

# Environmental Impact Study (EIS)

## FINAL

TMM Subdivision  
Part of Lots 22 & 23, Concession 2,  
Geographic Township of Pembroke,  
Township of Laurentian Valley  
Renfrew County

October 2, 2023

Jp2g Project # 22-7028A





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## 1 Introduction

The purpose of this report is to provide details regarding Species at Risk (SAR) and their potential habitat, as well as natural heritage features on and adjacent to the subject lands in support of a subdivision proposal on the subject lands. The location of the subject lands is shown on **Map 1**. This report also addresses the Environmental Impact Statement criteria outlined in Section 2.2(23) of the County of Renfrew Official Plan, 2021.

The municipal and provincial natural heritage policies and species at risk legislation that is applicable to the proposed development includes the following:

- The County of Renfrew Official Plan, 2021
- The Provincial Policy Statement, 2020
- The Endangered Species Act, 2007

## 2 Site Context

The subject lands are located to the northwest of Robinson Lane, within Part of Lots 22 & 23, Concession 2, in the Geographic Township of Pembroke, now in the Township of Laurentian Valley as shown on **Map 1**. The subject lands are approximately 90 acres in area and have approximately 72 metres of road frontage on Robinson Lane, a municipally maintained road. The property is currently accessed by an existing access road/driveway off of Robinson Lane as shown on the enclosed Maps.

The subject lands are designated primarily Rural with a small portion designated commercial near Pembroke Street East on Schedule A-3 – Township of Pembroke to the Township of Laurentian Valley Official Plan (Jp2g Consultants Inc., 2002) and are zoned Urban Reserve-Exception Twenty-Two-holding (UR-E2-h) and Rural (RU) on Schedule “A-3” to the Township of Laurentian Valley Zoning By-law No. 23-2002.

The subject lands currently consist of vacant woodlands, wetlands, open areas, and agricultural fields. No existing buildings or structures are located on the subject lands. Land use in the vicinity of the subject lands as shown on **Map 1** includes vacant woodlands, wetlands, agricultural fields, open areas, commercial, residential and institutional (Fellowes High School) uses.

## 3 Description of Proposed Development

The subdivision proposal will consist of a mix of dwelling types. The development will be accessed by new municipally maintained roads to be constructed over the property which are currently proposed to connect to Robinson Lane, Matheson Drive/Cockburn Crescent, Angus Campbell Drive, and to the adjacent lands to the south, which are also being proposed for development. The proposed development will be serviced by municipal sewer and water services and a combination of municipal storm sewers and stormwater ponds. Stormwater ponds will be located towards the eastern end of the site along with a parkland block. Gravel walking trails are also proposed on the subject lands along the Pembroke Branch of the Pleasant View Municipal Drain. A copy of the draft plan for phase 1 of the subdivision is included as **Map 2**.

## 4 Existing Conditions

Site visits to the subject lands were carried out by Bryana Kenny and/or Helena Vaughan on June 3, 8, 13, 17, 30 and July 7, 2022. The purposes of these site visits were to review the existing site conditions, complete a vegetation inventory (including a butternut (*Juglans cinerea*) survey and a cavity tree survey), delineate the vegetation communities on the subject lands, carry out breeding bird and eastern whip-poor-will (*Antrostomus vociferus*) surveys, and determine the potential for natural heritage features and/or areas to occur on/adjacent

to the subject lands. A description of the surveys completed for the subject lands are described in the Significant Habitat of Endangered and Threatened Species section (section 5.1) of this report.

The subject lands consist of agricultural fields, open areas, woodlands and wetlands, which are described in detail below. The Pleasant View Municipal Drain and associated Pembroke Branch as well as the North-West Tile Drain are located on and adjacent to the subject lands, as described below. An existing access road is located off of Robinson Lane which provides access to property.

The ground surface of the subject lands is relatively flat to gently rolling. Clay soils were observed on the subject lands.

During the site visits to the subject lands, a vegetation inventory was carried out by completing transects of the property to identify vegetation species and delineate vegetation communities. The Ecological Land Classification (ELC) terminology is used below to describe the main vegetation communities on site. The approximate location of each vegetation community is shown on **Map 3**.

#### 4.1 Cultural Meadow (CUM)

The cultural meadows on the subject lands consist of soyabean fields, as well as open areas. The soyabean fields (Photo 1) comprise the bulk of the subject lands and are separated by forested hedgerows and/or a gravel access road (Photo 2). Some pockets of standing water were noted in the fields at the time of the site visits. Another cultural meadow (unmaintained area growing up with herbaceous vegetation and some tree saplings) is located on the subject lands near Robinson Lane (Photo 3).

The open area near Robinson Lane on the subject lands consists primarily of Canada goldenrod (*Solidago canadensis*), with some ox-eye daisy (*Leucanthemum vulgare*), cow vetch (*Vicia cracca*), red clover (*Trifolium pratense*), common burdock (*Arctium minus*), common milkweed (*Asclepias syriaca*), Virginia creeper (*Parthenocissus quinquefolia*), dwarf horsetail (*Equisetum scripoides*), and some staghorn sumac (*Rhus typhina*) and trembling aspen (*Populus tremuloides*) saplings.

Photo 1 – Site Conditions of Southern Soyabean Field.  
View Looking southwest. Photo Taken June 30, 2022.



Photo 2 – Site Conditions of Gravel Access Road on Subject Lands.  
View Looking northwest. Photo Taken June 30, 2022.



Photo 3 – Site Conditions of Open Area on the Southeastern Portion of Subject Lands.  
View Looking northeast. Photo Taken June 17, 2022.



## 4.2 Thicket Swamp (SWT)

The thicket swamp (Photo 4) is located on the southwestern portion of the subject lands and contains pockets of pooled surface water as well as an intermittent watercourse in the ditch along the western property line. The northern portion of this vegetation community contained other wetland representation, a deciduous swamp (SWD) (Photo 5), but due to its small size, it was not mapped as a separate vegetation community. Vegetation noted within this wetland includes predominantly speckled alder (*Alnus incana*) with eastern white cedar (*Thuja occidentalis*) (15 cm dbh), black ash (*Fraxinus nigra*) (13 cm dbh), white elm (*Ulmus americana*) (10 cm dbh), red maple (*Acer rubrum*) (13 cm dbh), balsam poplar (*Populus balsamifera*) (20 cm dbh), trembling aspen (*Populus tremuloides*) (11 cm dbh), slender willow (*Salix petiolaris*), red osier dogwood (*Cornus sericea*), rough stemmed

goldenrod (*Solidago rugosa*), sensitive fern (*Onoclea sensibilis*), grass, sedge and horsetail (*equisetum*) species, wild grape (*Vitis vinifera*), and Virginia creeper with some fallen dead trees.

Photo 4 – Site Conditions of Thicket Swamp Surface Water.  
View Looking Southwest. Photo Taken June 17<sup>th</sup>, 2022.



Photo 5 – Site Conditions of Deciduous Swamp Portion of Wetland.  
View Looking Southwest. Photo Taken June 17<sup>th</sup>, 2022.



### 4.3 Deciduous Forest (FOD)

Deciduous forests (Photos 6 & 7) are located on the southwestern portion of the subject lands; in hedgerows located between the soybean fields; and along the property boundaries in fencerows. Vegetation noted within these forests includes sugar maple (*Acer saccharum*) (22 cm dbh), largetooth aspen (*Populus grandidentata*) (7 cm dbh), ironwood (*Ostrya virginiana*) (10 cm dbh), American basswood (*Tilia americana*) (22 cm dbh), Manitoba maple (*Acer negundo*) (13 cm dbh), Bebb's willow (*Salix bebbiana*) (13 cm dbh), eastern white cedar (7 cm dbh), balsam poplar (*Populus balsamifera*) (13 cm dbh), white ash (*Fraxinus americana*) (15 cm dbh), bur oak (*Quercus macrocarpa*) (13 cm dbh), green ash (*Fraxinus pennsylvanica*) (18 cm dbh), American elm (*Ulmus americana*) (4

cm dbh), red maple (*Acer rubrum*) (10 cm dbh), trembling aspen (25 cm dbh), white birch (*Betula papyrifera*) (13 cm dbh), white oak (*Quercus alba*) (38 cm dbh), bur oak (*Quercus macrocarpa*) (13 cm dbh), European mountain ash (*Sorbus aucuparia*), American plum (*Prunus americana*), common hawthorn (*Crataegus monogyna*), Tartarian honeysuckle (*Lonicera tatarica*), and staghorn sumac (*Rhus typhina*) as well as wild raspberry, milkweed, poison ivy, Virginia creeper, wild grape, wild carrot (*Daucus carota*), goldenrod and oxeye daisy (*Leucanthemum vulgare*). A butternut tree sapling was also noted along the fencerow in the northwestern corner of the property which is discussed further in section 5.1.6 of this report.

Photo 6 – Site Conditions of Deciduous Forest along Hedgerow.  
View Looking Southwest. Photo Taken June 30<sup>th</sup>, 2022.



Photo 7 – Site Conditions of Deciduous Forest on the Southwest Portion of the Subject Lands.  
View Looking Southwest. Photo Taken June 17<sup>th</sup>, 2022.



Some wetland vegetation such as sensitive fern (*Onoclea sensibilis*), spotted jewelweed (*Impatiens capensis*), speckled alder (*Alnus incana*), pussy willow (*Salix discolor*), black ash (*Fraxinus nigra*), and Bebb's willow (*Salix bebbiana*) were also noted in the forested areas along the municipal drain (Photo 8), which travels along the

southern property lines towards Robinson Lane, as shown on **Map 3**. These areas are not large enough to be identified as separate vegetation communities so they have been included with the deciduous forest vegetation community. Shallow, clear, flowing water was observed in the municipal drain at the time of the site visits.

*Photo 8 – Site Conditions of Pleasant View Municipal Drain Along Southeastern Property Line. View Looking Northwest. Photo Taken June 17 2022.*



#### 4.4 Adjacent Lands

The vegetation communities on adjacent lands are similar to that found on the subject lands. Existing residential and commercial development is located to the north and southeast and Fellowes High School is located to the west.

## 5 Natural Heritage Features and Areas

Sections 5 to 11 of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Ministry of Natural Resources, 2010) describe the natural heritage features and areas which include significant habitat of endangered and threatened species, significant wetlands, significant woodlands, significant valleylands, significant wildlife habitat, areas of natural and scientific interest and fish habitat.

Schedule C of the Laurentian Valley Official Plan (Jp2g Consultants Inc, 2004) and Schedule B – Map 4 of the County of Renfrew Official Plan (County of Renfrew Development and Property Department, 2020) were reviewed for Natural Heritage Features and Areas on and adjacent to the subject lands. Schedule B – Map 4 of the County of Renfrew Official Plan shows a valleyland located adjacent to the subject lands and shown as an intermittent watercourse on the enclosed Maps. No other natural heritage features or areas are identified on Schedule C of the Laurentian Valley Official Plan (Jp2g Consultants Inc, 2004) or on Schedule B – Map 4 of the County of Renfrew Official Plan on or within 120 metres of the subject lands.

### 5.1 Significant Habitat of Endangered and Threatened Species

Section 5.0 of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Ministry of Natural Resources, 2010) outlines the methodology used to determine the presence or absence of significant habitat of endangered and threatened species.

The Ministry of Natural Resources and Forestry (MNRF) “Make a Map: Natural Heritage Areas” website (Ministry of Natural Resources and Forestry, 2022) was reviewed for species at risk occurrences for the subject lands. Data



available for the 1 km x 1 km grid cells (UTM Grid: 18UR3875 and 18UR3876) containing the eastern portion of the subject lands, included an occurrence of lake sturgeon (*Acipenser fulvescens*) (endangered). No data was available for grid cell 18UR3675 which contains the western portion of the subject lands.

Based on a review of air photography and a site visit to the property there is potential for other species at risk to occur on the subject lands as well. A discussion on the reported species at risk by MNRF as well as for other SAR that have the potential to utilize the site and adjacent lands are addressed in alphabetical order in the following paragraphs.

#### 5.1.1 Bats (Most Species Endangered)

Cavity trees that could potentially be used by bat species were searched for by completing transects of the treed areas of the property during the vegetation inventory. Some snag/cavity trees were noted on and adjacent to the subject lands. However, the snag density for this area is considered to be less than 10 snags/hectare and so the subject lands are not considered to contain high potential bat maternity roost habitat. If bats are using the subject lands or adjacent lands as a travel corridor or as foraging habitat, there will be some habitat loss as a result of the proposed development, however it is anticipated that the removal of woody vegetation within this area will not significantly impact any bat habitat that may be present in the overall area provided the mitigation measures outlined in this report are properly implemented.

#### 5.1.2 Black Ash (Endangered)

Black ash, which was identified on the subject lands, was recently listed as Endangered in Ontario. However, as of January 26<sup>th</sup>, 2022, the Ministry has paused protections for black ash under the Endangered Species Act, for two years to develop an approach to protect and enhance the black ash population.

#### 5.1.3 Bobolink & Eastern Meadowlark (Threatened)

As the open areas on the subject lands are actively being used as cropland, with the exception of a small open area (1 hectare) near Robinson Lane, and as the fields were planted with soyabeans during the 2022 site visits to the subject lands, no suitable habitat for bobolink (*Dolichonyx oryzivorus*) or eastern meadowlark (*Sturnella magna*) is located on or adjacent to the subject lands. An open field area is present on adjacent lands to the northeast, however as this field is only approximately 3.7 hectares in area and as no bobolinks or eastern meadowlarks were observed on or adjacent to the subject lands, during the June 3 and June 30, 2022 site visits to the subject lands, no suitable habitat for these species is considered to be present. Therefore, no adverse impacts are anticipated to occur on bobolink or eastern meadowlark, as a result of the proposed development.

Although the site visits that form the basis of the report/recommendations were completed in 2022, a site visit was completed on June 22, 2023 to confirm that the subject lands are once again planted with soyabeans and the findings and recommendations in this report are therefore still valid.

#### 5.1.4 Breeding Birds

Breeding Bird surveys were carried out on the subject lands on June 3 and June 30, 2022, at the sampling points shown on **Map 4** according to the Bird and Bird Habitats: Guidelines for Wind Power Projects (Ministry of Natural Resources, December 2011) document. Weather conditions and survey effort for each survey date are described in **Table 1** below.

**Table 1: Breeding Birds Survey Information**

Survey Date		June 3, 2022	June 30, 2022
Weather Conditions	Wind	Light breeze	Light breeze
	Cloud Cover	Partly Sunny to Overcast	Few clouds
	Temperature	23 °C	12°C
	Precipitation	None	None
<b>Sampling Point 1</b>			
Time		7:30 am – 7:40 am	7:09 am – 7:19 am

<b>Duration</b>	10 minutes	10 minutes
<b>Sampling Point 2</b>		
<b>Time</b>	7:50 am – 8:00 am	7:30 am – 7:40 am
<b>Duration</b>	10 minutes	10 minutes

The following bird species were recorded to be on or in close proximity to the subject lands; American crow (*Corvus brachyrhynchos*), American goldfinch (*Spinus tristis*), American Redstart (*Setophaga ruticilla*), American Robin (*Turdus migratorius*), blue jay (*Cyanocitta cristata*), brown thrasher (*Toxostoma rufum*), cedar waxwing (*Bombycilla cedrorum*), chestnut sided warbler (*Setophaga pensylvanica*), common yellowthroat (*Geothlypis trichas*), indigo bunting (*Passerina cyanea*), mallard (*Anas platyhynchos*), mourning warbler (*Geothlypis philadelphia*), northern cardinal (*Cardinalis cardinalis*), red-eyed vireo (*Vireo olivaceus*), red-winged blackbird (*Agelaius phoeniceus*), song sparrow (*Melospiza melodia*), veery (*Catharus fuscescens*), white throated sparrow (*Zonotrichia albicollis*), wild turkey (*Meleagris gallopavo*) wood thrush (*Hylocichla mustelina*) and yellow warbler (*Setophaga petechia*).

The only species of special concern noted on the subject lands was wood thrush (*Hylocichla mustelina*). No negative impacts are anticipated to occur on this bird species, which would be utilizing the deciduous forests, provided the mitigation measures in this report are properly implemented.

#### 5.1.5 Butternut (Endangered)

During the June 17, 2022, site visit to the subject lands, a butternut survey was completed using up to 30 metre transects in the treed areas of the subject lands. One butternut sapling was found on the subject lands in the fencerow along the western property boundary (Photos 9 & 10) as shown on **Map 4**.

A Butternut Health Assessment (BHA) was completed for this tree which categorized it as a Category 1 tree. Category 1 trees are considered unhealthy and do not need to be retained or compensated for. The BHA will need to be submitted to the Ministry of Environment, Conservation and Parks (MECP) for review. After 30 days of the Ministry receiving the BHA report, the Category 1 tree can be removed provided any other applicable mitigation measures for tree removal are adhered to.

Photo 9 – Butternut Tree Sapling in a fencerow on the western Property Boundary of the Subject Lands. View Looking west. Photo Taken June 30th, 2022.



Photo 10 – Canker on Stem of Butternut Tree. Photo Taken June 30th, 2022.



#### 5.1.6 Eastern Whip-poor-will (Threatened)

Based on the characteristics of the forest on the subject lands and its proximity to open areas, eastern whip-poor-will surveys were carried out as per the DRAFT Survey Protocol for Eastern Whip-poor-will (*Caprimulgus vociferus*) in Ontario, December 2014 by the Ontario Ministry of Natural Resources and Forestry Species at Risk Branch in order to determine if eastern whip-poor-wills were using the forested portions of the subject lands as habitat. Weather conditions were not suitable to conduct the surveys during the first survey window of (May 18-22) and so guidance was sought from MECP who indicated that two surveys could be carried out around the full moon in June and the third survey during the week before the full moon in July. Surveys were carried out on June 8 and June 13, 2022, during the second timing window (June 8 to June 20, 2022) and on July 7, 2022, during the approved third timing window (July 7 to July 13, 2022) at the sampling point location shown on **Map 4**. Weather conditions and survey effort for each survey date are described in **Table 2** below. No eastern whip-poor-wills were heard or visually observed during any of the surveys.

**Table 2: Eastern Whip-poor-will Survey Information**

Survey Date		June 8, 2022	June 13, 2022	July 7, 2022
Lunar Phase		Waxing Gibbous	Waxing Gibbous	Waxing Gibbous
Sunset		8:56 pm	8:59 pm	9:00 pm
Moonrise		1:59 pm	8:33 pm	2:07 pm
Weather Conditions	Wind	None	None	None
	Cloud Cover	None	None	Partly cloudy
	Temperature	14°C	14°C	19°C
	Precipitation	None	None	None
<b>Sampling Point 3</b>				
Time		11:24 pm – 11:30 am	11:52 pm – 11:58 pm	10:05 pm – 10:11 pm
Duration		6 minutes	6 minutes	6 minutes

### 5.1.7 Fish (Lake Sturgeon (Endangered) and Other Fish Species)

The surface water features located on and/or adjacent to the subject lands that contain or potentially contain fish habitat is the Pleasant View Municipal Drain and associated Pembroke Branch along the southern property lines of the subject lands and adjacent lands to the southeast. This municipal drain connects with the Ottawa River approximately 1.05 kilometres to the southeast of the subject lands. The North West Tile Drain along Robinson Lane is not considered to contain direct fish habitat, due to the lack of connection with other surface water features containing fish habitat.

The Ministry of Natural Resources and Forestry (MNRF) “Fish ON-Line” website (MNRF, 2022) was reviewed for fish occurrences for the Lower Allumette Lake (Ottawa River) located downstream of the subject lands. The following fish species were observed by MNRF: brown bullhead (*Ameiurus nebulosus*), burbot (*Lota lota*), channel catfish (*Ictalurus punctatus*), cisco (*Coregonus artedi*), lake trout (*Salvelinus namaycush*), lake whitefish (*Coregonus clupeaformis*), largemouth bass (*Micropterus salmoides*), mooneye (*Hiodon*), muskellunge (*Esox masquinongy*), northern pike (*Esox Lucius*), pumpkinseed (*Lepomis gibbosus*), rainbow smelt (*Osmerus mordax*), rainbow trout (*Oncorhynchus mykiss*), rock bass (*Ambloplites rupestris*), sauger (*Sander canadensis*), smallmouth bass (*Micropterus dolomieu*), walleye (*Sander vitreus*), white sucker (*Catostomus commersonii*) and yellow perch (*Perca flavescens*).

DFO’s Aquatic Species at Risk Mapping Tool was also reviewed for aquatic species at risk for the surface water features on and adjacent to the subject lands. Data available within the 1-kilometre buffer area from the subject lands includes river redhorse (*Moxostoma carinatum*) (special concern) and hickorynut (*Obovaria subrotunda*) (endangered).

The aquatic species identified above, including the potential Species at Risk are not anticipated to utilize the on-site and adjacent marginal fish habitat, if present, due to the small channels and associated lack of available habitat. No adverse impacts are anticipated to occur on fish or fish habitat, provided the mitigation measures in this report are properly implemented.

### 5.1.8 Turtles

The on-site wetland, ditches and municipal drains are not considered to contain suitable turtle habitat due to the lack of large areas of standing water or the shallow depth of the standing water pockets within these surface water features.

The stormwater pond on adjacent lands to the southeast contains suitable habitat for turtles, however as the stormwater pond is a man-made feature, the general habitat description for Blanding’s turtles would not apply to this feature. Turtle species could potentially be utilizing the subject lands and adjacent lands as a movement corridor. However, provided the mitigation measures in this report are properly implemented, no negative impacts as a result of the proposed development are anticipated to occur on turtle species that may be utilizing the subject lands as habitat.

## 5.2 Significant Wetlands

Section 6.0 of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Ministry of Natural Resources, 2010) outlines the methodology used to determine the presence or absence of significant wetlands.

Based on a desktop review of the County of Renfrew Official Plan (County of Renfrew Development and Property Department, 2021) and the MNRF’s “Make a Map: Natural Heritage Areas” website (Ministry of Natural Resources and Forestry, 2022) as well as site visits to the subject lands, there is no Provincially Significant Wetland (PSW) on or within 120 metres of the subject lands. During the site visits to the property, an unmapped wetland area (Thicket Swamp) was noted in the southwestern corner of the property as shown on **Map 3**, which extends into the hydro corridor to the southwest and onto adjacent lands as well.



During the June 17, 2022 site visit to the property, the unmapped wetlands on the subject lands were delineated according to the Ontario Wetland Evaluation System by Bryana Kenny who is a certified Ontario Wetland Evaluator. The wetland boundaries of these wetlands have been determined based on a site visit to the property and air photo interpretation and are shown on the enclosed maps.

This wetland and associated intermittent watercourse can be removed/relocated, if needed, provided that the recommendations in this report are properly implemented and any required agency approvals are obtained.

### 5.3 Significant Woodlands

Section 7.0 of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Ministry of Natural Resources, 2010) outlines the criteria used to determine the presence or absence of significant woodlands.

Based on a desktop review of the County of Renfrew Official Plan (County of Renfrew Development and Property Department, 2020) and the MNRF's "Make a Map: Natural Heritage Areas" website (Ministry of Natural Resources and Forestry, 2019) as well as site visits to the subject lands, significant woodlands are not located on or within 120 metres of the subject lands.

The wooded areas on the subject lands are small patches of deciduous forest habitat (< 5.4 ha) that contain tree species that are common in the area. The woodlands on the southwestern portion of the subject lands are part of a larger generally contiguous forest which extends onto adjacent lands to the west as well. This overall forest is approximately 43 hectares in area. Due to the small size of the forest on the subject lands (5.4 ha), only a small amount of interior forest habitat is present on the subject lands (0.2 ha). A larger patch of interior forest habitat is present on adjacent lands to the west. As this forest patch on the subject lands will need to be removed as a result of the proposed development, a small amount of interior forest habitat will be removed, however, the woodlands on adjacent lands will still meet the size and interior habitat criteria for significant woodlands post-development.

These woodlands are considered functionally important as they provide some linkage functions to the adjacent wetlands in the forested area on the adjacent lands to the west. The woodlands on the subject lands would therefore be considered to be significant woodlands as they meet at least one of the significant woodland criteria. As only a relatively small amount of the overall contiguous forest would need to be removed as a result of the future development of the subject lands, the proposed development will not impact the ability of this forest to function as a significant woodland post-development, provided the mitigation measures outlined in this report are properly implemented.

### 5.4 Significant Valleylands

Section 8.0 of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Ministry of Natural Resources, 2010) outlines the criteria used to determine the presence or absence of significant valleylands.

Schedule B Map 4 to the County of Renfrew Official Plan (County of Renfrew Development and Property Department, 2020) designates a mapped intermittent watercourse on adjacent lands to the south as valleylands. Based on a review of air photography, and a site visit to the subject lands, this watercourse does not appear to be present in the field to the south, as no shallow channel or swale in the relatively flat to gently rolling field was noted in the vicinity of this mapped feature. As this mapped feature does not appear to be present on the adjacent lands to the south, no adverse impacts on this mapped valleyland will occur as a result of the proposed development.

The ditches and municipal drains located on/adjacent to the property are not considered to be significant valleylands as they are man-made features. Provided the mitigation measures in this report are properly implemented, no adverse impacts on the water quality or downstream habitat within the municipal drains will occur as a result of the proposed development.

## 5.5 Significant Wildlife Habitat

Section 9.0 of the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (Ministry of Natural Resources, 2010) outlines the methodology used to determine the presence or absence of significant wildlife habitat. The following paragraphs outline the different types of Significant Wildlife Habitat within ecoregion 6E and discuss whether or not they are considered to be present on or adjacent to the subject lands.

### 5.5.1 Seasonal Concentration Areas of Animals

The seasonal concentration areas that have the potential to occur on or adjacent to the subject lands are described below.

#### 5.5.1.1 Bat Maternity Colony

According to the Significant Wildlife Habitat Criteria Schedule for EcoRegion 6E (Ontario Ministry of Natural Resources and Forestry, 2015), bat maternity colonies are found in “*mature deciduous or mixed forest stands with >10/ha large diameter (>25 cm dbh) wildlife trees.*”

As discussed previously, the subject lands are not considered to contain high potential bat maternity roost colonies. If bats are using the forested areas on or adjacent to the subject lands as a travel corridor or as foraging habitat, the removal of woody vegetation within this area will not significantly impact any bat habitat that may be present in the overall area provided the mitigation measures outlined in this report are properly implemented.

#### 5.5.1.2 Deer Yarding Area

According to the Significant Wildlife Habitat Criteria Schedule for EcoRegion 6E, deer wintering areas are areas that deer utilize in the winter and consist of two areas. Stratum II areas consist of mixed or deciduous forest and have lots of browse present for the deer to eat. Stratum I areas are considered the core of a deer yard and consist primarily of coniferous trees such as pine, hemlock, cedar and spruce. Core areas are considered to have a canopy cover greater than 60%.

The subject lands contain small patches of deciduous forests which contain some browse for deer. The deciduous forests on the subject lands have a canopy cover greater than 60% and the forests on the subject lands extend onto the adjacent lands. The forests are also located adjacent to agricultural fields which can also be considered to be part of a Stratum II area. Therefore, the subject lands and adjacent lands are considered to contain a potentially suitable deer wintering area.

The proposed development is not anticipated to impact the potential deer wintering area on and adjacent to the subject lands, provided the mitigation measures in this report are properly implemented.

### 5.5.2 Rare Vegetation Communities

Rare vegetation communities were not noted on or adjacent to the subject lands during the site visits to the property.

### 5.5.3 Specialized Habitat for Wildlife

The only specialized habitat for wildlife that has the potential to occur on or adjacent to the subject lands is described below.

#### 5.5.3.1 Amphibian Breeding Habitat (Woodland)

The wetland within the forested area in the southwest corner of the subject lands has the potential to be amphibian breeding habitat. Adverse impacts as a result of the proposed development can be mitigated provided the mitigation measures in this report are properly implemented.



#### 5.5.4 Habitat for Species of Conservation Concern

The only species of special concern that was observed on or adjacent to the subject lands during the site visits to the property was a wood thrush. It is anticipated that sufficient woodland habitat will remain on adjacent lands post development for wood thrush as well as any other species of special concern that may be using the subject lands or adjacent lands as habitat. Adverse impacts on wood thrush and other species of special concern are not anticipated to occur as a result of the proposed development provided the important mitigation measures in this report are properly implemented.

#### 5.5.5 Animal Movement Corridors

The lands along the municipal drain could potentially be utilized as an animal movement corridor. If any animals are utilizing the municipal drain as an animal movement corridor, it is anticipated that sufficient corridors will remain on the subject lands post development and no adverse impacts will occur on these corridors as a result of the proposed development, provided the mitigation measures in this report are properly implemented.

### 5.6 Areas of Natural and Scientific Interest

Based on a desktop review of the County of Renfrew Official Plan, 2021 (County of Renfrew Development and Property Department, 2021) and the MNR's "Make a Map: Natural Heritage Areas" website (Ministry of Natural Resources and Forestry, 2022) as well as site visits to the subject lands, Areas of Natural and Scientific Interest (ANSI's) are not located on or within 120 metres of the subject lands.

### 5.7 Stormwater

A preliminary stormwater management study has not yet been completed for the proposed development, however, it is anticipated that there will be no negative impacts on the water quality and quantity of the municipal drains or any downstream habitat as a result of the proposed development, provided post-development flows do not exceed pre-development flows, that quality controls are put in place and that the mitigation measures in this report are properly implemented.

## 6 Recommendations

The recommendations from this study are intended to mitigate potential impacts arising from the future development of this property and should be implemented through the subdivision agreement between the owners and the Township of Laurentian Valley in order to control development of the site. These recommendations are deemed sufficient to mitigate the potential impacts of the proposed development on the potential or confirmed natural heritage features and areas located on/adjacent to the subject lands:

1. Nests and eggs of many bird species are protected under federal and/or provincial legislation such as the Migratory Birds Convention Act and the Fish and Wildlife Conservation Act. In order to protect breeding birds, no tree or shrub removal should occur between April 15<sup>th</sup> and August 15<sup>th</sup>, unless a breeding bird survey is completed by a qualified professional within five days of the woody vegetation removal which identifies no nesting activity in the vicinity of the work area.
2. To protect bats, no tree or shrub removal should occur between April 15<sup>th</sup> and October 1<sup>st</sup>, unless an evening bat survey in June is completed by a qualified professional within five days of the woody vegetation removal identifies no bat activity in the vicinity of the work area.
3. The Butternut Health Assessment prepared by Jp2g Consultants Inc. will need to be submitted to the MECP prior to any site disturbances within 50 metres of the butternut tree. Following the 30-day review period by the Ministry, the Category 1 butternut tree can be removed, provided any other applicable mitigation measures for tree removal are adhered to.
4. If any other Butternut trees are noted in or adjacent to the proposed work areas, a Butternut Health Assessment will need to be completed during the leaf-on period for those trees to identify if they are



healthy. Healthy butternuts are not to be removed or harmed until an overall benefit for the species has been provided following MECP protocols. Depending on the Category of butternut tree and how many there are, registration or authorization under the Endangered Species Act may be required.

5. Although not anticipated to occur on site and out of an abundance of caution, the following mitigation measures are recommended in order to mitigate the potential impacts on turtle species that may be utilizing the subject lands:
  - a. Specific site preparation work requiring clearing of vegetation and construction activities should be undertaken between November 1<sup>st</sup> and March 30<sup>th</sup>, which is outside of the more active season for turtles.
  - b. If the proposed works will occur between April 1<sup>st</sup> and October 31<sup>th</sup>, in order to prevent potential movement of turtle species into the proposed work area, a properly installed and maintained temporary exclusion barrier (for example silt fencing) should be erected as per the *Species at Risk Branch Best Practices Technical Note Reptile and Amphibian Exclusion Fencing Version 1.1 July 2013* around any areas where the proposed works will occur prior to all site preparation and construction activities.
    - i. Once the work areas are surrounded by properly dug in fencing and prior to further site alterations, the work areas are to be searched for turtles. Any turtles observed during the construction phase are to be relocated outside of the work area as required to ensure they are not endangered by the construction activities.
6. If the wetlands and associated ditch/intermittent watercourse will be removed/relocated:
  - i. Any permits and/or approvals required from the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) and Department of Fisheries and Oceans (DFO) are to be obtained prior to the removal/relocation of the on-site wetland and/or associated ditch/intermittent watercourse.
  - ii. at the time that they will be filled in, if there is standing or flowing water present, defishing, if applicable will need to occur prior to filling it in. A sampling permit will be required from NDMNRF for the defishing.
  - iii. the filling activities should start in the eastern portion of the wetland, or ditch/intermittent watercourse and proceed in a westerly direction on the subject lands in order to encourage any wildlife utilizing these features on the subject lands to relocate to the west towards the forested area on the adjacent lands.
7. For any roadworks that will involve the installation of culverts in the municipal drain to access the adjacent lands to the southeast, the following mitigation measures shall be implemented:
  - i. Timing of the in-water work for the installation of a culvert is favoured for the summer period (between July 15 and September 30) due to generally reduced flow, decreased potential for sediment input and the greater growing season afforded for re-vegetation of disturbed areas. The re-vegetation of the disturbed areas shall be done with native species to the area. If in-water occurs between September 30 and March 15, depending on the length of construction period and how the re-vegetation germinates, it may be necessary to have any exposed areas along the banks covered with erosion control blankets to keep the soil in place and prevent erosion from occurring during the spring freshet period. The sediment and erosion control measures shall remain in place until the area has completely stabilized. No in-water work is to occur between March 15 and July 15 if water is present in the vicinity of the work area;



- ii. The channel bed and banks shall be stabilized with clean shot rock one metre upstream and downstream of the new culvert after installation. Smaller rounded material will be placed over the larger rock protection to provide more habitat utilization potential;
  - iii. All material to be placed in the watercourse is to be clean and free of fines;
  - iv. All access to the work areas shall be within the future road allowances on/adjacent to the subject lands, to avoid tree removal and other potential disturbances in portions of the watercourse corridor that will not be disturbed;
  - v. It is important to ensure the banks are stabilized as soon as possible after the installation is completed and exposed soil is kept to a minimum at all times;
  - vi. Erosion and sediment control measures are a critical component of the construction work. Effective sediment and erosion control measures are to be maintained until complete re-vegetation of disturbed areas is achieved with native species to the area. Prior to any in-water work a rock flow check dam, with a sediment trap immediately upstream of the flow check, is recommended downstream of the work area. Silt fencing is to be installed along the edges of the work areas and along both banks of the watercourse where the fencing will not conflict with work within and under the watercourse. It is important that fencing is properly dug-in to treat any surface water flow and is maintained as required, including removal of accumulated sediment until the area has completely stabilized;
  - vii. 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 on construction equipment with respect to refuelling, washing and fluid changes, and proper disposal of fluids, filters and other waste materials. None of this work shall take place within 30 metres of any surface water features;
  - viii. It is important that monitoring be completed at all times and any water quality issues such as elevated turbidity levels be addressed immediately with cessation of work until proper sediment and erosion controls are in place.
8. To ensure that no adverse impacts occur on the ditch/intermittent watercourse, the municipal drains, and the potential fish habitat within these features as well as the potential significant wildlife habitat located on and adjacent to the subject lands, the following recommendations should be implemented:
- a. A 10-metre-wide buffer area from the normal high water mark of the ditch/intermittent watercourse and municipal drains shall be maintained in a natural vegetated state, with the exception of a gravel walking path. The open portions of the water setback could also be replanted with native trees and shrubs and maintained in a natural vegetated state.
  - b. Vegetation on the remainder of the subject lands should also remain in a natural state as much possible, except for the clearing portions of the property to allow for the construction of structures and associated access requirements.
  - c. The extent of exposed soils is to be kept to a minimum at all times. Re-vegetation with native trees and shrubs of exposed, non-developed areas is to be achieved as soon as possible and should only use locally appropriate native species.
  - d. Erosion and sediment control measures are a critical component of the construction work. Effective sediment and erosion control measures are to be maintained until complete re-vegetation of disturbed areas is achieved. Silt fencing is to be installed along the edges of the work



areas. It is important that fencing is properly dug-in to treat any surface water flow and is maintained as required, including removal of accumulated sediment.

- e. Additional mitigation measures to minimize the potential for inputs of sediments and other contaminants into the wetlands, watercourses and the environment in general include proper maintenance on construction equipment with respect to refuelling, washing and fluid changes, and proper disposal of fluids, filters and other waste materials. None of this work should take place within 30 metres of any surface water features.
9. Municipal by-laws and provincial regulations for noise will be followed and utilities will be located as required in the vicinity of the site prior to construction.
10. If any SAR (alive or injured) are observed or if a nest is observed during construction, activity in the area is to stop and the Ministry of Environment, Conservation and Parks (MECP) and a biological consultant contacted immediately.
11. Any occurrences of species at risk found on site should be submitted to the Natural Heritage Information Centre as soon as possible.
12. If any SAR are discovered throughout the course of the work and/or should any SAR or their habitat be potentially impacted by on site activities, MECP should be contacted and operations be modified to avoid any negative impacts to SAR or their habitat until further direction is provided by MECP.

## 7 Conclusion

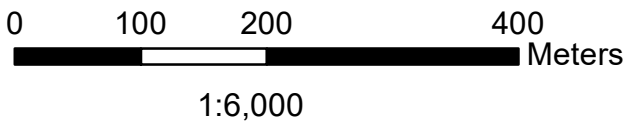
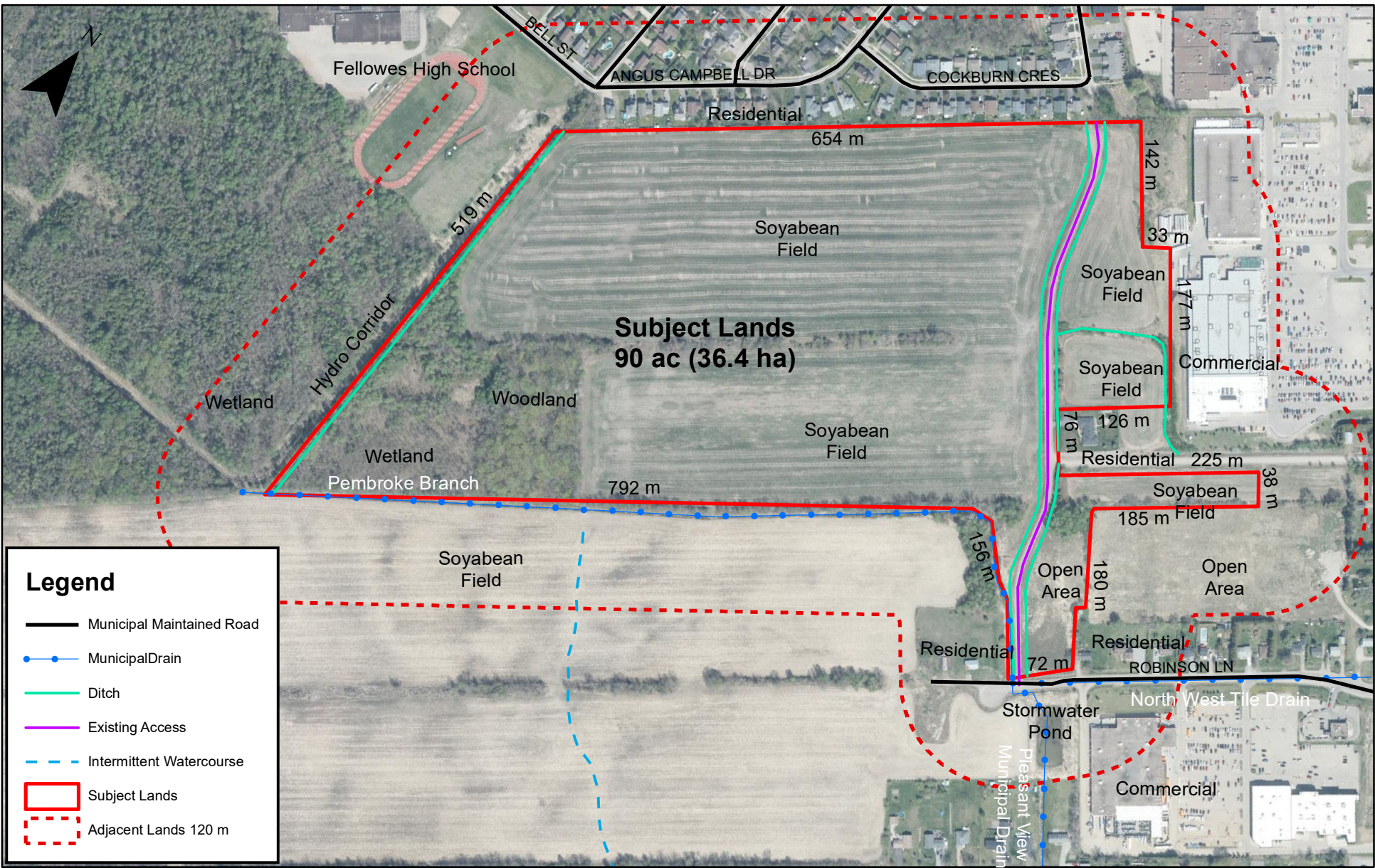
No adverse impacts on the potential or confirmed natural heritage features in areas on/adjacent to the subject lands are anticipated to occur, provided the mitigation measures outlined in this report are properly implemented. Therefore, the subdivision proposal will be consistent with the Natural Heritage policies of the County of Renfrew Official Plan, 2021 and the Provincial Policy Statement (PPS), 2020.

## 8 References

- County of Renfrew Planning Division. August 2021. County of Renfrew Official Plan.
- Government of Canada. 2022. Fisheries and Oceans Canada. Aquatic Species at Risk Map.
- Jp2g Consultants Inc. 2004. Official Plan of the Township of Laurentian Valley.
- Jp2g Consultants Inc. Consolidated December 31, 2020. Comprehensive Zoning By-law No. 08-04-391 of the Corporation of the Township of Laurentian Valley.
- Ontario Ministry of Natural Resources and Forestry. January 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E.
- Ministry of Natural Resources. 2011. Bird and Bird Habitats: Guidelines for Wind Power Projects.
- Ministry of Natural Resources and Forestry. 2022. Ministry of Natural Resources and Forestry Make-a-Map: Natural Heritage Areas.
- Ministry of Natural Resources and Forestry. 2022. Ministry of Natural Resources and Forestry Fish ON-Line.
- Ontario Ministry of Natural Resources. March 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. Toronto: Queen's Printer for Ontario.

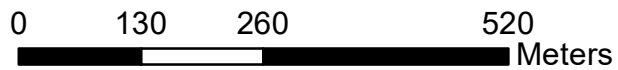
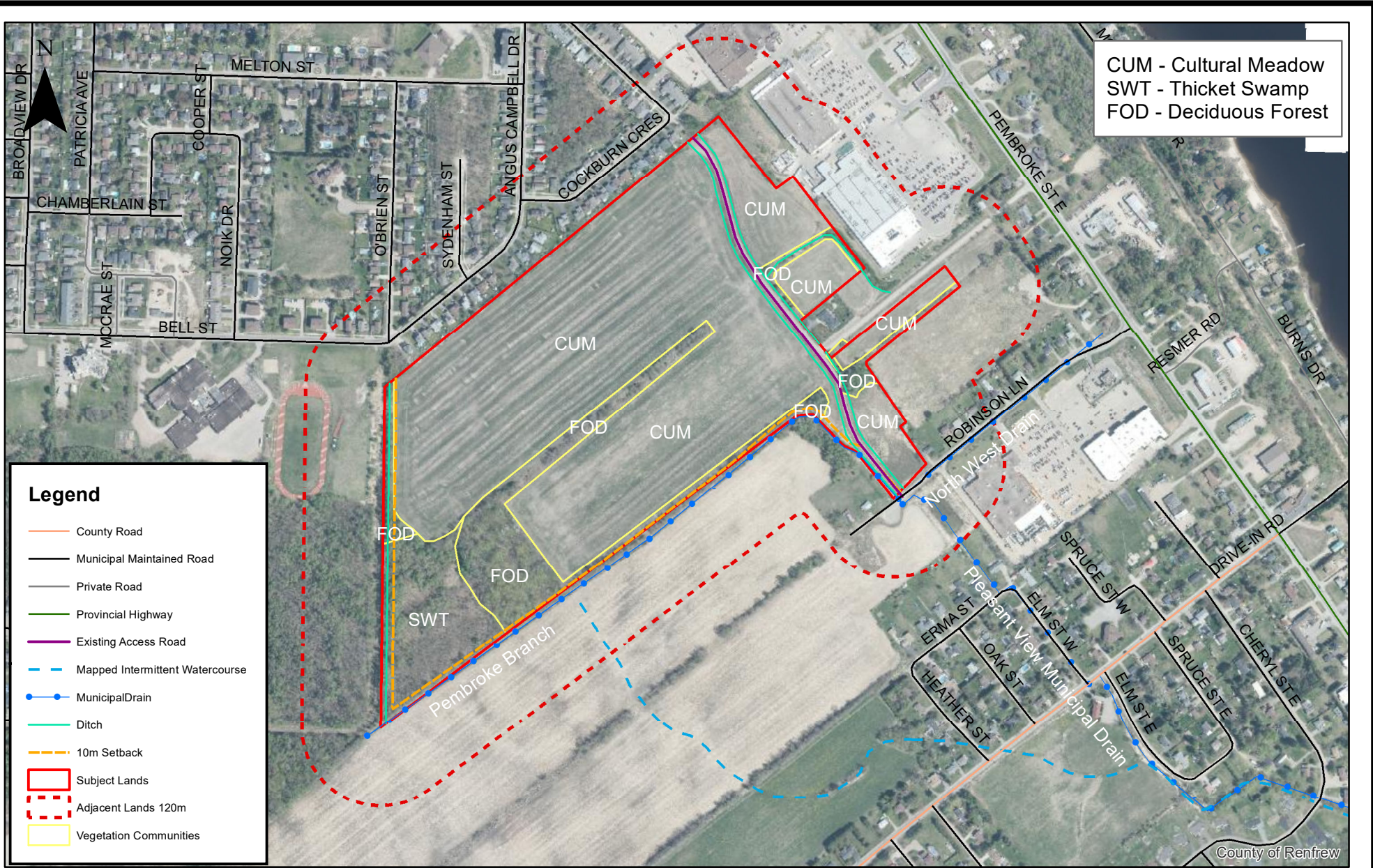
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End of report.



## Map 1: Site and Surrounding Lands





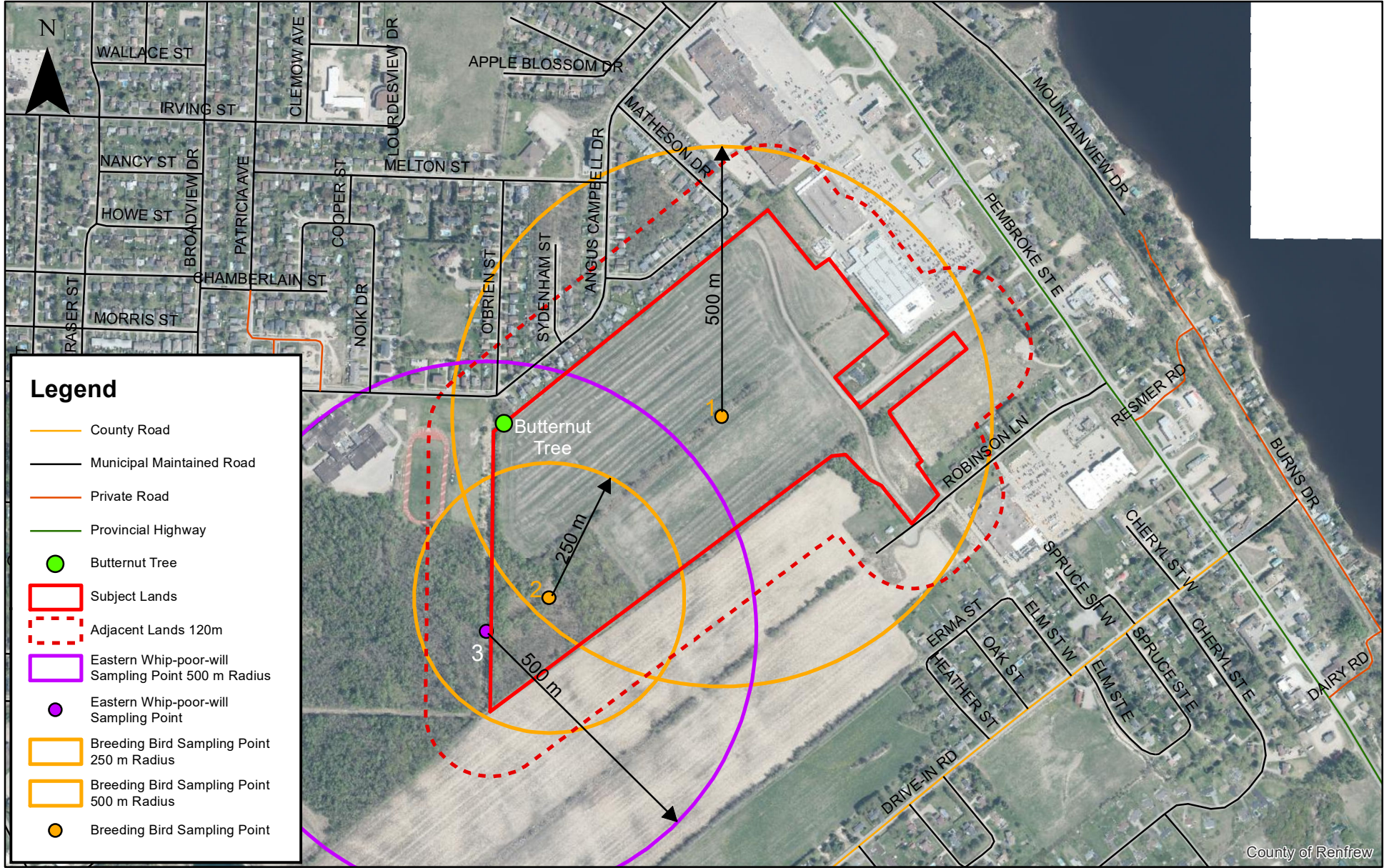
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### Map 3: Vegetation Community

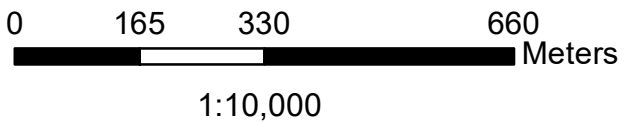
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ENGINEERS • PLANNERS • PROJECT MANAGERS

Date: March 2023

Project No. 22-7028A



Notes:  
1. Map Layers Obtained from LIO



## Map 4: Sampling Points

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Date: March 2023

Project No. 22-7028A