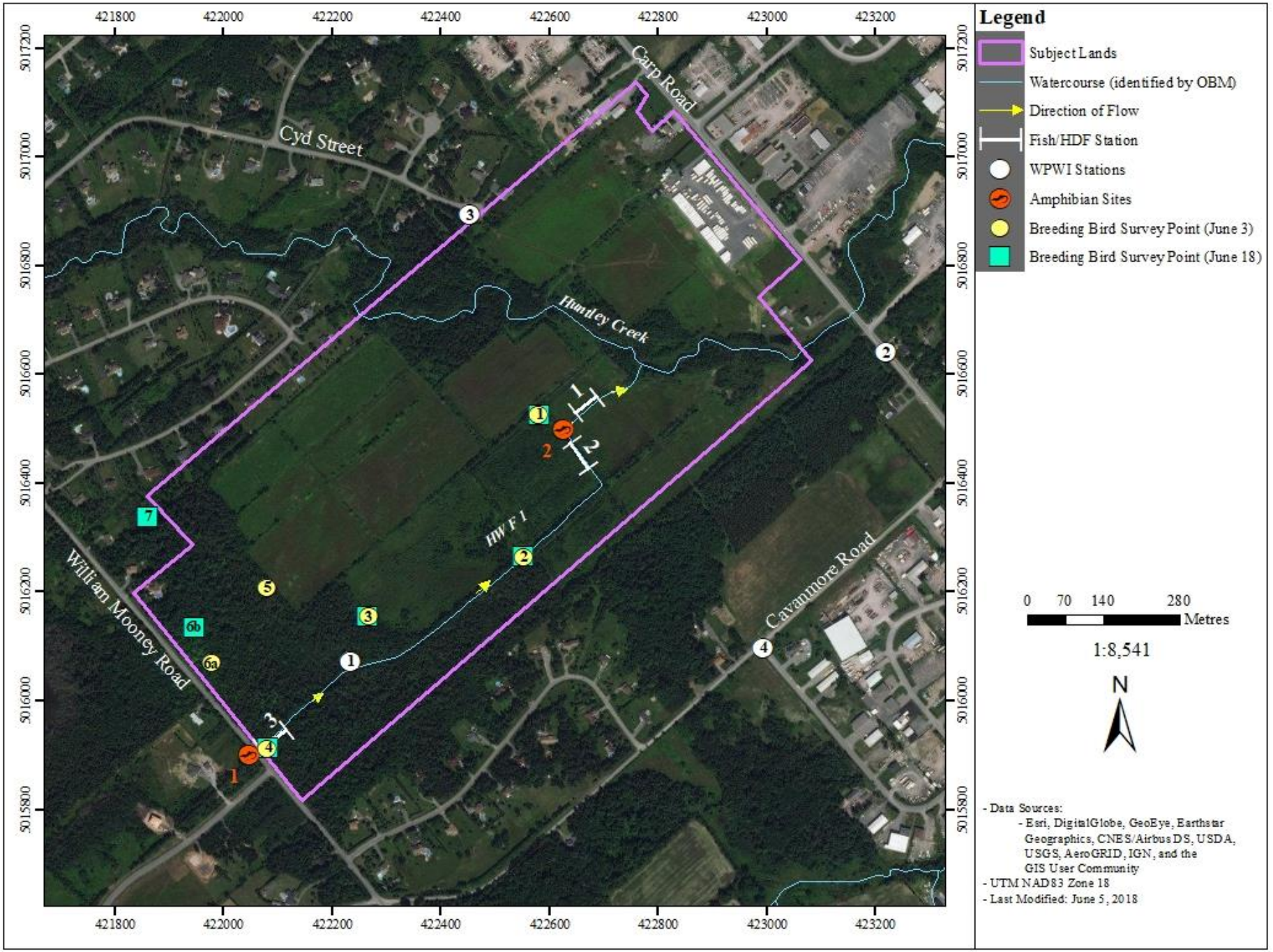
Prepared for: 1384341 Ontario Ltd

Prepared by: Muncaster Environmental Planning Inc.

CURRENT VEGETATION

2727 CARP ROAD
HUNTLEY, CITY of OTTAWA

MAP 2 – AQUATIC, BREEDING BIRD, WPWI, and AMPHIBIAN SAMPLING STATIONS

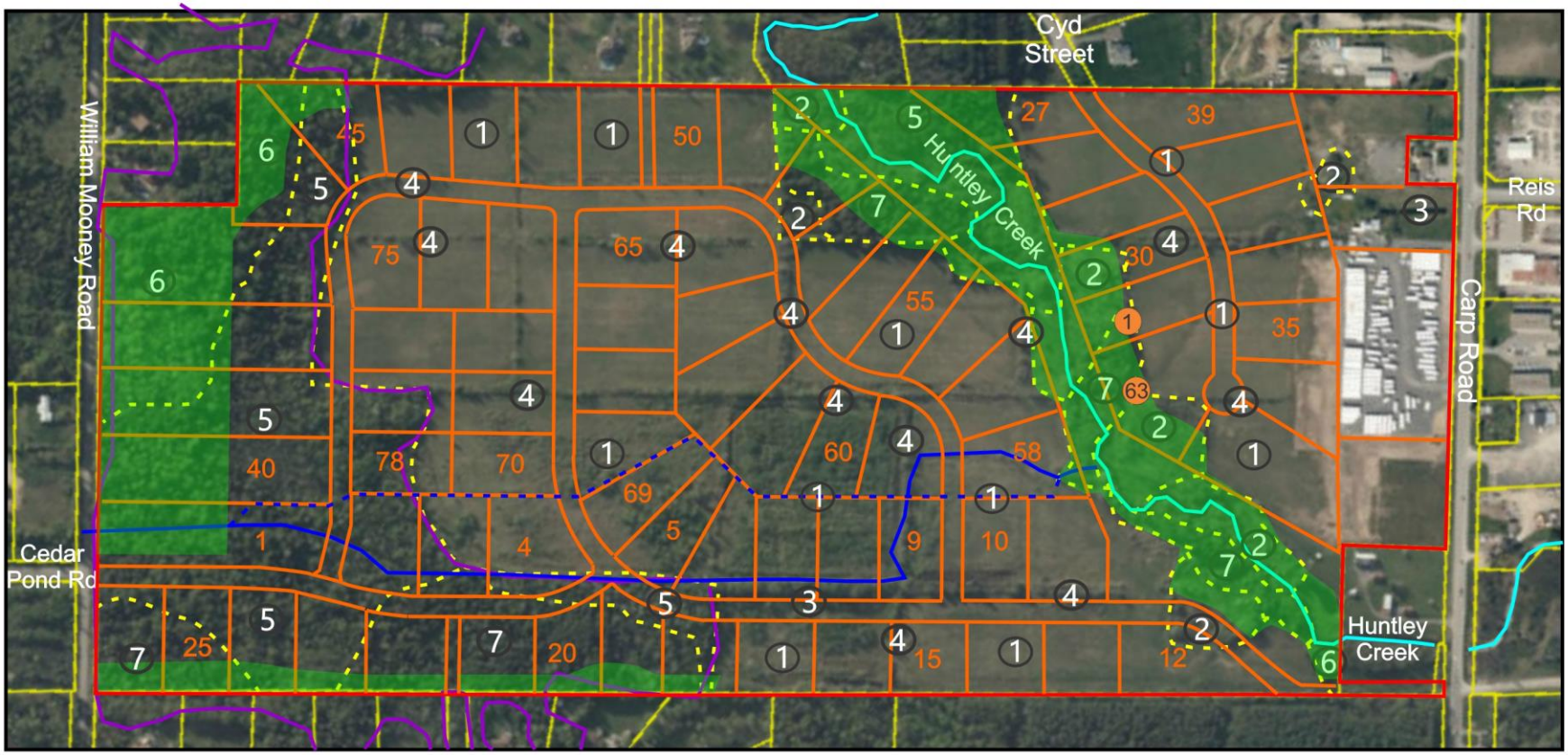


4.0 DEVELOPMENT PROPOSAL

Per Schedule A - Rural Policy Plan of the Official Plan, the majority of the site is designated General Rural Area, with the east portion of the site, on the west side of Carp Road, designated Rural Employment Area. The corresponding zones are Rural Countryside (RU) and Rural Commercial (RC9). A Zoning By-law Amendment application will be submitted to amend the current zoning of the RU Zone to a Rural Residential Zone (RR) to implement the proposed residential lots.

The proposed development consists of seventy-eight rural residential lots with lot sizes that range in size from approximately 0.6 to two hectares, along with four commercial blocks on the west side of Carp Road. A trailer storage yard (ATCO) was developed in 2016 on Block 81; one of the four proposed commercial blocks. The residential lots will be developed in two phases. The first phase consists of the four commercial lots along Carp Road, and 39 residential lots in the southern and eastern portion of the site. Thirteen of the residential lots are located on the east side of Huntley Creek with the remaining lots located along the southern portion of the site, west of Huntley Creek. The proposed development layout is shown on Maps 3 and 4.

Access to the site will be provided via a new road along the southern portion of the site from Carp Road in the east to William Mooney Road in the west, as shown on Map 3. Notably, this road alignment does not include a crossing of Huntley Creek. Additional access to the site will be provided via an extension of Cyd Street from the north in the northeast portion of the site, and a new crescent street off the aforementioned east-west street between Huntley Creek and William Mooney Road. Each residence and commercial block will be serviced with their own drilled water well and private septic system.



2017 airphoto base from geoOttawa

Legend

- Site
- Natural Heritage System per Schedule L3
- Headwater Feature
- Realigned Headwater Feature
- 40 Lot Number
- (1) Category 2 Butternut (# indicates cm dbh)

Vegetation Communities

1. Agricultural field
2. Cultural woodland
3. Mixed hedgerow
4. Deciduous hedgerow
5. Upland cedar-poplar-ash mixed forest
6. Upland pine-maple mixed forest
7. Upland cedar coniferous forest

Proposed Tree Retention

Approx. Scale 1:6,600

0 50 100 150 200 METRES

June 26, 2018	FILE: 03 - 10	Map 3

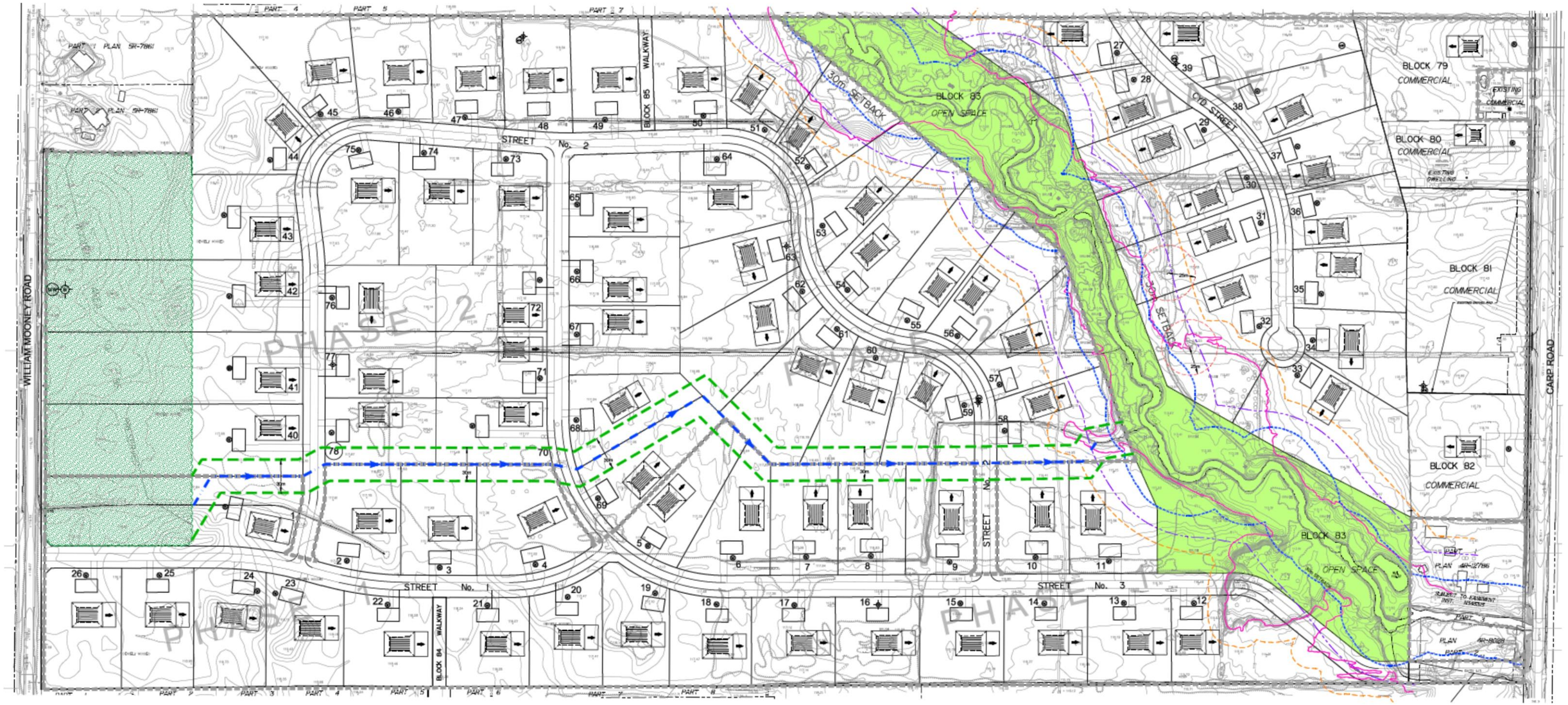
Prepared for: 1384341 Ontario Ltd

Prepared by: Muncaster Environmental Planning Inc.

PROPOSED CONSERVED VEGETATION

2727 CARP ROAD
HUNTLEY, CITY of OTTAWA

MAP 4 – CONSTRAINTS PLAN by NOVATECH



30 Metre Huntley Creek Setback

Realigned Tributary Corridor

Meander Belt

1:100 Year Floodplain

Regulatory Limit

5.0 POTENTIAL IMPACTS

The significant natural heritage features on the site, as defined in the Provincial Policy Statement are the Huntley Creek corridor and associated significant valleylands, sensitive fish habitat, butternut, and significant wildlife habitat. In addition, one forage fish was netted in the west-east tributary of Huntley Creek, and the tributary contributes to the downstream fish habitat of Huntley Creek, and barn swallow was observed in and adjacent to the southeast portion of the Huntley Creek corridor.

5.1 West Forest

Though smaller in area and without forest interior habitat in 1976 aerial photography, many components of the west forest have been on the landscape for an extended time, as evidenced by the older trees, some of which have cavities that may be used by wildlife. Invasive species are common in the understorey and ground flora, likely reflecting former pasture use, as do very large maple trees. The west forest does support a small amount of forest interior habitat (2.7 hectares) and area sensitive breeding bird species were recorded.

As shown on Map 3 and the Constraints Plan (reproduced as Map 4), the older core of the west forest will be retained to the east of William Mooney Road. This retained core area will be approximately five hectares, not including the adjacent tree retention in the rear yards of Lots 44 and 45 to the northeast and other tree retention in along the south property line which will not be contiguous with the core retained forested area. The retained area will not support forest interior habitat but will include the larger cavity trees and the majority of the older trees.

The tree retention at the edge of the west forest will also protect trees adjacent to the northwest and southwest portions of the site. Other trees to the south of the central and east portions of the site will be protected with no excavations permitted within five metres of south edge of the site, as described in Section 6.1.

5.2 Huntley Creek Corridor and Tributary

As shown on Maps 3 and 4, the Huntley Creek corridor will be retained within Open Space Block 83. This stream corridor is a significant ecological feature which provides aquatic habitat, including sensitive cold water habitats, and contributes to the Carp River baseflow. The Constraints Plan (Map 4) places all building footprints greater than 30 metres from the normal high water mark of the channel and outside of the 1:100 year floodplain and meander belt. This no-touch setback will protect the existing vegetation, aquatic habitat and water quality of Huntley Creek. Two lots, Lots 51 and 52, have structures proposed within the regulatory limit associated with the corridor and will require a permit from MVCA when these residences are built. The vast majority of the woody vegetation in the corridor will be retained, including the two Category 2 butternuts. If site alterations that may harm the butternuts are anticipated within 25 metres of the trees, the butternuts will be registered through the on-line process and compensation plantings of pure butternut seedlings completed and monitored off site (or the 2016 butternut

health assessment can be updated). Some woody vegetation removal will occur on Lots 52 and 53, as well as for the road access west from Carp Road.

The pond on the east side of Huntley Creek in the southeast corner of the site and adjacent lands owned by others will not be disturbed in the vicinity of where barn swallows were observed, including the barns adjacent to the site. The southwest portion of the pond on the west side of Huntley Creek will likely be disturbed by construction of the road access west of Carp Road. Mitigation measures are presented in the next section.

The west-east channel flowing into Huntley Creek will be retained but relocated beginning approximately 140 metres east of William Mooney Road, as shown on Maps 3 and 4. The realigned channel will be within a 30 metre wide no disturbance corridor. As outlined in the next section the channel will be enhanced with natural channel designs techniques as part of the relocation. The realigned channel will meet the existing channel outlet at the east edge of Lot 58, west of Huntley Creek. As part of the preparation for the realignment, a Request for Review will be submitted to the Department of Fisheries and Oceans. Permitting for the relocation will also be required from the MVCA under their *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* regulation.

Stormwater management measures will be designed to ensure that the development can proceed without adversely affecting the on-site and downstream habitats of Huntley Creek and the Carp River in terms of water quality, base flows or peak flow rates. The sandy soils will be utilized to promote infiltration to the shallow groundwater, which will contribute to the base flows of Huntley Creek and maintain the existing thermal regime. Best management practices identified in Sections 6.2 and 6.3 will ensure that the aquatic habitat will not be impacted.

The servicing approach will include recommendations to promote infiltration of stormwater runoff within the site.

6.0 MITIGATION MEASURES AND RECOMMENDATIONS

This section outlines recommendations to minimize potential impacts to the natural environment features within and adjacent to the site, provides a Tree Conservation Report and addresses Design with Nature concepts.

6.1 Tree Conservation Report

The purpose of the Tree Conservation Report is to establish which vegetation should be retained and protected on the site. The site is owned by 1384341 Ontario Ltd. (613-257-2918). As described in Section 4, rural residential lots that range in size from approximately 0.6 to two hectares are proposed for the site, with four commercial blocks (including one existing operation) in the east portion of the site, west of Carp Road. The rural residences will be constructed in two phases, beginning with forty lots in the south and east portions. The woody vegetation not identified in this report for retention will be removed outside of the breeding bird season as each block is developed.

Retention of healthy trees and regenerating tree stems will be done wherever possible in the rear and side of lots, including the areas shown in green on Map 3. The final tree retention areas will be determined by the grading requirements established as part of the detailed engineering work.

The small amount of forest interior habitat in west forest will be lost as the road connection is put through to William Mooney Road and Lots 1, 22 – 26, and 40 – 43 developed. Some local wildlife and aesthetic functions of the removed vegetation can be mitigated with a generous planting plan of native trees and shrubs and retention of existing trees wherever possible adjacent to the building envelopes.

The removal of trees in the west forest will create a new reduced forest parcel east of William Mooney Road, although this area will include larger trees and the less disturbed portions of the forest. To reduce the potential for indirect impacts, such as sunscald or wind throw, on the remaining forest trees it is recommended that a band of trees, 5 – 7 metres wide adjacent to the east and south sides of new forest parcel be cleared a growing season before the balance of trees are removed to pre-stress the trees to be retained.

Where possible the tree retention can be enhanced through minimizing the extent of vegetation removal as much as possible and pruning of branches on trees to be retained to improve their condition and anticipated longevity.

The trees to be retained and their associated critical root zone are to be protected by placing temporary sturdy construction fencing at least 1.2 metres high adjacent to the protected vegetation. The fencing is to be installed at a distance of ten times the tree diameter from the tree trunk. No grading or activities that may cause soil compaction such as heavy machinery traffic and stockpiling of material are permitted within the fencing. No machinery maintenance or refuelling, storage of construction materials or stockpiling of earth is to occur within five metres of the protective fencing. The existing grade is not to be raised or lowered within the fencing and no digging is permitted within the fencing. The root system, trunk or branches of the trees to be retained must not be damaged. Exhaust fumes from all equipment during construction will not be directed towards the canopy of the retained trees. If any roots of trees to be retained are exposed during site alterations, the roots shall be immediately reburied with soil or covered with filter cloth or woodchips and kept moist until the roots can be buried permanently. Signs, notices or posters cannot be attached to any trees to be retained.

The critical root zones of trees to the south of the central and east portions of the site will be protected with a no excavations permitted within five metres of the south site border.

Landowners are encouraged to plant a mix of native species such as sugar maple, red maple, tamarack, white spruce, white pine, red oak, and basswood. To maximize the success of the plantings, it is strongly encouraged that stock from a local seed base be utilized. Where clay soils are present, tree and shrub species that have a high water demand are generally not recommended. These species include willows, poplars, Manitoba maple and elm.

To protect breeding birds, no tree or shrub removal should occur between April 15th and August 15th, unless a nesting survey conducted within five days of the woody vegetation removal identifies no breeding activity. No stick nests or other signs of potential raptor activity were observed on the site. It is important to note that nesting surveys cannot be done effectively in larger forested areas such as the portions of the west forest to be removed and trees in the west forest are to be removed only outside of the breeding bird period to avoid impacting nesting by area sensitive breeding birds.

Many helpful wildlife oriented mitigation measures are detailed in the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2015). Contractors are to review in detail and understand the City's Protocol for Wildlife Protection during Construction prior to commencement of construction. The contractor is to be aware of the potential Species at Risk in the vicinity of the site including barn swallow and butternut, as well as snapping turtle, a species of special concern. Appendix 1 of City of Ottawa (2015) describes these species. Appendix 1 should be modified for this residential and commercial project to include the contact information of the project biologist, as applicable. Any Species at Risk sightings are to be immediately reported to the site supervisor and the Ministry of the Natural Resources and Forestry, and work that may impact the species suspended immediately.

As recommended in City of Ottawa (2015) prior to beginning work each day, the work areas are to be checked for wildlife by conducting a thorough visual inspection of the work space and immediate surroundings. See Section 2.5 of the City's Protocol for Wildlife Protection during Construction (City of Ottawa, 2015) for additional recommendations on construction site management.

Any turtles and snakes are to be relocated to the Huntley Creek corridor or to the core west forest to be retained. Animals should be moved only far enough to ensure their immediate safety. See Appendix 1 and the links in Section 4 of City of Ottawa (2015) for suggestions on how to effectively relocate turtles and snakes.

6.2 Huntley Creek and Stormwater Mitigation

The Huntley Creek corridor is a significant ecological feature which provides aquatic habitat, including sensitive cold water habitats and contributes to the Carp River baseflow. The corridor will be retained within a separate Block which will be in private ownership in common. No site disturbances will occur within 30 metres of the normal high water mark, meander belt, or the 1:100 year floodplain, whichever is greater. As required, the setback along the Huntley Creek corridor will be adjusted to reflect a limit of hazard lands once detailed slope stability and other geotechnical work is completed. The no-touch setback area will be delineated with split-rail fencing at the edge of the amenity areas for lots backing onto the corridor. A benefit of the development for Huntley Creek is that the existing creek ford in the central portion of the corridor will no longer be used as farm equipment will not be required to transverse the creek and access requirements to the west side of the creek corridor can be accommodated with the new

road west from Carp Road. As the existing outlet for the west-east channel will be utilized approaching Huntley Creek from the west, no in-water or riparian work is anticipated in the vicinity of Huntley Creek. A dug pond to the east of Huntley Creek, where barn swallows were observed flying, will not be disturbed, nor will the south portion of the creek corridor where a snapping turtle was seen. A pond to the west of Huntley Creek will likely be disturbed during the new road construction west off Carp Road. Prior to road construction a replacement pond of similar size will be created to the north of the existing pond and within the Huntley Creek corridor. Sensitive wildlife such as amphibians will be relocated to the new pond.

Stormwater runoff mitigation for the site will include a series of Best Management Practices such as suitable roadside designs including drainage ditches and sub-drains, and roof leaders directed to grassed and natural areas. These measures will promote infiltration and reduce surface runoff. This approach will be designed to meet the annual infiltration targets from the Carp River Subwatershed Study, maintain the existing thermal regime in Huntley Creek and provide enhanced water quality control, including 80 percent total suspended sediment removal, during operation of the residential and commercial developments.

Section 6.3 describes the erosion and sediment control practices to be employed to protect Huntley Creek and the environment in general.

The following mitigation measures are recommended in association with relocation of the west-east tributary:

- The new channel alignment is to be designed with natural channel techniques that promote fish habitat. Examples include pools, riffles, some sinuosity in the low flow channel, woody debris with root wads, transplanting plus of aquatic vegetation, small boulders, cobble, and other coarse material;
- The new channel is to be created well before the flows are redirected to permit the vegetation along the new channel to germinate and take hold;
- All in-water work is to be completed preferably during low flow periods and must be completed outside of the more sensitive March 15th to June 30th period. The summer period is recommended due to generally reduced flow, decreased potential for sediment input, and the greater growing season afforded for re-vegetation of disturbed areas. If the proposed timing of the work is to take place between October 15th and March 15th, it may be necessary to have all exposed areas along the banks covered with erosion control blankets to keep the soil in place and prevent erosion from occurring during the following spring freshet;
- Connection of the realigned channel and associated redirection of existing flows will not be initiated when flows are elevated from local rains, storm events or seasonal floods, or when significant rains are forecasted;
- The existing channel is to be isolated and de-fished immediately if water is present. Fish are to be safely relocated to Huntley Creek;

- Bare fine soils along the channel banks at the time of the realignment are to be seeded or protected with self-seeded erosion control matting before the flow is redirected. Seeded areas are to be stabilized before the new connection is made;
- Where required due to the potential for erosion or sedimentation, the new channel and existing channel, when in-service, are to be protected with properly keyed in and maintained silt fencing. It is important that the silt fencing is properly maintained, including removal of accumulated sediment and replacement of damaged panels;
- If elevated turbidity levels are observed or there is reason to believe fines may enter the downstream habitat of Huntley Creek, suitable erosion control measure are to be implemented at the outlet of the realigned channel, which may include straw bale check dams and turbidity curtains placed near the outlet;
- Excavated material should either be removed from the site or spread away from the top-of-slope of the realigned channel and seeded. All disturbed areas are to be vegetated by seeding with native grasses to prevent soil erosion. Where the spread soil is within 15 metres of a watercourse, silt fencing is to be placed between the spread spoil and the existing watercourse;
- Any disturbed areas of fine material are to be stabilized as soon as possible to reduce soil erosion;
- Additional mitigation measures to minimize the potential for inputs of sediments and other contaminants into the watercourse and the environment in general include proper maintenance not in proximity to a watercourse on construction equipment with respect to refuelling, washing and fluid changes, and proper disposal of fluids, filters and other waste materials; and,
- If flow is present, monitoring is to be completed following redirection of the flow and any water quality issues such as elevated turbidity levels are to be addressed immediately with cessation of work until proper sediment and erosion controls are in place.

6.3 Erosion and Sediment Controls and Monitoring

An erosion and sediment control plan will be prepared as part of the detailed design package. During construction, existing stream and conveyance systems can be exposed to significant sediment loadings. The following mitigative construction techniques will be deployed to reduce as much as possible sediment loadings during construction:

- Any groundwater encountered during construction of municipal services will be pumped into a proper filter mechanism such as a sediment trap or filter bag prior to release to the environment. The treated discharge will be directed away from the Huntley Creek corridor;
- Seepage barriers such as silt fencing, straw bale check dams and other sediment and erosion control measures will be installed in any temporary drainage ditches and around disturbed areas during construction and stockpiles of fine material. These control measures must be properly maintained to maximize their function during construction; and,

- Best management practices will be employed to ensure dust is mitigated on site, including maximizing the use of hard surfaces for truck traffic and frequent watering during dry periods of unpaved travelled surfaces. As required loose material associated with the site exit will be removed from Carp and William Mooney Roads.

A qualified inspector will conduct frequent visits during construction to ensure that the contractor is constructing the project in accordance with the design drawings and mitigation measures are being implemented and maintained as specified. Silt fencing and other sediment and erosion control measures may require removal of sediment and repairs. The inspector must ensure that construction vehicles and chemicals, fuels and other potentially hazardous materials remain in designated areas.

All sediment and construction fencing should be removed following construction, providing there is no exposed soil or other potential sources of sedimentation.

Huntley Creek Corridor

It is very important that the integrity of the Huntley Creek corridor habitat be maintained during adjacent construction. In addition to the construction fencing to protect the vegetation, silt fencing will be placed along the work areas adjacent to the corridor. No activity will be permitted on the corridor side of the fencing.

Silt fencing will also be placed around the work areas, and adjacent to any temporary swales and around stockpiles. Straw bale check dams and other sediment and erosion control measures will be installed as required downstream of disturbed areas and within temporary swales. The realigned west-east channel will also be protected with silt fencing. These control measures must be properly maintained to maximize their function during construction. Stockpiles of cleared materials as well as equipment fuelling and maintenance areas will be located away from the Huntley Creek corridor, the west-east tributary, swales and other conveyance routes.

All sodding, seeding and tree and shrub planting are to be conducted correctly and as soon as weather and construction activity permits. The success of all vegetative plantings will be assessed for through visual inspections following planting. Any plantings that are dead or dying will be replaced.

7.0 SCHEDULE of PROPOSED WORKS

It is proposed to remove the on-site woody vegetation later in 2018 outside of the breeding bird season. City of Ottawa staff (Forester – Planning) is to be contacted at least two business days prior to any tree removal so that staff have the opportunity to verify that the protective fencing has been properly constructed.

8.0 CUMULATIVE EFFECTS

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

The Huntley Creek corridor and associated significant valleylands, aquatic habitat and significant wildlife habitat is the significant natural heritage feature on and adjacent to the site. The creek and other attributes will be protected with a vegetated no development corridor a minimum of 80 metres in width, with a greater distance to structures located outside of the meander belt and 1:100 year floodplain.

The removal of over half of the west forest will remove forest interior habitat and likely impact area sensitive breeding birds. The least disturbed portion of the forest, east of William Mooney Road, will be retained and protected. This core area contained many of the larger trees and the cavity trees and will provide important local wildlife habitat. Additional tree retention will occur along the Huntley Creek corridor and at the rear and sides of the rural lots, as shown on Map 3. In addition, to add to the local wildlife habitat and aesthetics of the area, it is recommended that plantings of native trees and shrubs be undertaken on the majority of lots which are currently not treed. While proper implementation of the mitigation measures described in this report and these plantings will assist in mitigating the impacts, the proposed development will result in a net loss of forest habitat and associated wildlife habitat functions in this portion of the rural area. Adjacent trees are only to the south of the site where conifer plantations are common west of Carp Road, and to the north adjacent to the Huntley Creek corridor, and to the north of the northwest corner of the site. Tree retention and no excavations within five metres from the site boundary in these areas will protect the critical root zone of the adjacent trees.

9.0 SUMMARY

Seventy-eight rural residential lots that range in size from approximately 0.6 to two hectares are proposed for the site, along with four commercial blocks on the west side of Carp Road. A trailer storage yard was developed in 2016 on one of the commercial blocks. The residential lots will be developed in two phases, with the first forty lot phase in the east and south portions of the site. As it is today, the majority of the site was in agricultural use on 1976 aerial photography, with the southwest portion wooded. Hedgerows were generally absent between the agricultural fields and trees were lacking along the Huntley Creek corridor. Since 1976 the extent of tree cover along the Huntley Creek corridor has increased noticeably and the deciduous hedgerows among the fields are more pronounced.

The Huntley Creek corridor represents significant valleylands, significant wildlife habitat and supports sensitive coldwater fish habitat. The corridor will be protected with a no development width of at least 80 metres. This protected corridor is a greater width than the corridor in the

rural residential development to the north and much greater than the greenspace corridor along the creek east of Carp Road. In addition to this corridor, all structures will be placed outside of the meander belt and 1:100year floodplain, as shown on the Constraints Plan. A west-east channel flowing to Huntley Creek from William Mooney Road in the south portion of the site will be relocated as shown on Maps 3 and 4, and retained in an open channel utilizing natural channel design. The realigned channel will be within a 30 metre wide no disturbance corridor.

The west forest does not meet the criteria for significant woodlands but does contain important wildlife habitat characteristics such as mature trees, cavity trees, and area-sensitive breeding birds. To retain a good representation of these features, a core five hectare block east of William Mooney Road will be retained in a no-touch area protected by zoning. This area contains the cavity trees, along with several mature maples, white pines and white spruce. The development will remove the small amount of forest interior habitat on site. To mitigate the impacts on breeding birds the forests are to be removed only outside of the breeding bird period.

The only Species at Risk observed on or adjacent to the site were butternut and barn swallow. If site disturbances are to occur within twenty-five metres of the two healthy Category 2 butternuts on the east side of the Huntley Creek corridor, the butternuts are to be registered online and compensation plantings of pure butternuts completed off-site. No site disturbances are to occur within 25 metres of the butternuts until this process have been completed. No disturbances are anticipated for the barn on adjacent lands where the barn swallows were observed adjacent to the southeast corner of the site or the southeast portion of the Huntley Creek corridor where the barn swallows were also noted.

This EIS identifies many important natural environment mitigation measures that must be properly implemented. The following is a numbered summary of the main mitigation measures:

1. Retain and protect the Huntley Creek corridor, with a minimum no development 80 metre wide corridor width. A conservation handbook is recommended to clearly identify to the future residents the importance of protecting the corridor, and the other natural features retained on the site including the core area in the west forest, other tree retention at the rear and sides of lots, and the realigned west-east channel;
2. Where existing woody vegetation is lacking, generous plantings of native tree and shrub species of local origin should occur;
3. Careful siting of the building envelopes on each lot and commercial blocks to further increase tree and shrub retention at the individual lot and block development stage;
4. Protect woody vegetation to be retained with sturdy fencing at least 1.2 metres in height prior to any site alterations. See Section 6.1 for further measures to protect the adjacent retained vegetation during construction;
5. A new forest edge will be created in the central portion of the west forest. To reduce the potential for indirect impacts, such as sunscald or wind throw, on the forest trees to be retained to the west and north it is recommended that a band of trees, 5 - 7 metres wide, be cleared a growing season before the balance of trees are removed to pre-stress the trees to be retained;

6. Woody vegetation that must be removed is to be cut outside of the breeding bird period of April 15th to August 15th unless a breeding bird survey identifies no nesting activity within five days of the proposed vegetation removal. Note that nesting surveys are not generally effective in forest habitats during the leaf-out period, and to protect the area sensitive species no tree removal is to occur in the forests during the nesting period;
7. Realignment of the west-east channel tributary to Huntley Creek is to be completed outside of the more sensitive aquatic habitat period, with the mitigation measures described in Section 6.2 properly implemented. No structures will be within 15 metres of the realigned normal high water mark of the channel; and,
8. Proper sediment and erosion control, as outlined in Section 6.3 is very important for the protection of the Huntley Creek corridor and other environmental features. These measures must be monitored and properly implemented.

10.0 REFERENCES

Bowfin Environmental Consulting Inc. 2018. Headwaters Report. Rural Residential Development, 2727 Carp Road. June 5th, 2018. 24 pp & Append.

City of Ottawa. 2010. City of Ottawa Official Plan. As adopted by City Council, May, 2003. Publication: 1-28. 227 pp & Sched.

City of Ottawa. 2015. Protocol for Wildlife Protection during Construction. August, 2015. 14 pp & Append.

Gemtec. 2018. Hydrogeological Investigation & Terrain Analysis. Proposed Newill Subdivision, 2727 Carp Road, Ottawa, Ontario. May 24, 2018. Project: 61318.15 55 pp & Append.

Ontario Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. 2nd Edition. March 2010. 233 pp.

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

Robinson Consultants Inc. 2004. Carp River Watershed/Subwatershed Study. December, 2004 Prepared for the City of Ottawa. Project No. 00056. 224 pp & append.

Schut, L.W. and E.A. Wilson. 1987. The soils of the Regional Municipality of Ottawa-Carleton (excluding the Ottawa Urban Fringe). Report No. 58 of the Ontario Institute of Pedology.

White, D.J. 1997. Summary: Natural Area Reports for Natural Areas West of the Rideau River (400 Series). Prepared for the Regional Municipality of Ottawa-Carleton, Planning and Development Approvals Department. Report #28-08c. 120 pp.

APPENDIX A

MINISTRY of NATURAL RESOURCES and FORESTRY

CORRESPONDENCE

Ministry of Natural Resources and Forestry

Kemptville District

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

Ministère des Richesses naturelles et des Forêts

District de Kemptville

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Téléc.: 613 258-3920

Ontario

Tue. Oct 4, 2016

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

Attention: Bernie Muncaster

Subject: Information Request - Consent-Variance-Zoning
Project Name: 2727 Carp Road, Cavanagh
Site Address:
Our File No. 2016_HUN-3730

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:

- 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

Ministry of Natural Resources and Forestry

Kemptville District

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

Ministère des Richesses naturelles et des Forêts

District de Kemptville

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Téléc.: 613 258-3920

Ontario

and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

As per the Natural Heritage Reference Manual (NHRM, 2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage features and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

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

In Addition, the following Fish species were identified: bluntnose minnow, brook stickleback, brown bullhead, central mudminnow, common shiner, creek chub, eastern blacknose dace, fathead minnow, golden shiner, johnny darter/tesselated darter, mottled sculpin, northern redbelly dace, Phoxinus sp., pumpkinseed, 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

Ministry of Natural Resources and Forestry

Kemptville District

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

Ministère des Richesses naturelles et des Forêts

District de Kemptville

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Téléc.: 613 258-3920

Ontario

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.

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:

- Blanding's Turtle (THR)
- Butternut (END)
- Sensitive Species (END)
- Whip poor will (THR)

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.

Ministry of Natural Resources and Forestry

Kemptville District

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

Ministère des Richesses naturelles et des Forêts

District de Kemptville

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Téléc.: 613 258-3920

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:

- Milksnake (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,

Ministry of Natural Resources and Forestry

Kemptville District

10 Campus Drive
Postal Box 2002
Kemptville ON K0G 1J0
Tel.: 613 258-8204
Fax: 613 258-3920

Ministère des Richesses naturelles et des Forêts

District de Kemptville

10, promenade Campus
Case postale, 2002
Kemptville ON K0G 1J0
Tél.: 613 258-8204
Téléc.: 613 258-3920

Ontario

it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at sar.kemptville@ontario.ca.

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

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

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

This letter is valid until: Wed. Oct 4, 2017

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,

Scott Smithers
Management Biologist
scott.smithers@ontario.ca

Encl.\
-ESA Infosheet
-NHIC/LIO Infosheet
-SAR GeoTownship Listing
-Natural Heritage GeoTownship Map