Walkerton Soccer Complex
Bobolink (*Dolichonyx oryzivorus*) and
Eastern Meadowlark (*Sturnella magna*)
Habitat Management Plan

Prepared for the
The Municipality of Brockton
100 Scott Street
Walkerton, Ontario, N0G 2V0

Project No. 1678 Date: September 23, 2015

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

TABLE OF CONTENTS

List of Maps

List of Tables

List of Appendices

1.0 Introduction

The Municipality of Brockton plans to develop an 8.6ha outdoor soccer field complex as part of a larger, long-term municipal development plan for the northeast end of the town of Walkerton. This complex will comprise four soccer fields along with associated walkways and parking facilities along an extension of the existing Eastridge Road. The Municipality plans to begin construction of the soccer complex during fall 2015, with expected completion in early summer 2016. The soccer complex is anticipated to comprise part of a larger East Ridge Business Park that is proposed by the Municipality for development over the course of the next several years as lots are purchased.

A portion of the lands comprising the planned soccer complex were actively farmed in 2015 with row crop agriculture (winter wheat), while a portion comprised re-naturalizing meadow. Due to the known occurrence of the Species at Risk (SAR) Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*) to occur within the Walkerton vicinity, Natural Resource Solutions Inc. (NRSI) was retained by BM Ross and Associates, on behalf of the Municipality in June 2015, to complete a SAR Assessment within the area of the proposed soccer complex and surrounding business park. Through the course of targeted SAR surveys completed by NRSI in June and July 2015, Bobolink and Eastern Meadowlark were recorded in agricultural field and meadow habitat located within and adjacent to the proposed soccer complex development. As provincial SAR, Bobolink and Eastern Meadowlark, including their general habitats, are protected under Sections 9(1) and 10(1) of the *Endangered Species Act* (ESA). Accordingly, the agricultural fields and meadow habitats in which they were observed are considered confirmed and protected habitat for these species. Impacts to these habitats, such as through construction of the proposed soccer complex, are prohibited unless permitted by the MNRF.

Ontario Regulation 242/08 of the ESA identifies specific protection, mitigation, and habitat compensation requirements for Bobolink and Eastern Meadowlark. This Habitat Management Plan has been created to satisfy the requirements consistent with Ontario Regulation 242/08. This Plan is considered a living document, in that it will be updated as required to provide accurate and effective guidance to inform the implementation of compensatory habitat enhancement, management and monitoring activities. From time

to time updates to this Plan may be required based on results derived from habitat management and monitoring activities. An adaptive management approach will be followed, whereby habitat management methodologies will be re-evaluated and revised if found through monitoring to be ineffective. This Management Plan will be retained and updated as necessary through the five-year duration of Municipal responsibility for Bobolink/Eastern Meadowlark habitat management on the compensation lands, as required under provincial regulation. This document will be provided to the MNRF upon request.

1.1 Subject Property for Proposed Development

The proposed soccer complex development is located within municipally owned lands that correspond to the boundaries of the future business park within the town of Walkerton. This municipal property is considered the "subject property" for the purposes of this report, of which only a portion will be developed for the soccer complex. The subject property is located north of Eastridge Road and west of Ontario Road and County Road 19, within the town of Walkerton (Map 1). The proposed soccer complex is to be located centrally within the southern half of the proposed business park lands (Map 2). This property is located within the provincial Ecoregion 6E.

1.2 Requirements of the Endangered Species Act (ESA)

The original ESA, written in 1971, recently underwent a year-long review which resulted in a number of changes that came into force in 2007. There is now a much stronger emphasis on science-based review and assessment of species completed by The Committee on the Status of Species at Risk in Ontario (COSSARO). Species designated as Threatened or Endangered automatically receive legal protection under the ESA and their habitats are protected generally under the Act (i.e. areas essential for breeding, rearing, feeding, hibernation and migration).

Subsection 9(1) of the ESA states that:

"No person shall,

> *(a) kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;*

(b) possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade,

(i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species,

(ii) any part of a living or dead member of a species referred to in subclause (i),

(iii) anything derived from a living or dead member of a species referred to in subclause (i); or

(c) sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii).

Subsection 10(1)(a) of the ESA states that "*No person shall damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species*." In addition to this general habitat protection, there are a number of Regulations which have been created under the ESA which address specific species. Ontario Regulation 242/08 Section 23.6 identifies exemptions to ESA Subsections 9(1) and 10(1) associated with land development activities such as the proposed soccer complex and which are <30ha, which are specific to impacts to Bobolink and Eastern Meadowlark and their habitats. These exemptions may be authorized by the MNRF provided that various conditions are met that effectively minimize potential for impact to the species and adequately compensate habitats to be removed through a habitat creation/enhancement, management and monitoring program.

Section 23.6(4) of Ont. Reg. 242/08 specifies the conditions that must be satisfied by a person who carries out the habitat removal activities:

"1. Before commencing the activity, the person must,

i. give the Minister notice of the activity by submitting a notice of activity form available on the Registry to the Minister through the Registry,

ii. prepare a habitat management plan in accordance with subsections (5) and (6), and

iii. give the Minister a written undertaking to continue, after the end of the five-year period referred to in paragraph 7, to manage any habitat created or

enhanced in accordance with paragraph 6 by carrying out the measures described in subsection (9) until the earlier of,

a. *the end of the 20-year period that follows the creation or enhancement of the habitat under paragraph 6, or*

b. *if the area of habitat that was destroyed by the activity is eventually returned to a suitable state to be used by bobolink or eastern meadowlark, the day on which the area reaches that state."*

This Habitat Management Plan has been completed in fulfillment of sub-point (ii) above. Ont. Reg. 242/08 Section 23.6 contains various other clauses which govern the appropriate compensation of Bobolink/Eastern Meadowlark habitat removal through targeted habitat creation and/or enhancement activities on suitable lands. Specific requirements for long-term habitat management, monitoring and reporting have also been identified within the regulation. This report summarizes how these requirements will be met through description of a habitat management and monitoring plan for Bobolink and Eastern Meadowlark, to be undertaken by the Municipality of Brockton in accordance with the conditions identified within Section 23.6.

2.0 Development Site

2.1 Existing Conditions

The subject property is approximately 50ha in size and is primarily comprised of annual row crops with a smaller area of successional meadow habitat. The crops grown in 2015 include winter wheat, soybeans, and canola. Three hedgerows, mapped as Dry – Fresh Deciduous Hedgrerow Thicket (THDM3), cross the subject property and are generally comprised of various shrubs and a few isolated trees. Some of the tree species present include American Basswood (*Tillia americana*) and Manitoba Maple (*Acer negundo*). An area of regenerating Dry-Fresh Mixed Meadow (MEMM3) occurs north of the western terminus of Eastridge Road (Map 1).

Photographs of the site are provided in Appendix I, showing actively cultivated agricultural lands and the re-naturalizing MEMM3 meadow within the subject property.

2.2 Species at Risk Observations

The following Eastern Meadowlark and Bobolink survey methodology and results are a summary of the data collected by NRSI in June and July of 2015. These results were compiled within a SAR Assessment Report, dated July 29, 2015, and submitted to Municipality of Brockton (NRSI 2015; see Appendix II).

2.2.1 Survey Methodology

Targeted surveys for Eastern Meadowlark and Bobolink were carried out by NRSI biologists on June 18, 2015, June 25, 2015 and July 2, 2015. An MNRF-approved survey methodology for Bobolink and Eastern Meadowlark was followed in conducting each point count survey and transect (MNRF 2015). Ten point count stations were established along two transect lines within the subject property, and were monitored for 10 minutes each per visit, in accordance with the survey protocol. Point count and transect locations are shown on Map 1.

2.2.2 Survey Results

The field surveys documented confirmed breeding evidence for Bobolink and probable breeding evidence for Eastern Meadowlark within the subject property. A summary of results for both species is provided below.

Bobolink

Multiple Bobolink individuals were observed within the subject property during each site visit. It is anticipated that three pairs of Bobolinks breed in the subject property. One pair was observed in the northeast end of the regenerating Dry-Fresh Mixed Meadow (MEMM3) community. A second pair was observed near the boundary of the OAGM1 canola and OAGM1 winter wheat fields north of Eastridge Road, utilizing both fields. The third pair was observed near point count station 1-1. See Map 2 for the general locations of the Bobolink observations within the subject property. Breeding was confirmed within the subject property due to observations of fledged young (BSC 2001). All three pairs were observed during each of the three site visits.

Eastern Meadowlark

Eastern Meadowlark individuals were observed within the subject property during all three site visits. It is anticipated that these observations represent two pairs of Eastern Meadowlarks. Repeated observation of these individuals in the same general locations is considered evidence of territoriality and therefore represents probable breeding on-site (BSC 2001). The general locations of each observed Eastern Meadowlark pair are shown on Map 2. These birds were observed singing and perched in the trees and hydro poles near their territories.

Based on the locations of probable and confirmed Eastern Meadowlark and Bobolink breeding within the subject property, all of the winter wheat and canola row crop agricultural fields within the subject property were considered confirmed habitat for these species. The MEMM3 regenerating mixed meadow was also considered confirmed habitat (Map 2). Only the soybean field, at the west end of the subject property, was considered to not provide breeding habitat for these species based on a lack of observations within this field. Soybean row crop fields are generally not considered suitable habitat for either species.

3.0 Impact of Development

3.1 Proposed Development

The Municipality of Brockton plans to develop an 8.6ha outdoor soccer field complex as part of a larger, long-term development of the proposed East Ridge Business Park. This complex will include four soccer fields along with associated walkways and a surface-level parking lot. An entrance to the parking lot will be constructed from the existing western terminus of Eastridge Road. Eastridge Road will be extended westward within the subject property to accommodate anticipated future development of the subject property as a business park.

The Municipality plans to begin construction of the soccer complex during fall 2015 (site grading), with expected completion in June 2016.

Project activities will include the removal of topsoil and site rough grading during fall 2015. This will be followed by the installation of utility servicing, detailed grading, paving and landscaping to occur during early 2016.

3.2 Habitat Removal Requirements

The proposed soccer complex occurs entirely within lands considered confirmed Bobolink/Eastern Meadowlark habitat, as shown on Map 2. The proposed development will require the removal of 8.6 ha of confirmed SAR habitat. Specifically, the lands to be removed within the footprint of the proposed soccer complex primarily comprise winter wheat row crop field and the MEMM3 meadow community. A portion of one hedgerow also falls within the footprint of the soccer complex and will require removal.

As stated in Ont. Reg. 242/08 Section 23.6(4)5, no part of the activity that is likely to damage or destroy the habitat of Bobolink or Eastern Meadowlark, or kill, harm, or harass these species (e.g., habitat removal), is to occur between May 1 and July 31 of any year. Any components of the activity should also be designed to minimize adverse effects on Bobolink or Eastern Meadowlark, such as by routing construction access roads along the perimeter of the fields rather than through the interior.

4.0 Proposed Habitat Enhancement Area (HEA)

The proposed site for the enhancement of Bobolink/Eastern Meadowlark habitat is a municipally owned property located adjacent to the active Brant Landfill. This property is located on Concession 8, immediately west of Bruce Road 10, in the Municipality of Brockton (Map 3). This property is located within the provincial Ecoregion 6E. The municipal property to be used for habitat compensation currently comprises a mix of active soy fields (as per the 2015 crop season) and interspersed natural features including cultural woodland, deciduous swamp and meadow (Map 3).

This municipally owned property as a whole is considered the "habitat compensation property". A refined Habitat Enhancement Area (HEA), which was considered suitable for Bobolink/Eastern Meadowlark habitat enhancement within the habitat compensation property, was identified as described below.

4.1 Existing Conditions

NRSI completed a site investigation on September 14, 2015 to characterize the existing natural features and agricultural land uses on the habitat compensation property. Natural features were characterized following the Ecological Land Classification (ELC) system for southern Ontario (Lee et al. 1998). This work was completed to accurately identify and delineate areas suitable for Bobolink/Eastern Meadowlark habitat enhancement within the property, based on MNRF guidelines identified in Ont. Reg. 242/08.

The habitat compensation property totals approximately 35.84ha in area and is comprised of active agricultural lands (soy in 2015) and a mixture of cultural woodland (CUW), cultural meadow (CUM), and deciduous swamp communities (SWD) (Map 3).

For the purposes of identifying the HEA, lands considered for enhancement within the property included the active agricultural lands and cultural meadow communities. Ont. Reg. 242/08 Section 23.6(7) specifies the size requirements of habitat enhancement lands as the following:

"1) The area must be larger than the area of the habitat for bobolink or eastern meadowlark that is damaged or destroyed by the activity.
2) The area may be made up of separate parcels of lands, but the minimum size of any individual parcel must be no less than four hectares.
3) No portion of the area shall be less than 200 metres in width."

Based on these size requirements, one area of the habitat compensation property was considered to provide a suitable HEA (Map 3). This area comprises 6.6ha of active agricultural row crop field and 1.64ha of cultural meadow. An intervening "finger" of cultural woodland (0.77ha) has been included as representing ideal perching habitat for Eastern Meadowlark. In total, this HEA comprises 9.01ha, which exceeds the 8.61ha of habitat removal required for development of the soccer complex. Further, the HEA is wider than 200m in all areas.

An additional area of existing soybean field, totaling 1.96ha, will also be enhanced along with the adjacent area of the HEA. This additional area to be enhanced is shown on Map 3. Although this area of agricultural field does not meet the minimum size requirements for habitat compensation area outlined in Ont. Reg. 242/08, its exclusion from the HEA was considered impractical as it represents too small an area to be retained as a continuously cultivated agricultural field. Furthermore, while this additional enhancement area may not provide additional core nesting habitat for Bobolink or Eastern Meadowlark, it is anticipated to provide greater opportunity for foraging and cover that can be utilized by these species. With the inclusion of this additional enhancement area, the total size of the HEA is 10.97ha.

The HEA is not considered to include the narrow hedgerow immediately east of the cultural woodland. The small deciduous swamp feature that falls within the HEA was not included within the 9.01ha total as it does not represent suitable habitat for Bobolink or Eastern Meadowlark. As part of a larger, contiguous area of interspersed agricultural lands and natural features, the HEA is ideal for providing habitat for a variety of open country bird and wildlife species. Based on this site assessment, it was agreed that the HEA provides ideal conditions to enhance the existing row crop and cultural meadow areas into suitable grassland habitat for use by Bobolink and Eastern Meadowlark.

Other areas of agricultural field and cultural meadow within the north end of the habitat compensation property were deemed unsuitable as HEA due to these open land areas being too small or narrow, based on MNRF guidelines, as constrained by property boundaries or wooded natural features.

4.1.1 HEA Soil Composition

The soils found within the HEA are characterized as fine – very fine sand, with deposits of sandy loam (Soils of Ontario 1983). Field assessments also corroborated this, with fine – very fine sand noted to be present throughout much of site, with rocky debris noted to be present at depths of >35cm. It is anticipated that soil composition will be suitable to sustain a mixed meadow community which will provide habitat for Eastern Meadowlark and Bobolink within the HEA.

4.1.2 HEA Vegetation Composition and Structure

A vegetation survey was conducted by NRSI within each of the ELC polygons of the HEA and adjacent features within the property (Map 3). Species composition within the HEA was reflective of ecological disturbance, with a high proportion of non-native species present. Soy fields dominate the western two-thirds of the HEA. An area of cultural meadow located at the east end of the HEA represents former agricultural field that is re-naturalizing. This cultural meadow was noted to consist largely of goldenrod (*Solidago spp.*) and aster species (*Symphyotrichum spp.*), with numerous cold season grasses (e.g., Smooth Brome (*Bromus inermis)* and Orchard Grass (*Dactylis glomerata)*). Indian Grass (*Sorghastrum nutans*) was also observed within this meadow; the presence of this species indicates that the site will support the establishment of savannah or prairie communities through enhancement seeding activities. This meadow was noted to contain the remains of an old house and barn, with various debris objects scattered in the meadow surrounding this location.

The small finger of cultural woodland that extends into the HEA represents natural woody vegetation regrowth on an uncultivated area of slope that divides the soybean field from the fallow cultural meadow. This wooded slope was observed to contain a mix of scattered trees and shrubs including ash (*Fraxinus* spp.), Manitoba Maple (*Acer*

negundo), raspberry (*Rubus* spp.), Riverbank Grape (*Vitis riparia*) and various meadow grasses. The slope of this features varies from being relatively steep at the north end of the HEA, tapering to a lesser slope toward the south end.

One small deciduous swamp inclusion occurs within the HEA, within the soy field. This feature was noted to be a kettle depression with seasonal wetness, and was dominated by Silver Maple (*Acer sacchinarum*) along the perimeter of the feature and cattail (*Typha sp.*) within the interior.

Vegetation varies from 10-70cm in height largely due to the nature of the site. A notable proportion of legume species which may provide seed forage for grassland birds includes Alfalfa (*Medicago sativa ssp. sativa*), Red Clover (*Trifolium pratense*), Birdsfoot Trefoil (*Lotus corniculatus*), White Sweet Clover (*Melilotus alba*) and Tufted Vetch (*Vicia cracca*).

In addition to the active agricultural fields and cultural meadow present within the HEA, the adjacent areas of cultural woodland and deciduous swamp (SWD3-2 and SWD4-1) to the north and east within and adjacent to the property provides additional benefit for the entire site by providing green cover for other species which may utilize the HEA.

4.2 Proposed Habitat Enhancement Works

An analysis of suitable habitat for Bobolink and Eastern Meadowlark has led to the development of a set of proposed enhancement works. These are meant to facilitate the creation of suitable forage and nesting habitat for these species in the HEA.

During a site visit on September 14, 2015 by NRSI and Municipality of Brockton staff Municipal staff showed a willingness to contribute their resources to facilitate the habitat enhancement works. The Acting Chief Financial Officer of the Municipality of Brockton has expressed support for site enhancement works within the municipally owned habitat compensation property. As discussed below, these efforts will include a variety of site enhancement activities which aim to improve forage opportunity, encourage successful nesting and effectively mitigate impact to Bobolink and Eastern Meadowlark associated with planned development of the municipal soccer complex.

4.2.1 Seeding

The HEA is currently dominated by planted soybeans as of fall 2015. Under this habitat management plan, following the harvesting of the soybean field in fall 2015, the HEA will no longer be used for row crop agriculture. It is anticipated that adjacent active agricultural fields within the municipally owned property, outside of the HEA, will continued to be farmed. As well, as the cultural meadow is comprised predominantly of non-native species, opportunity exists to supplement the vegetation community to encourage a greater diversity of native meadow species. It is anticipated that by enhancing the structure of the vegetation, community forage and nesting habitat for Eastern Meadowlark and Bobolink will be improved.

The HEA agricultural field and cultural meadow will be seeded with a native meadow and tallgrass prairie seed mix that meets the requirements of Ont. Reg. 242/08 Section 23.6(8) (e.g., ensuring appropriate minimum vegetation growth heights are achieved). The seed mix will be applied such that at least 60-80% of the HEA will be covered by at least three grass species in accordance with the regulation. If necessary, a second seed mix will be applied to ensure that remaining parts of the habitat not covered by grasses will be covered with forbs or legumes, as required by the regulation. Establishment of the seed mix will create suitable habitat within the soybean field where none previously existed. Additionally, seeding of the cultural meadow will enhance the overall species diversity (providing an enhanced source of seed) and the community structure (improving suitable nesting habitat) of the feature. Seeding will occur across the entire HEA with the exception of the narrow wooded slope (cultural woodland; see Map 3). Seeding will be completed by a Truax seed drill (or equivalent) to ensure good seed to soil contact and proper germination. The application of herbicide will not be used in site preparation.

Fall 2015, following soybean harvesting, is the recommended time for seeding in order to utilize spring soil moisture which will encourage the growth of seed material. In the event that a fall 2015 seeding is not feasible due to weather conditions or seasonal availability of stock, seeding would occur during spring 2016. Spring works will occur no later than April 30, 2016 to ensure completion before the breeding bird season.

An agreement will be reached between the Municipality and the tenant farmer such that herbaceous growth within the HEA is mown or harvested once annually, which will occur outside the period May 1 to July 31 of any year. In allowing vegetation to grow taller, the HEA would provide improved cover for bird species, an increased food source of seeds and insects, and increased fledgling success as mowing would not occur during the breeding season. The specific composition of the seed mix to be applied will be determined in consultation with the farmer in order to provide an annual hay crop that provides economic value, if possible.

An NRSI biologist, experienced in restoration ecology, will be on site during the seeding installation to ensure that the prescribed methodology is adhered to. Vegetation establishment will be monitored during the spring of 2016 in conjunction with breeding bird surveys. The details of the vegetation monitoring are provided below.

5.0 Habitat Enhancement Area: Management and Monitoring

5.1 Management Plan

Management of the HEA will be attained through adherence to the requirements of Ont. Reg. 242/08 Section 23.6(9). Mowing or harvesting will be maintained outside of the period April 1-July 31, and will be completed once annually. The HEA will not be used for livestock grazing.

During each of the five years following creation of the habitat (i.e., 2016-2020) the HEA will be managed as necessary to maintain the grass, forb and legume species in the required proportions outlined in Ont. Reg. 242/08. Maintenance of these species coverage proportions will ensure the continued occurrence of optimal habitat conditions for Bobolink and Eastern Meadowlark. Woody vegetation or invasive species that are observed within the HEA will be identified and flagged for removal. Since woody and invasive species will be monitored for annually, it is anticipated that any young growth that is observed will be removed manually by hand. In cases where invasive species removal by hand is considered infeasible, an alternate plan will be developed in consultation with the Municipality and MNRF, the details of which will be dependent on the invasive species to be managed. Habitat management during the period 2016-2020 will be the responsibility of the Municipality of Brockton.

5.2 Monitoring Plan

5.2.1 Bobolink/Eastern Meadowlark Surveys

Targeted Bobolink/Eastern Meadowlark SAR surveys are recommended to occur three times between late May and early July of each year in order to determine the presence and breeding success of these species on site. Survey protocol and timing would follow the accepted MNRF methodology for Bobolink/Eastern Meadowlark surveys (MNRF 2015). These surveys would occur in each of the five years post-habitat creation/enhancement and would be the responsibility of the Municipality of Brockton. In following the MNRF protocol, point count surveys will be conducted for 10 minutes each between dawn and 10:00am and under suitable weather conditions. Point counts would be established along linear transects established within the HEA. A map denoting transect and point count locations will be included as part of follow up reporting. All

observations of Bobolink and Eastern Meadowlark recorded on site will be submitted to the Midhurst MNRF including breeding evidence and location.

5.2.2 Vegetation Establishment

The establishment and health of the HEA will be evaluated once per year. Abundance of each species will be noted during this survey as well as an assessment of the overall vegetation community structure and composition to ensure habitat suitability.

It should be noted that surveys of vegetation establishment will yield to any SAR breeding bird activity observed on site. Should biologists encounter Eastern Meadowlark or Bobolink, caution will be taken to minimize intrusion into the territory as this would cause unnecessary agitation for the birds and could affect breeding success.

Should any deficiencies be observed during the five-year monitoring period following the establishment of the HEA, efforts will be taken to amend any issues which may arise. Although not anticipated to present a major issue for the site, any deficiencies in the establishment of plantings will be addressed based on observations made during monitoring visits.

5.2.3 Reporting

A memo report summarizing the results of breeding bird surveys and vegetation monitoring will be prepared and submitted to MNRF following each breeding bird season up to a maximum of five seasons. In accordance with Ont. Reg. 242/08 Section 23.6(10), the monitoring report will

- describe the measures taken by the Municipality to minimize adverse effects on Bobolink and Eastern Meadowlark during construction of the soccer field complex;
- describe the steps taken to enhance and manage the compensation habitat within the HEA;
- include a photolog of the HEA prior to and following habitat enhancement activities;

- include monitoring result summaries including appended copies of original data forms; and,
- provide detailed descriptions of Bobolink and/or Eastern Meadowlark observations in the HEA.

6.0 Proposed Schedule

As described above, removal of Bobolink/Eastern Meadowlark habitat for soccer field development is expected to occur during fall 2015. Compensatory habitat enhancement activities will begin during late October or November 2015, or otherwise by spring 2016. This timing meets the requirements of Ont. Reg. 242/08 Section 23.6(4)6, in that habitat enhancements will be completed within 12 months of the original habitat removal activity, with the enhanced habitat meeting the requirements of the regulation in terms of the type of vegetation it provides. Monitoring will commence during the following bird breeding season to evaluate the effectiveness of the habitat enhancement at attracting Bobolink and Eastern Meadowlark use, and evaluating the success of restoration seeding activities. Table 1 below provides a summary of anticipated milestone dates associated with municipal soccer field construction and preparation, management and monitoring of the HEA.

Table 1. Anticipated Milestone Dates Associated with Soccer Field Construction and Compensation Habitat Enhancement

Task	Timing
Preparation of the Habitat Management Plan	September 2015
Submission of Notice of Activity and written undertaking to the Minister of Natural Resources	September 2015
Commencement of existing Bobolink/Eastern Meadowlark habitat removal as part of soccer field complex construction	October 2015
HEA debris removal	October-November 2015
Completion of HEA seeding	October-November 2015
Year 1 monitoring of Bobolink/Eastern Meadowlark and habitat establishment	May-July 2016
Completion of soccer field development	June 2016
Years 2-5 monitoring of Bobolink/Eastern Meadowlark and habitat establishment	May-July 2017-2020
Habitat management activities	To be determined as required

7.0 References

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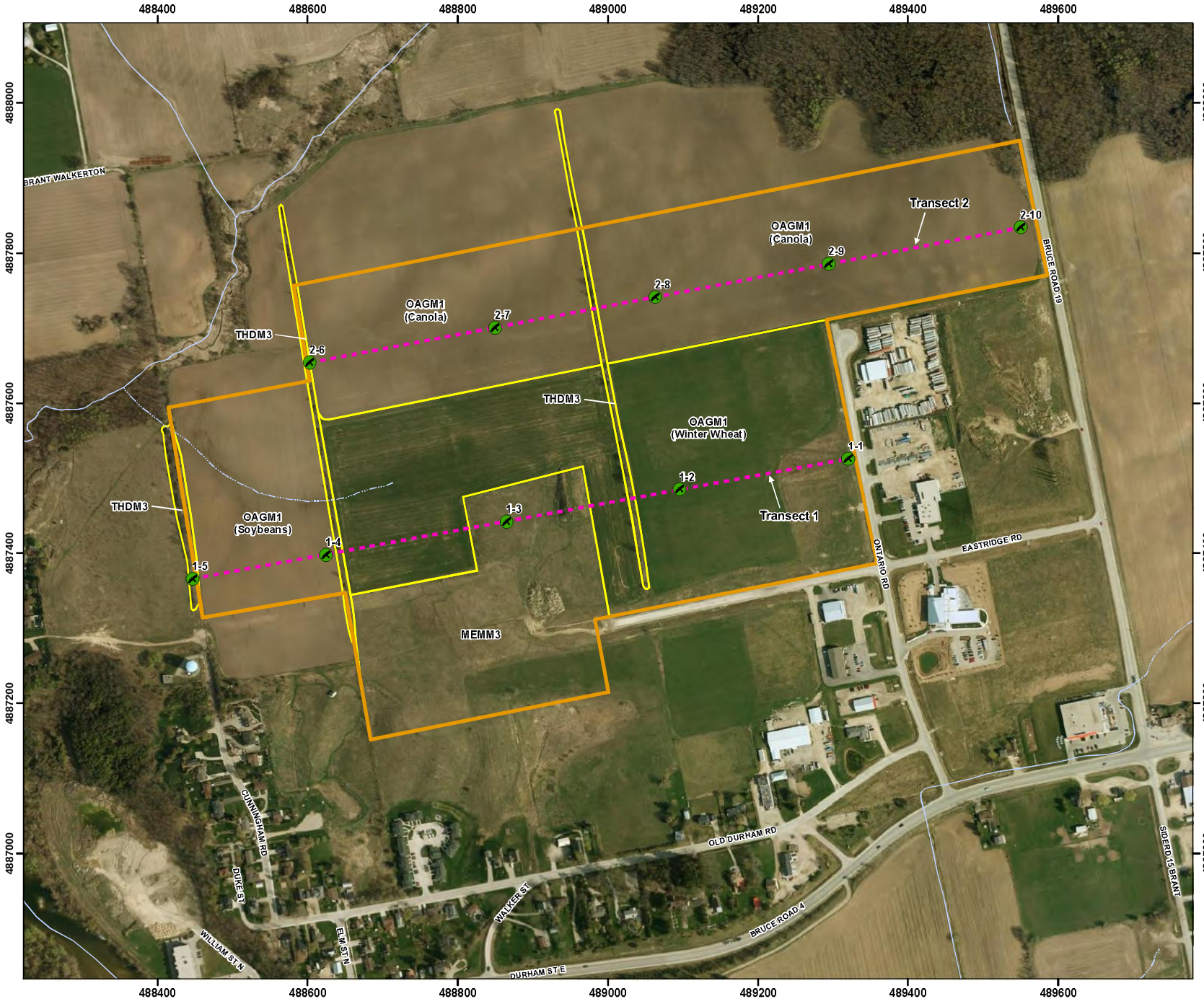

Map 1

East Ridge Business Park

Study Area

Legend

- Study Area
- Bird Breeding Monitoring (BMB)
- Transect
- Permanent Watercourse
- Intermittent Watercourse
- Ecological Land Classification (ELC)

(MEMM3) Dry-Fresh Mixed Meadow Ecosite

(OAGM1) Annual Row Crop

(THDM3) Dry-Fresh Deciduous Hedgerow Thicket Ecosite

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Project: 1657
Date: July 22, 2015

NAD83 - UTM Zone 17
Size: 11x17"
1:5,000

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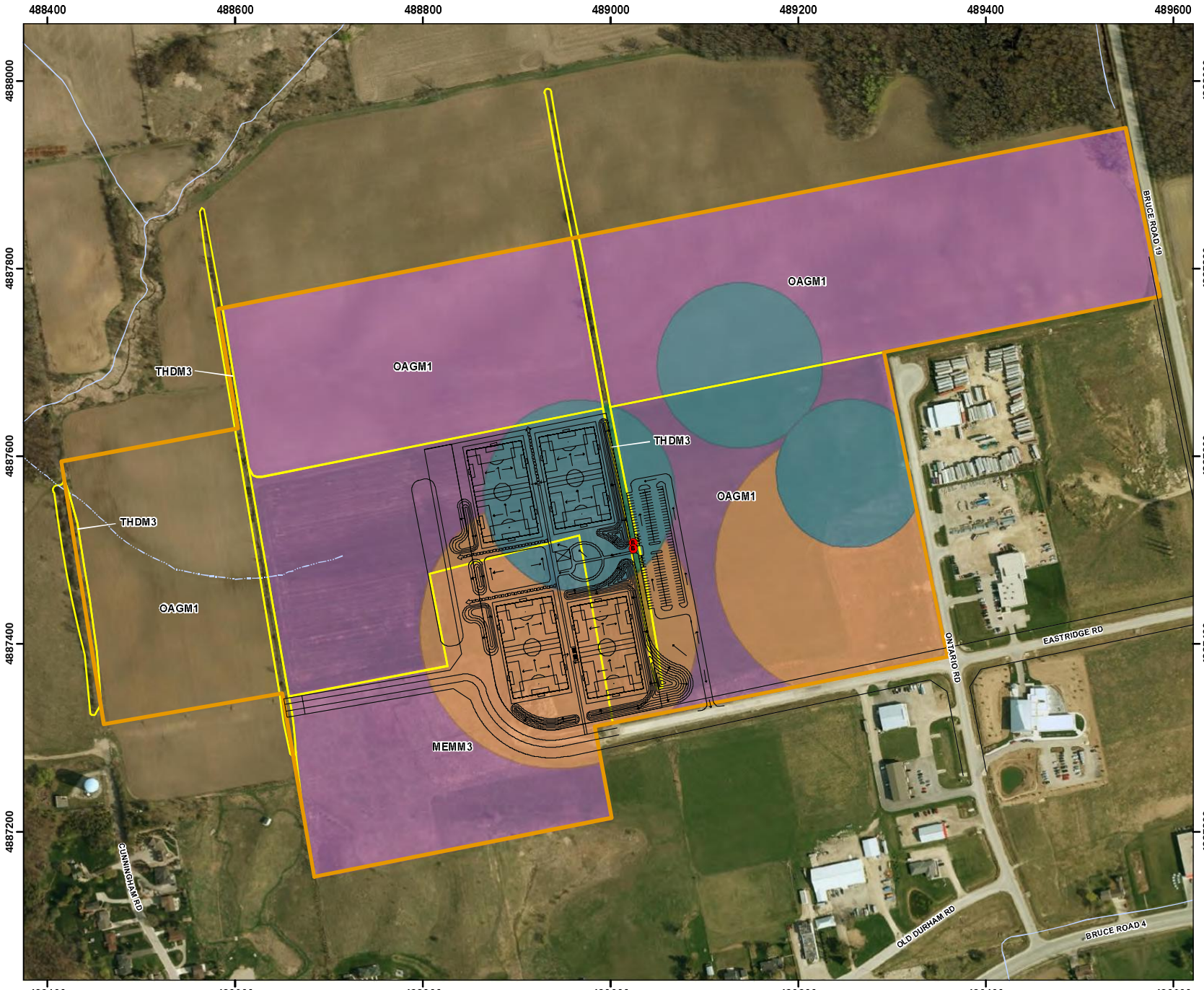

Map 2

East Ridge Business Park

Species at Risk Habitat and Proposed Soccer Facility

Legend

- Study Area
- Bat Cavity Tree
- Proposed Development
- Permanent Watercourse
- Intermittent Watercourse
- Species At Risk Habitat
- Bobolink Observation Area
- Eastern Meadowlark Observation Area
- Ecological Land Classification (ELC)

(MEMM3) Dry-Fresh Mixed Meadow Ecosite

(OAGM1) Annual Row Crop

(THDM3) Dry-Fresh Deciduous Hedgerow Thicket Ecosite

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Project: 1657
Date: July 24, 2015

NAD83 - UTM Zone 17
Size: 11x17"
1:4,000

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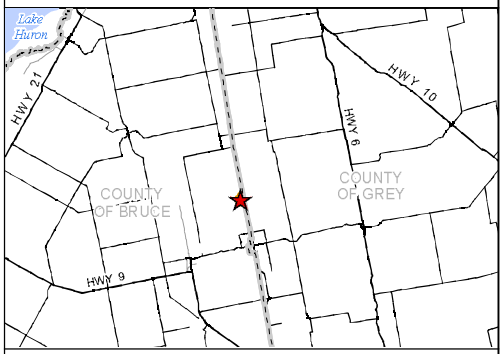
Map 3a

Walkerton Soccer Complex

Habitat Enhancement Area



Legend

- Subject Property
- Railway
- Permanent Watercourse
- Intermittent Watercourse
- Additional Lands to be Enhanced
- Habitat Enhancement Area
- Ecological Land Classification (ELC)

(CUM) Cultural Meadow

(CUW) Cultural Woodland

(MAM) Meadow Marsh

(SWD3) Maple Mineral Deciduous Swamp Ecosite

(SWD3-2) Silver Maple Mineral Deciduous Swamp Type

(SWD4-1) Willow Mineral Deciduous Swamp Type

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project: 1657 Date: September 23, 2015	NAD83 - UTM Zone 17 Size: 11x17" 1:4,000

0 50 100 150 200 Metres

N

Appendix I
Photolog

Development Property – Area of Proposed Soccer Complex (June 2015)

Photograph 1. - MEMM3 facing north west

Photograph 2. MEMM3 facing east

Municipal Habitat Compensation Property (September 2015)

Photograph 3.

Photograph 4.

Photograph 5.

Appendix II
Species at Risk Assessment Report (NRSI 2015)

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

July 29, 2015 Project 1657

Lisa Courtney
BM Ross and Associates Ltd.
62 North Street
Goderich, ON N7A 2T4

Re: Proposed East Ridge Business Park, Walkerton
Species at Risk Assessment

Natural Resource Solutions Inc. (NRSI) was retained by BM Ross and Assoicates Ltd. to undertake a Species at Risk (SAR) habitat assessment on lands owned by the Municipality of Brockton for the proposed East Ridge Business Park in Walkerton, Ontario. It is understood that the lands of the business park are to be severed and sold as individual lots to separate future landowners over a long-term period. However, the Municipality plans to develop an outdoor complex of soccer fields within a portion of the business park in the short-term, with construction proposed to start in 2015.

Background information review and targeted SAR surveys were completed to assess the presence of SAR habitat within the study area. Specifically, surveys for Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*) were carried out following Ontario Ministry of Natural Resources and Forestry (MNRF)-approved protocols during June-July 2015 to assess the presence of these species within the study area. Observations of other bird species, including SAR Bank Swallow (*Riparia riparia*) and Barn Swallow *(Hirundo rustica*), were recorded concurrently during these surveys.

This report summarizes the methods and results of the SAR assessment undertaken for the study area. These results are djscuused below in the context of Ontario's *Endangered Species Act* (ESA), with anticipated next steps and requirements to meet MNRF policies for the protection of observed SAR and their habitats.

Study Area
The study area comprises an area of approximately 50 ha and is located north of East Ridge Road and west of Ontario Road and County Road 19 in the town of Walkerton (see Map 1). The study area was defined as the lands comprising the proposed East Ridge Business Park.

The study area is dominated by actively cultivated agricultural lands, the majority of which are mapped as Annual Row Crop (OAGM1) (Map 1). The crops being grown in 2015 include winter wheat, soybeans, and canola. Three hedgerows, mapped as Dry-Fresh Deciduous Hedgrerow Thicket (THDM3), cross the study area and are generally comprised of various shrubs and a few isolated trees. Some of the tree species present

include American Basswood (*Tillia americana*), hawthorns (*Crataegus* spp.), Black Cherry (*Prunus serotina*) and Manitoba Maple (*Acer negundo*). An area of regenerating Dry-Fresh Mixed Meadow (MEMM3) occurs north of the western terminus of East Ridge Road.

Background Review and Species at Risk Screening

For the purposes of this report, SAR include species listed as 'Threatened' or 'Endangered' under the provincial ESA, or on Schedule 1 of the federal *Species at Risk Act*. In Ontario, provincial Species of Conservation Concern (SCC) include:

- species designated under the ESA as 'Special Concern' within Ontario,
- species that have been assigned a conservation status (S-Rank) of S1 to S3 or SH by the Natural Heritage Information Centre,
- species that have a high percentage of their global population in Ontario, and
- species that are identified federally as 'Threatened' or 'Endangered' by the Committee for the Status of Endangered Wildlife in Canada (COSEWIC), but are not protected provincially by the ESA.

Habitat for SCC may be considered Significant Wildlife Habitat (SWH), which is afforded protection under the Provincial Policy Statement (OMMAH 2014) and various municipal natural heritage protection policies.

Background information sources were reviewed to identify records of provincially significant species known from the study area vicinity (up to 10 km). These information sources included the following:

- MNRF Natural Heritage Information Centre significant species database (MNRF 2015a);
- Ontario Breeding Bird Atlas (BSC et al. 2009);
- Ontario Reptile and Amphibian Atlas (Ontario Nature 2015);
- Atlas of the Mammals of Ontario (Dobbyn 1994);
- Ontario Butterfly Atlas (TEA 2012);
- Ontario Odonate Atlas (OMNR 2005).

An information request was submitted to the MNRF Midhurst District office on July 9, 2015 for any SAR records known from the study area and surrounding vicinity. A response was received on July 24, 2015. Information received from this response was considered with other background information in screening potential for SAR occurrence.

Based on background information review, a comprehensive list of SAR and SCC known from the study area vicinity was compiled (Appendix I). Based on this list, 2 plant species, 6 bird species, 1 herpetofauna species and 3 mammal SAR were identified as having occurrence records in the study area vicinity. Appendix I also lists SCC known from or observed within the study area vicinity. However, because the focus of this assessment is on SAR that are regulated under the ESA, SCC are not discussed further within this report.

A preliminary screening exercise was conducted on these species to identify which species have suitable habitat within the study area. This involved cross-referencing the preferred habitat for reported SAR (OMNR 2000, Michigan Flora 2014) against habitats known to occur in the study area. This was completed to ensure that the potential

presence of all SAR within the study area was adequately assessed as part of this assessment.

Of the SAR with known occurrence records in the study area vinicity (Appendix I), the following SAR were determined to have suitable habitat, and therefore may potentially occur, within the study area:

- Chimney Swift (*Chaetura pelagica*) (foraging habitat only)
- Barn Swallow (foraging habitat only)
- Bobolink
- Bank Swallow
- Eastern Meadowlark
- American Badger (*Taxidea taxus jacksoni*)
- Little Brown Myotis (*Myotis lucifugus*)
- Northern Myotis (*Myotis septentrionalis*)
- Butternut (*Juglans cinerea*)

Field Methodology

The field survey methodology for this study was designed to assess the presence of the SAR with potential to occur within the study area, as listed above. A total of three site visits were completed on June 18, June 25, and July 2, 2015 to characterize the study area natural features and undertake targeted surveys for SAR. Completed survey methodologies are listed below

- Vegetation community descriptions and mapping using Ecological Land Classification (ELC) methods for Southern Ontario (Lee *et al.* 1998, Lee 2008).
- Breeding bird surveys according to the Ontario Breeding Bird Atlas methodology (OBBA 2001) comprising a combination of 10-minute point count surveys and general area searches within the study area. The highest level of breeding evidence was recorded for each observed species based on breeding evidence codes provided in OBBA (2001). See Map 1 for point count locations.
- Targeted Species at Risk surveys for Bobolink and Eastern Meadowlark following OMNR survey protocols (MNRF 2015b). Each of three required surveys was completed between the hours of dawn and 0900hrs. Surveys consisted of walking two transects, each 750m long, with five point count locations along each transect at 250m intervals (see Map 1). Point count locations used for this survey doubled as point count locations for general breeding bird surveys described above. Detailed information including the highest level of breeding evidence, sex, location, direction, distance and behaviour was recorded for each observed individual.
- Area searches for snakes in appropriate habitat;
- Cavity tree assessment to determine presence of potential bat SAR habitat;
- Assessment and documentation of any additional potential SAR habitat (e.g., badger burrows along field edges);
- Incidental observations of mammals, amphibians, butterflies and odonates (dragonflies/damselflies) observed on-site.

Results of Field Studies

A total of 39 bird species were recorded during the breeding bird surveys. Of these, 33 species showed evidence of breeding within the study area, such as maintenance of

breeding territories, observed pair-bonds, individuals carrying food and singing males. American Toad (*Anaxyrus americanus*) was also observed incidentally within the study area. See Appendix II for lists of bird, herpetofauna, mammal, butterfly, and odonate (dragonfly and damselfly) species known to occur, or recorded within, the study area vicinity.

A total of four SAR were documented within the study area following the completion of field surveys:

- Barn Swallow
- Bank Swallow
- Bobolink
- Eastern Meadowlark

Tree cavities that may be used by the SAR bats Little Brown Myotis and Northern Myotis as roosting or maternity colony habitat were also observed within the study area. These results are described further below. No Butternuts were documented within the study area by a certified Butternut Health Assessor who attended the June 18 site visit. No other SAR or their habitats were documented within the study area.

Barn Swallow

A total of four Barn Swallow individuals were observed foraging over the study area on each of June 18, June 25, and July 2, 2015. Specifically, these individuals were observed foraging over the wheat field north of East Ridge Road and the canola field north of the northern terminus of Ontario Road (Map 1). Barn swallows are known to travel up to 500 m from their nest for foraging (G. Buck, OMNR, pers. comm.). Due to the lack of nesting structures observed within the study area, the observed Barn Swallows were determined to be nesting outside of the study area.

Bank Swallow

Bank Swallows were observed foraging over the study area on June 18, June 25, and July 2, 2015. They were observed in relatively large groupings on each site visit with one group of up to approximately 40 individuals recorded. The Bank Swallows were observed foraging over all study area fields except the OAGM1 soybean field. These birds were also observed perched on the power lines alongside East Ridge Road. Suitable, albeit marginal, nesting habitat was observed at two locations within the study area, corresponding to two soil stockpiles with exposed soil faces (Photos 3 and 4; Appendix III). These piles were thoroughly searched for the presence of nest holes or colonization by Bank Swallows. No nests were found in either of the soil stockpiles and there is no evidence of Bank Swallows nesting in the study area.

A large nesting colony (Photos 7-8, Appendix III), containing at least 100-500 nest holes, was observed on a north bank of the Saugeen River on a high, sandy bluff. This colony site is approximately 530m away from the study area. Large numbers of Bank Swallows were observed entering and exiting these nest holes. It is anticipated that the Bank Swallows observed foraging within the study area are likely nesting in this large colony along the Saugeen River.

Bobolink

Multiple Bobolink individuals were observed within the study area during each site visit. It is anticipated that three pairs of Bobolinks breed in the study area. One pair was observed in the northeast end of the regenerating Dry-Fresh Mixed Meadow (MEMM3) community. A second pair was observed near the boundary of the OAGM1 canola and OAGM1 winter wheat fields north of East Ridge Road, utilizing both fields. The third pair was observed near point count station 1-1. See Map 2 for the general locations of the Bobolink observations. Breeding was confirmed within the study area due to observations of fledged young. All three pairs were observed during each of the three site visits.

Eastern Meadowlark

Eastern Meadowlark individuals were observed within the study area during all three site visits. It is anticipated that these observations represent two pairs of Eastern Meadowlarks. Repeated observation of these individuals in the same general locations is considered territoriality and evidence of probable breeding on-site (OBBA 2001). The general locations of each observed Eastern Meadowlark pair are shown on Map 2. These birds were observed singing and perched in the trees and hydro poles near their territories.

Bat Cavity Trees

All trees ≥10cm diameter-at-breast-height (DBH) within the study area were examined for the presence of cavities that might represent suitable bat habitat, based on MNRF guidelines (OMNR 2011). Based on this assessment two trees were identified that contain suitable cavities that may be used by bats (Map 2). Both trees were located immediately adjacent to each other within a deceiduous hedgerow and represented a declining American Basswood (*Tilia americana*) and an unknown-species snag. Because the SAR Little Brown Myotis and Northern Myotis may occur within the study area vicinity (Appendix I), these trees may also be used by these SAR bats. Photographs of these trees are included in Appendix III (Photos 5-6).

Based on guidance NRSI has received from the MNRF Midhurst District office, it is understood that SAR bat habitat is only considered for forested areas that meet a minimum density of ≥10 snag/cavity trees that are ≥25 cm DBH. Trees of this size and density provide suitable conditions for bat maternity colonies. Because the two observed cavity trees are not located in a forested community, and are in fact largely isolated from most surrounding trees, these trees would not be considered ESA-protected SAR bat habitat (J. Benvenuti, MNRF, pers. comm., July 2015). These trees may be used as roosting habitat for male SAR bats. Because male bats do not maintain fidelity to individual trees, the removal of these trees will not negatively impact SAR bat populations. However, in order to avoid potential injury, mortality or harassment of SAR bats that may use the trees, it is recommended by the MNRF that tree removal be timed to occur during the bat hibernation period (J. Benvenuti, MNRF, pers. comm., July 2015). The hibernation period, during which tree removals should occur is understood by NRSI to represent the period September 2 – April 29 of any year. However, NRSI will need to confirm this timing window with MNRF.

Summary and Recommendations

NRSI biologists completed a desktop- and field-based assessment of SAR habitats that occur on lands of the proposed East Ridge Business Park. Based on the results of this assessment, the study area was confirmed to provide SAR breeding habitat for Bobolink and Eastern Meadowlark, and function as foraging habitat for the SAR Bank Swallow and Barn Swallow. Two cavity trees observed on the subject property do not meet the criteria of protected SAR bat habitat, but removal of these trees should be timed to occur during the bat hibernation period.

Development of the East Ridge Business Park will require the removal of >30 ha of confirmed Bobolink and Eastern Meadowlark habitat, which, unless permitted by the MNRF, would represent a contravention of the ESA. The proposed development will therefore require a permit under Section 17(2)(c) (i.e., a C-permit) of the ESA in consultation with the MNRF. Because Bobolink and Eastern Meadowlark share the majority of their habitat requirements and life history strategies, these species are generally grouped together for permitting purposes where they co-occur. Obtaining an ESA C-permit will require demonstration of an Overall Benefit strategy for these species while identifying measures to avoid, minimize or mitigate impact to the species during the construction- and post-construction stages of the development.

As described above, the proposed development includes the construction of an outdoor soccer field complex that is planned to begin construction in 2015. Because the soccer field development is planned for construction in the short-term, whereas the remainder of business park development will occur over a long-term period, it is recommended that the soccer field development be considered a separate development proposal for the purposes of MNRF permitting or authorizations. Because the soccer field development requires <30 ha of Bobolink/Eastern Meadowlark habitat removal, it is understood that it falls within a regulatory exemption from C-permit requirement, under Section 23.6 of Ontario Regulation 242/08. As conditions of this exemption, it is required that the proposed undertaking that would cause the SAR habitat removal be registered with the MNRF through a Notice of Activity filing. The activity that would cause the habitat removal (e.g., vegetation removal and site grading) can proceed provided the following conditions are met:

- The Municipality receives confirmation of receipt of the Notice of Activity from the MNRF;
- A habitat management plan is prepared, which outlines the requirements for compensation habitat creation/enhancement, including the management and monitoring of these lands with associated reporting;
- The Minister of Natural Resources is given a written undertaking such that, at the end of the 5-year period of the Municipality's compensation habitat management responsibilities, the MNRF will continue management of the compensation lands for a period of up to 20 year post habitat creation/enhancement.
- Habitat removal is maintained outside the period May 1-July 31 of any year.

A central requirement of the habitat management plan is the identification of habitat compensation lands to be created or enhanced for use by Bobolink and Eastern Meadowlark. These lands must be greater in total size than the habitat to be removed. Because the soccer field development totals approximately 8.6 ha, the compensation lands must be at least 8.61 ha in size. The compensation lands do not need to be

located adjacent to the East Ridge Business Park, nor do they need to be located within the Municipality of Brockton. The compensation lands can also comprise multiple individual parcels, provided that no individual parcel is <4 ha in size or is <200 m wide in any area. The compensation lands must be created or enhanced to contain a majority cover of grass species, and cannot be harvested, cut or mown during the period of April 1-July 31 of any year. Various other land management and monitoring conditions must be met, as described in Ont. Reg. 242/08. The Municipality will have responsibility for undertaking management and monitoring of the compensation lands for a period of 5 years post-habitat creation/enhancement. A text excerpt of Ont. Reg. 242/08 Section 23.6 has been included as Appendix IV for reference

The outcome of the SAR assessment, as described herein, was discussed during a meeting of NRSI, BM Ross and Associates, and Muncipality of Brockton staff on July 16, 2015. The implications of these results under the ESA were also discussed. During this meeting, municipal staff agreed with NRSI's recommendation that the soccer field development proceed through the submission of a Notice of Activity to the MNRF, while an ESA C-permit will be applied for by the Municipality for the remainder of the business park. The minutes of this meeting are included in Appendix V

The study area does not contain nesting habitat for Bank Swallow or Barn Swallow, which are the habitat features most sensitive to disturbance for these species. By contrast, foraging habitat is regarded as being relatively less sensitive to disturbance for these species by the MNRF. Specifically with respect to the soccer field development, because nesting habitat impacts will not occur, and because the area affected is relatively small, specific habitat mitigation measures for these species are not anticipated to be required by the MNRF. However, mitigation measures may be required to address potential impacts to Barn Swallow and Bank Swallow foraging habitat for the larger business park area, to be determined through consultation with the MNRF.

As discussed during the meeting of July 16, 2015, it is recommended that these results be forwarded to the MNRF for review and comment. It is recommended that NRSI consult with the Midhurst District Management Biologist to discuss and confirm the recommendations and conclusions about ESA habitat implications described above.

Sincerely,

Ryan Archer, M.Sc.
Terrestrial and Wetland Biologist
Natural Resource Solutions Inc.

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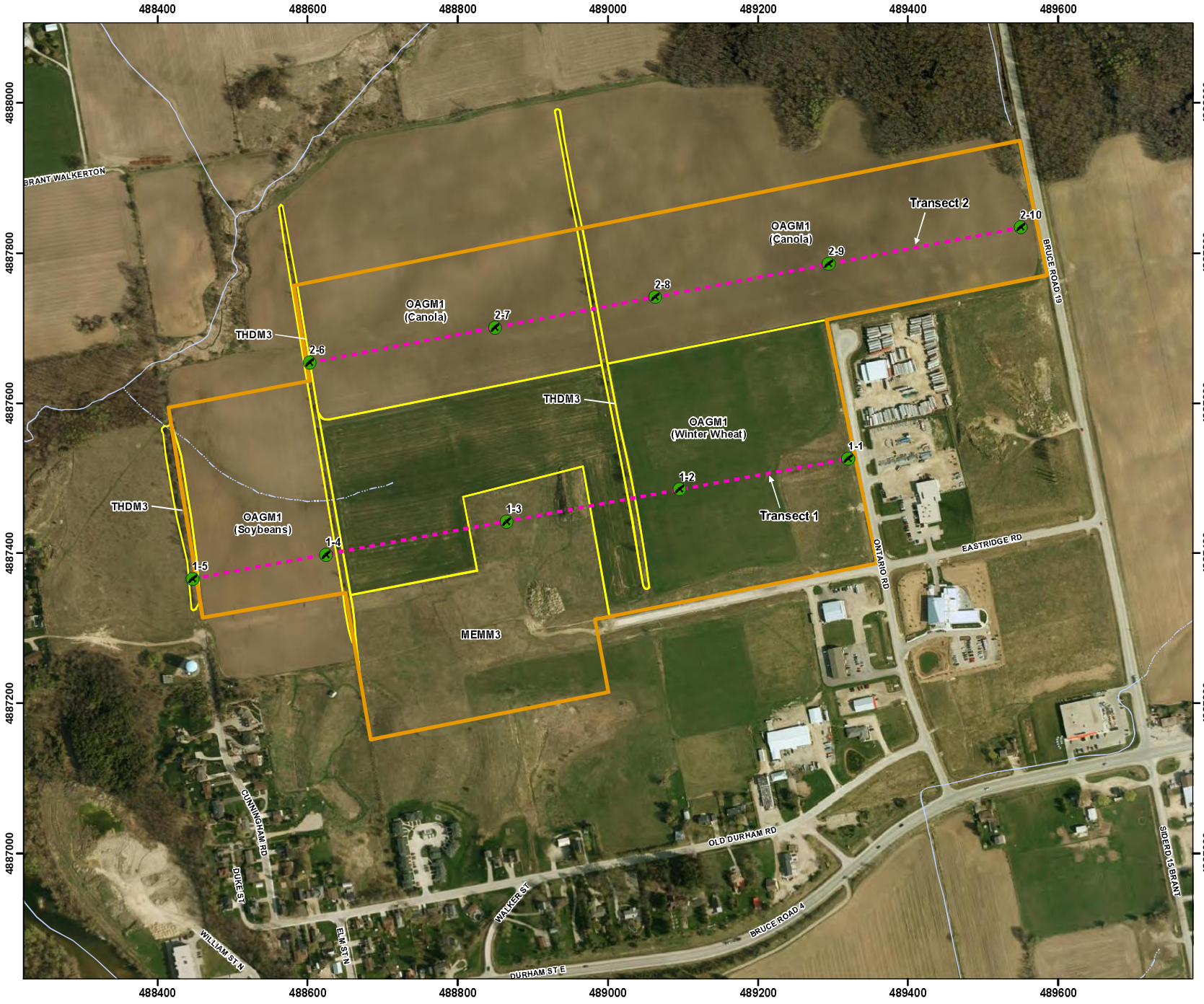

Map 1

East Ridge Business Park

Study Area

Legend

- Study Area
- Bird Breeding Monitoring (BMB)
- Transect
- Permanent Watercourse
- Intermittent Watercourse
- Ecological Land Classification (ELC)

(MEMM3) Dry-Fresh Mixed Meadow Ecosite

(OAGM1) Annual Row Crop

(THDM3) Dry-Fresh Deciduous Hedgerow Thicket Ecosite

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project: 1657
Date: July 22, 2015

NAD83 - UTM Zone 17
Size: 11x17"
1:5,000

0 50 100 150 200 250 300 Metres

N

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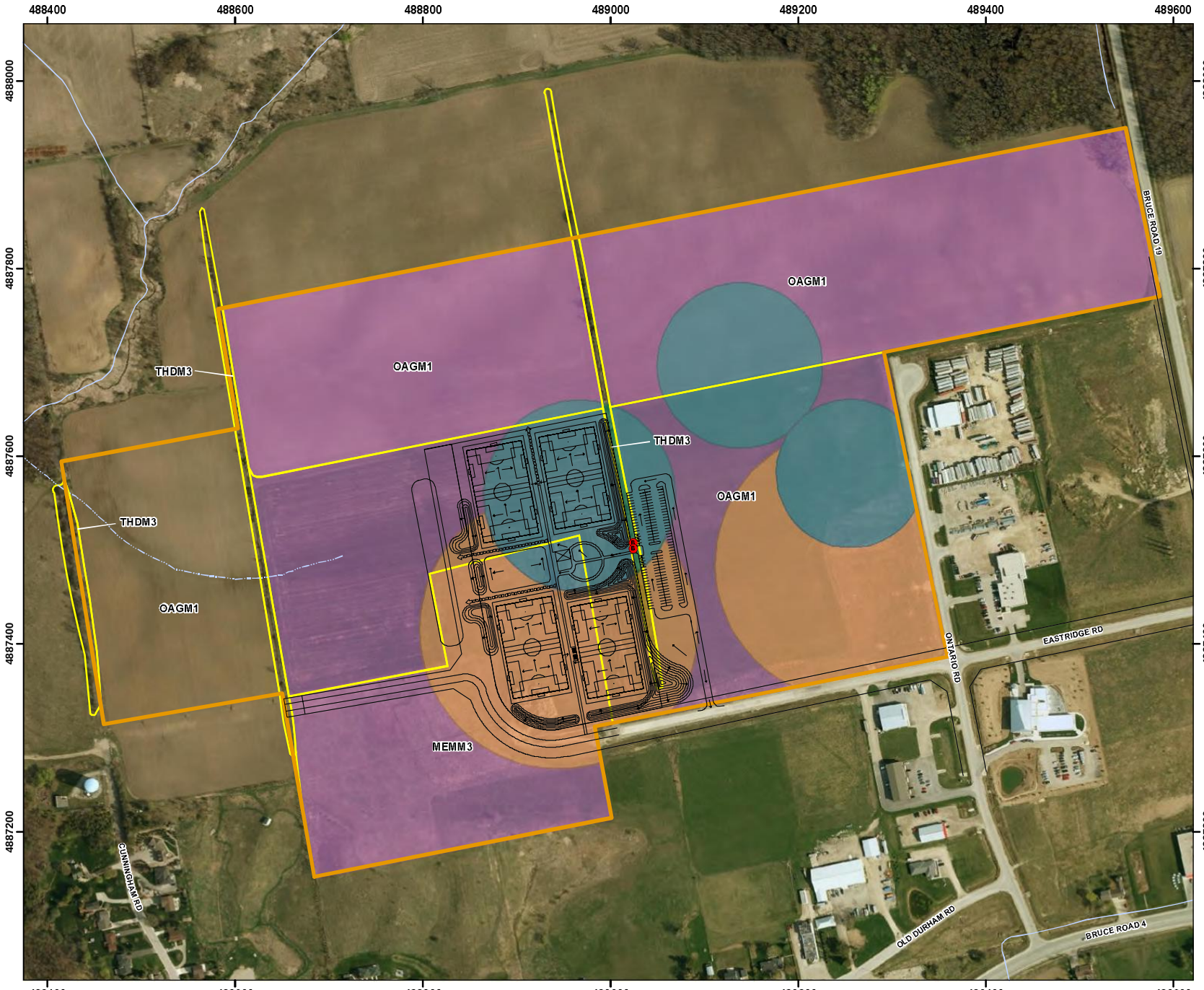

Map 2

East Ridge Business Park

Species at Risk Habitat and Proposed Soccer Facility

Legend

- Study Area
- Bat Cavity Tree
- Proposed Development
- Permanent Watercourse
- Intermittent Watercourse
- Species At Risk Habitat
- Bobolink Observation Area
- Eastern Meadowlark Observation Area
- Ecological Land Classification (ELC)

(MEMM3) Dry-Fresh Mixed Meadow Ecosite

(OAGM1) Annual Row Crop

(THDM3) Dry-Fresh Deciduous Hedgerow Thicket Ecosite

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project: 1657
Date: July 24, 2015

NAD83 - UTM Zone 17
Size: 11x17"
1:4,000

0 50 100 150 200 250 Metres

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APPENDIX I

Species at Risk and Species of Conservation Concern Screening Table

Federal and Provincial Species at Risk Known from the Study Area and Vicinity

Scientific Name	Common Name	SRANK[1]	COSSARO[2]	COSEWIC[3]	SARA Schedule[4]	Habitat Preference[8,9,10,11]	Background Source	Suitable Habitat in Study Area	Observed by NRSI
Plants									
Monarda didyma	Oswego-tea	S3	--	--	--	Rich forests on riverbanks and in floodplains	MNRF 2014	No	No
Birds									
Chaetura pelagica	Chimney Swift	S4B, S4N	THR	T	Schedule 1	Commonly found in urban areas near buildings; nests in hollow trees, crevices of rock cliffs, chimneys; highly gregarious; feeds over open water.	BSC et al. 2008	Yes (foraging habitat)	Yes (Foraging)
Dolichonyx oryzivorus	Bobolink	S4B	THR	T	--	Large, open expansive grasslands with dense ground cover; hayfields, meadows or fallow fields; marshes; requires tracts of grassland >50 ha.	BSC et al. 2008	Yes	Yes
Contopus virens	Eastern Wood-Pewee	S4B	SC	SC	--	Open, deciduous, mixed or coniferous forest; predominated by oak with little understory; forest clearings, edges; farm woodlots, parks.	BSC et al. 2008	No	Yes (outside study area)
Hirundo rustica	Barn Swallow	S4B	THR	T	--	Farmlands or rural areas; cliffs, caves, rock niches; buildings or other man-made structures for nesting; open country near body of water.	BSC et al. 2008	Yes (foraging habitat)	Yes (Foraging)
Hylocichla mustelina	Wood Thrush	S4B	SC	T	--	Undisturbed moist mature deciduous or mixed forest with deciduous sapling growth; near pond or swamp; hardwood forest edges; must have some trees higher than 12m.	BSC et al. 2008	No	No
Ixobrychus exilis	Least Bittern	S4B	THR	T	Schedule 1	Deep marshes, swamps, bogs; marshy borders of lakes, ponds, streams, ditches; dense emergent vegetation of cattail, bulrush, sedge; nests in cattails; intolerant of loss of habitat and human disturbance.	BSC et al. 2008	No	No
Riparia riparia	Bank Swallow	S4B	THR	T	--	Sand, clay or gravel river banks or steep riverbank cliffs; lakeshore bluffs of easily crumbled sand or gravel; gravel pits, road-cuts, grassland or cultivated fields that are close to water.	BSC et al. 2008	Yes	Yes (Foraging)
Sturnella magna	Eastern Meadowlark	S4B	THR	T	--	Open, grassy meadows, farmland, pastures, hayfields or grasslands with elevated singing perches; cultivated land and weedy areas with trees; old orchards with adjacent, open grassy areas >10 ha in size.	BSC et al. 2008	Yes	Yes
Herpetofauna									
Chelydra serpentina serpentina	Snapping Turtle	S3	SC	SC	Schedule 1	Permanent, semi-permanent fresh water; marshes, swamps or bogs; rivers and streams with soft muddy banks or bottoms; often uses soft soil or clean dry sand on south-facing slopes for nest sites.	Ontario Nature 2015	No	No

Scientific Name	Common Name	SRANK[1]	COSSARO[2]	COSEWIC[3]	SARA Schedule[4]	Habitat Preference[8,9,10,11]	Background Source	Suitable Habitat in Study Area	Observed by NRSI
Lampropeltis taylori triangulum	Eastern Milksnake	S3	SC	SC	Schedule 1	Farmlands, meadows, hardwood or aspen stands; pine forest with brushy or woody cover; river bottoms or bog woods; hides under logs, stones, or boards or in outbuildings.	Ontario Nature 2015	Yes	No
Pseudacris triseriata pop. 2	Western Chorus Frog *(Great Lakes/St. Lawrence - Canadian Shield Pop.)*	S3	NAR	T	Schedule 1	Roadside ditches or temporary ponds in fields; swamps or wet meadows; woodland or open country with cover and moisture; small ponds and temporary pools.	Ontario Nature 2015	No	No
Mammals									
Taxidea taxus jacksoni	American Badger	S2	END	E	Schedule 1	open grasslands and oak savannahs; dens in new hole or enlarged existing hole; sometimes makes food caches	Dobbyn 1994	Yes	No
Myotis lucifuga	Little Brown Myotis	S3	END	E	Schedule 1	uses caves, quarries, tunnels, hollow trees or buildings for roosting; winters in humid caves; maternity sites in dark warm areas such as attics and barns; feeds primarily in wetlands, forest edges	Dobbyn 1994	Yes	No
Myotis septentrionalis	Northern Myotis	S3	END	E	--	hibernates during winter in mines or caves; roosts in houses, manmade structures but prefers hollow trees or under loose bark; hunts within forests, below canopy	Dobbyn 1994	Yes	No
Insects									
Danaus plexippus	Monarch	S2N, S4B	SC	SC	Schedule 1	Host plant is Milkweed (*Asclepias* spp.)	Jones et al. 2013	Yes	No

[1]MNRF 2014; [2]MNRF 2015 [3]COSEWIC 2014; [4]Government of Canada 2015; [5]OMNR 2000; [6]Michigan Flora 2014

**Specimens observed within Study Area are believed to be anthropogenic occurrences.*

LEGEND
SRANK
S1 Critically Imperiled
S2 Imperiled
S3 Vulnerable
S4 Apparently Secure
S5 Secure
SNA Unranked
B Breeding
N Non-breeding
S#? Rank Uncertain
COSSARO/COSEWIC
END/E Endangered
THR/T Threatened
SC/SC Special Concern
NAR Not at Risk
SARA Schedule
Schedule 1 Officially Protected under SARA
Schedule 3 Special concern; may be reassessed for consideration for inclusion to Schedule 1

APPENDIX II

Wildlife Species Lists

Bird Species Reported From the Study Area

Scientific Name	Common Name	SRANK[1]	OMNR[2]	COSEWIC[3]	SARA Schedule[4]	OBBA[5] 17MJ88	NHIC Data[6]	NRSI Observed
Anatidae	**Ducks, Geese & Swans**							
Branta canadensis	Canada Goose	S5				FY		
Aix sponsa	Wood Duck	S5				H		
Anas platyrhynchos	Mallard	S5				FY		X
Phasianidae	**Partridges, Grouse & Turkeys**							
Bonasa umbellus	Ruffed Grouse	S4				D		
Meleagris gallopavo	Wild Turkey	S5				D		
Ardeidae	**Herons & Bitterns**							
Ardea herodias	Great Blue Heron	S4B				H		
Butorides virescens	Green Heron	S4B				T		
Cathartidae	**Vultures**							
Cathartes aura	Turkey Vulture	S5B				H		X
Accipitridae	**Hawks, Kites, Eagles & Allies**							
Pandion haliaetus	Osprey	S5B				CF		
Circus cyaneus	Northern Harrier	S4B	NAR	NAR		A		
Accipiter cooperii	Cooper's Hawk	S4	NAR	NAR		T		
Buteo jamaicensis	Red-tailed Hawk	S5	NAR	NAR		CF		
Charadriidae	**Plovers**							
Charadrius vociferus	Killdeer	S5B, S5N				FY		S
Scolopacidae	**Sandpipers, Phalaropes & Allies**							
Actitis macularia	Spotted Sandpiper	S5				FY		A
Scolopax minor	American Woodcock	S4B				S		

Laridae	**Gulls, Terns & Skimmers**							
Larus argentatus	Herring Gull	S5B, S5N				H		
Larus delawarensis	Ring-billed Gull	S5B, S4N						X
Columbidae	**Pigeons & Doves**							
Columba livia	Rock Pigeon	SNA				AE		X
Zenaida macroura	Mourning Dove	S5				NE		S
Strigidae	**Typical Owls**							
Megascops asio	Eastern Screech-Owl	S4	NAR	NAR		A		
Bubo virgianus	Great Horned Owl	S4				H		
Apodidae	**Swifts**							
Chaetura pelagica	Chimney Swift	S4B, S4N	THR	T	Schedule 1	AE		
Trochilidae	**Hummingbirds**							
Archilochus colubris	Ruby-throated Hummingbird	S5B				T		T
Alcedinidae	**Kingfishers**							
Megaceryle alcyon	Belted Kingfisher	S4B				AE		
Picidae	**Woodpeckers**							
Melanerpes carolinus	Red-bellied Woodpecker	S4				T		
Sphyrapicus varius	Yellow-bellied Sapsucker	S5B				FY		
Picoides pubescens	Downy Woodpecker	S5				FY		H
Picoides villosus	Hairy Woodpecker	S5				S		
Colaptes auratus	Northern Flicker	S4B				AE		S
Dryocopus pileatus	Pileated Woodpecker	S5				T		X
Falconidae	**Caracaras & Falcons**							
Falco sparverius	American Kestrel	S4				FY		
Falco columbarius	Merlin	S5B	NAR	NAR		FY		
Tyrannidae	**Tyrant Flycathers**							
Contopus virens	Eastern Wood-Pewee	S4B	SC	SC		T		S
Empidonax alnorum	Alder Flycatcher	S5B				S		
Empidonax traillii	Willow Flycatcher	S5B				S		

Sayornis phoebe	Eastern Phoebe	S5B				T		
Myiarchus crinitus	Great Crested Flycatcher	S4B				V		S
Tyrannus tyrannus	Eastern Kingbird	S4B				NY		A
Hirundinidae	**Swallows**							
Tachycineta bicolor	Tree Swallow	S4B				AE		H
Stelgidopteryx serripennis	Northern Rough-winged Swallow	S4B				AE		
Riparia riparia	Bank Swallow	S4B	THR	T		AE		H
Petrochelidon pyrrhonota	Cliff Swallow	S4B				H		
Hirundo rustica	Barn Swallow	S4B	THR	T		AE		H
Paridae	**Chickadees & Titmice**							
Poecile atricapillus	Black-capped Chickadee	S5				FY		S
Sittidae	**Nuthatches**							
Sitta canadensis	Red-breasted Nuthatch	S5				FY		
Sitta carolinensis	White-breasted Nuthatch	S5				T		
Certhiidae	**Creepers**							
Certhia americana	Brown Creeper	S5B				H		
Troglodytidae	**Wrens**							
Troglodytes aedon	House Wren	S5B				AE		S
Troglodytes hiemalis	Winter Wren	S5B				S		
Turdidae	**Thrushes**							
Sialia sialis	Eastern Bluebird	S5B	NAR	NAR		NY		S
Catharus fuscescens	Veery	S4B				S		
Hylocichla mustelina	Wood Thrush	S4B	SC	T		T		
Turdus migratorius	American Robin	S5B				CF		FY
Mimidae	**Mockingbirds, Thrashers & Allies**							
Dumetella carolinensis	Gray Catbird	S4B				T		S
Toxostoma rufum	Brown Thrasher	S4B				S		P

Sturnidae	**Starlings**							
Sturnus vulgaris	European Starling	SNA				FY		H
Bombycillidae	**Waxwings**							
Bombycilla cedrorum	Cedar Waxwing	S5B				FY		P
Parulidae	**Wood Warblers**							
Seiurus aurocapillus	Ovenbird	S4B				T		
Parkesia noveboracensis	Northern Waterthrush	S5B				S		
Mniotilta varia	Black-and-white Warbler	S5B				S		
Oreothlypis ruficapilla	Nashville Warbler	S5B				S		
Geothylpis philadelphia	Mourning Warbler	S4B				T		
Geothylpis trichas	Common Yellowthroat	S5B				T		P
Setophaga ruticilla	American Redstart	S5B				T		
Setophaga petechia	Yellow Warbler	S5B				T		S
Setophaga coronata	Yellow-rumped Warbler	S5B				S		
Emberizidae	**New World Sparrows & Allies**							
Pipilo erythrophthalmus	Eastern Towhee	S4B				S		
Spizella passerina	Chipping Sparrow	S5B				FY		
Spizella pusilla	Field Sparrow	S4B				T		S
Pooecetes gramineus	Vesper Sparrow	S4B				T		
Passerculus sandwichensis	Savannah Sparrow	S4B				CF		S
Ammodramus savannarum	Grasshopper Sparrow	S4B		SC		S		
Melospiza melodia	Song Sparrow	S5B				CF		S
Melospiza georgiana	Swamp Sparrow	S5B				S		
Zonotrichia albicollis	White-throated Sparrow	S5B				T		
Cardinalidae	**Cardinals, Grosbeaks & Allies**							
Piranga olivacea	Scarlet Tanager	S4B				T		
Cardinalis cardinalis	Northern Cardinal	S5				CF		
Pheucticus ludovicianus	Rose-breasted Grosbeak	S4B				V		P

Passerina cyanea	Indigo Bunting	S4B				FY		S
Icteridae	**Blackbirds**							
Dolichonyx oryzivorus	Bobolink	S4B	THR	T	No Schedule	S	x	NE
Agelaius phoeniceus	Red-winged Blackbird	S4				CF		S
Sturnella magna	Eastern Meadowlark	S4B	THR	T		CF	x	S
Quiscalus quiscula	Common Grackle	S5B				CF		H
Molothrus ater	Brown-headed Cowbird	S4B				FY		P
Icterus galbula	Baltimore Oriole	S4B				AE		P
Fringillidae	**Finches & Allies**							
Carpodacus mexicanus	House Finch	SNA				NY		
Spinus tristis	American Goldfinch	S5B				D		X
					Total	619	2	46

[1]OMNR 2013a; [2]OMNR 2013b; [3]COSEWIC 2012; [4]Government of Canada 2012; [5]Cadman et al. 2007; [6]OMNR 2013c

Reptile and Amphibian Species Reported From the Study Area

Scientific Name	Common Name	SRANK[1]	OMNR[2]	COSEWIC[3]	SARA Schedule[4]	Ontario Reptile and Amphibian Atlas[5]	NHIC Data[6]	NRSI Observed
Turtles								
Chelydra serpentina	Snapping Turtle	S3	SC	SC	Schedule 1	x		
Chrysemys picta bellii	Western Painted Turtle	S4		NAR		x		
Snakes								
Lampropeltis taylori triangulum	Eastern Milksnake	S3	SC	SC	Schedule 1	x		
Thamnophis sirtalis sirtalis	Eastern Gartersnake	S5				x		
Salamanders								
Plethodon cinereus	Eastern Red-backed	S5				x		
Toads and Frogs								
Anaxyrus americanus	American Toad	S5				x		x
Pseudacris triseriata pop. 2	Western Chorus Frog *(Great Lakes/St. Lawrence - Canadian Shield Population)*	S3	NAR	T	Schedule 1	x		
Pseudacris crucifer	Spring Peeper	S5				x		
Lithobates catesbeiana	American Bullfrog	S4				x		
Lithobates clamitans	Northern Green Frog	S5				x		
Lithobates pipiens	Northern Leopard Frog	S5	NAR	NAR		x		
Lithobates sylvatica	Wood Frog	S5				x		
					Total	**12**	**0**	**1**

[1]OMNR 2013a; [2]OMNR 2013b; [3]COSEWIC 2012; [4]Government of Canada 2012; [5]Ontario Nature 2013; [6]OMNR 2013c

Mammal Species Reported From the Study Area

Scientific Name	Common Name	SRANK[1]	OMNR[2]	COSEWIC[3]	SARA Schedule[4]	Ontario Mammal Atlas[5]	NHIC Data[6]	NRSI Observed
Insectivora	**Shrews and Moles**							
Blarina brevicauda	Northern Short-tailed Shrew	S5				X		
Chiroptera	**Bats**							
Eptesicus fuscus	Big Brown Bat	S5				X		
Myotis lucifugus	Little Brown Myotis	S4	END	E	Schedule 1	X		
Lagomorpha	**Rabbits and Hares**							
Sylvilagus floridanus	Eastern Cottontail	S5				X		
Rodentia	**Rodents**							
Castor canadensis	Beaver	S5				X		
Erethizon dorsatum	Porcupine	S5				X		
Marmota monax	Woodchuck	S5				X		
Ondatra zibethicus	Muskrat	S5				X		
Tamiasciurus hudsonicus	Red Squirrel	S5				X		
Tamias striatus	Eastern Chipmunk	S5				X		
Carnivora	**Carnivores**							
Mephitis mephitis	Striped Skunk	S5				X		
Mustela erminea	Ermine	S5				X		
Mustela vison	American Mink	S4				X		
Procyon lotor	Northern Raccoon	S5				X		
Vulpes vulpes	Red Fox	S5				X		
Artiodactyla	**Deer and Bison**							
Odocoileus virginianus	White-tailed Deer	S5				X		
					Total	21	6	6

[1]OMNR 2013a; [2]OMNR 2013b; [3]COSEWIC 2012; [4]Government of Canada 2012; [5]Dobbyn 1994, [6]OMNR 2013c

APPENDIX III

Study Area Photolog

Photo Log

Photograph 1- MEMM3 facing north west (June 2015)

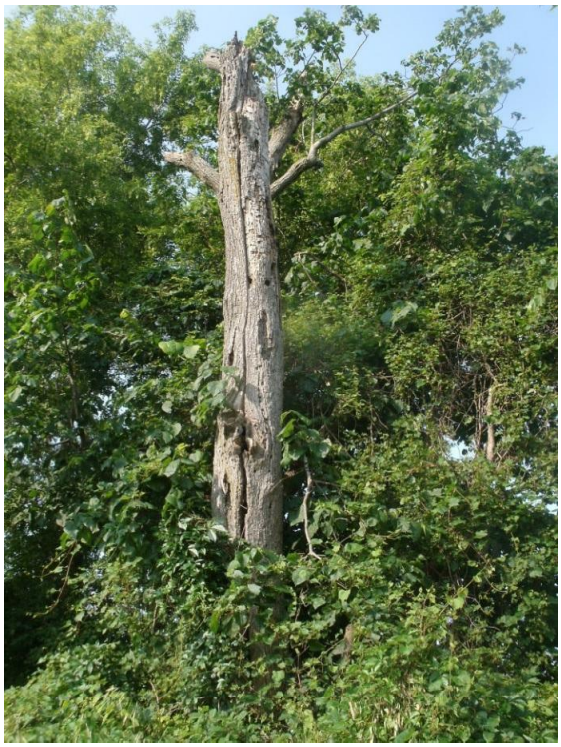
Photograph 2- MEMM3 facing east (June 2015)

Soil stock piles

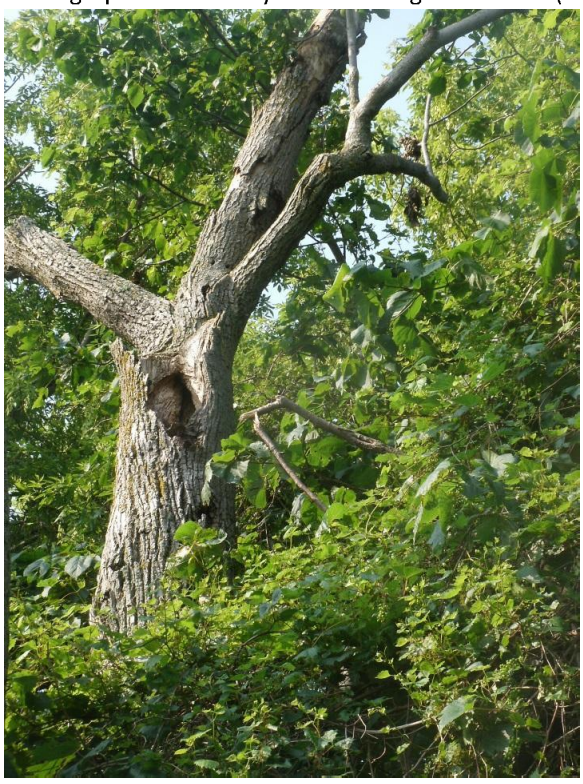
Photograph 3 –Soil stock pile 1 facing west (June 2015)

Photograph 4- Soil stock pile 2 facing south west (June 2015)

Bat cavity trees



Photograph 5- Bat cavity tree B facing south west (June 2015)



Photograph 6- Bat cavity tree H facing south (June 2015)

Bank Swallow colony along the Saugeen River

Photograph 7- Bank Swallow colony facing north (June 2015)

Photograph 8- Bank Swallow colony facing north (June 2015)

APPENDIX IV

Excerpt - Section 23.6, Ontario Regulation 242/08

23.6 (1) This section applies with respect to any activity to develop land, such as the construction of buildings, structures, roads or other infrastructure and the excavation and landscaping of land, in an area that is the habitat of bobolink or eastern meadowlark, but does not apply to an activity to which section 23.2 applies. O. Reg. 176/13, s. 14.

(2) Clause 9 (1) (a) and subsection 10 (1) of the Act do not apply to a person who, while carrying out an activity described in subsection (1), kills, harms, harasses, captures or takes a bobolink or an eastern meadowlark, or damages or destroys its habitat, if,

(a) the size of the area of habitat of bobolink or eastern meadowlark that is damaged or destroyed by the activity is equal to or less than 30 hectares; and

(b) the person satisfies all of the conditions set out in subsection (4). O. Reg. 176/13, s. 14.

(3) Subclauses 9 (1) (b) (i) and (ii) of the Act do not apply to the possession or transport of a bobolink or an eastern meadowlark if, pursuant to subsection (2), clause 9 (1) (a) of the Act did not apply with respect to the bobolink or eastern meadowlark. O. Reg. 176/13, s. 14.

(4) The following are the conditions that a person who carries out an activity described in subsection (1) must satisfy for the purposes of clause (2) (b):

1. Before commencing the activity, the person must,

i. give the Minister notice of the activity by submitting a notice of activity form available on the Registry to the Minister through the Registry,

ii. prepare a habitat management plan in accordance with subsections (5) and (6), and

iii. give the Minister a written undertaking to continue, after the end of the five-year period referred to in paragraph 7, to manage any habitat created or enhanced in accordance with paragraph 6 by carrying out the measures described in subsection (9) until the earlier of,

A. the end of the 20-year period that follows the creation or enhancement of the habitat under paragraph 6, or

B. if the area of habitat that was destroyed by the activity is eventually returned to a suitable state to be used by bobolink or eastern meadowlark, the day on which the area reaches that state.

2. The person must ensure that the notice of activity form submitted under subparagraph 1 i includes,

   i. a description of the activity,

   ii. the proposed start and end dates of the activity and the area in which it will be carried out, and

   iii. an indication as to whether the activity will be carried out on land that is habitat for bobolink, for eastern meadowlark, or for both, as the case may be.

3. The person must follow the requirements of section 23.3 with respect to the completion of the notice of activity form, the keeping of records relating to the notice of activity form and the updating of the information on the Registry.

4. Once a habitat management plan is prepared under subparagraph 1 ii, the person must,

   i. comply with any provisions in the habitat management plan with respect to the manner in which,

      A. the activity should be carried out, and

      B. the habitat for bobolink or eastern meadowlark referred to in paragraph 6 should be created or enhanced, as the case may be, and managed,

   ii. retain a copy of the habitat management plan for at least five years after the activity is complete, and

   iii. provide a copy of the habitat management plan to the Ministry within 14 days of receiving a request for it.

5. While carrying out the activity, the person must,

   i. not perform any part of the activity that is likely to damage or destroy the habitat of bobolink or eastern meadowlark or kill, harm or harass bobolink or eastern meadowlark, between May 1 and July 31 of any year, and

   ii. take reasonable steps to minimize adverse effects of the activity on bobolink and eastern meadowlark, including, if applicable, routing access roads along existing fencerows or hedgerows if possible.

6. The person must either create new habitat for bobolink or eastern meadowlark or enhance an already existing habitat for bobolink or eastern meadowlark as follows:

i. the area of the new or enhanced habitat must,

A. be located outside of the area where the activity is carried out but within the same ecoregion as that area or in an ecoregion that is adjacent to that area, and

B. meet the requirements of subsection (7) with respect to its size and dimensions,

ii. within 12 months after the day the activity described in subsection (1) is commenced, the work of creating or enhancing the habitat must be completed in a manner that ensures that the habitat meets the requirements of subsection (8) with respect to the types of vegetation it provides.

7. For five years after habitat is created or enhanced in accordance with paragraph 6, the person must do the following annually:

i. manage the habitat by carrying out the measures described in subsection (9), and

ii. monitor the area in which the habitat was created or enhanced by conducting at least three surveys every year at a time when bobolink or eastern meadowlark are likely to be present, to determine if the species are in fact present and, if so, to assess fledgling success.

8. The person must prepare and maintain a record in respect of the activity and the habitat created or enhanced under paragraph 6 and ensure that the record meets the requirements of subsection (10) and the person must,

i. retain the record until December 31 of the final year of the five-year period during which the person must manage and monitor the new or enhanced habitat, and

ii. provide a copy of the record to the Ministry within 14 days of receiving a request for it. O. Reg. 176/13, s. 14.

(5) A habitat management plan shall be prepared by one or more persons with expertise in relation to bobolink or eastern meadowlark, or both, as the case may be, using the best available information on steps that may help minimize or avoid adverse effects on the species to which the plan relates, which includes consideration of information obtained from the Ministry,

aboriginal traditional knowledge and community knowledge if it is reasonably available. O. Reg. 179/14, s. 3.

(6) A habitat management plan shall include the following information:

1. The name and contact information of the person on whose behalf the activity described in subsection (1) is being carried out.

2. With respect to the area of bobolink or eastern meadowlark habitat that is likely to be damaged or destroyed by the activity described in subsection (1),

   i. a description of the area's location, including a detailed map,

   ii. the ecoregion in which the area is located, and

   iii. the size of the area in hectares.

3. With respect to the activity described in subsection (1) that the person proposes to carry out,

   i. a description of the activity, and

   ii. the proposed start date of the activity,

4. With respect to the area intended as new or enhanced habitat under paragraph 6 of subsection (4),

   i. a description of the area's location, including a detailed map,

   ii. the ecoregion in which the area is located,

   iii. the size of the area in hectares,

   iv. the composition of the soils covering the area, and

   v. the percentage of the area covered by grass species at the time the habitat management plan is prepared.

5. A description of how the area intended as new or enhanced habitat under paragraph 6 of subsection (4) will be created or enhanced and managed for eastern meadowlark or bobolink, including,

   i. a description of the areas to be seeded, and of the composition of the seed mixture such as the species and their relative percentage within the seed mixture,

ii. phasing and times of the year for site preparation, planting, seeding, tending and maintenance, and

iii. a description of the practices that will be undertaken for site preparation, planting, seeding, tending and maintenance, including the requirements set out in subsections (8) and (9). O. Reg. 176/13, s. 14.

(7) An area that will be converted into new or enhanced habitat for bobolink or eastern meadowlark must meet the following requirements as to its size and dimensions:

1. The area must be larger than the area of the habitat for bobolink or eastern meadowlark that is damaged or destroyed by the activity.

2. The area may be made up of separate parcels of land, but the minimum size of any individual parcel must be no less than four hectares.

3. No portion of the area shall be less than 200 metres in width. O. Reg. 176/13, s. 14.

(8) Habitat for bobolink or eastern meadowlark that has been created or enhanced under paragraph 6 of subsection (4) must meet the following requirements with respect to the types of vegetation it provides:

1. A minimum of 60 to 80 per cent of the habitat must be covered with at least three different grass species and any remaining part of the habitat that is not covered with grass species must be covered with forbs or legumes.

2. Among the grass species referred to in paragraph 1, at least one must grow greater than 50 centimetres high under normal growing conditions. O. Reg. 176/13, s. 14.

(9) The following are the requirements to manage habitat for bobolink or eastern meadowlark that has been created or enhanced under paragraph 6 of subsection (4):

1. The area shall not be harvested, mowed or cut between April 1 and July 31 of any year.

2. If the habitat is used for pasture, grazing farm animals must be excluded from at least 50 per cent of the habitat from April 1 until July 31 of each year.

3. In each of the five years following the creation or enhancement of the habitat, take such actions as are necessary to maintain the grass species, forbs and legumes in the area in the proportions described in paragraph 1 of subsection (8) and remove woody vegetation and invasive species. O. Reg. 176/13, s. 14.

(10) The record required under paragraph 8 of subsection (4) shall,

(a) document the steps taken by the person under subparagraph 5 ii of subsection (4) to minimize adverse effects of the activity described in subsection (1) on bobolink or eastern meadowlark;

(b) document the steps taken by the person to create or enhance habitat under paragraph 6 of subsection (4) and to manage that habitat under subparagraph 7 i of subsection (4);

(c) include photographs of the area created or enhanced as habitat under paragraph 6 of subsection (4) that show the area prior to and after the habitat is created or enhanced;

(d) include data and information collected during monitoring under subparagraph 7 ii of subsection (4); and

(e) include details of any encounters with the species. O. Reg. 176/13, s. 14.

APPENDIX V

Minutes of Meeting Held on July 16, 2015

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File No. 12154

MUNICIPALITY OF BROCKTON
EAST RIDGE BUSINESS PARK SERVICING MASTER PLAN
SPECIES AT RISK

MEETING NOTES – July 16, 2015

A meeting was held on Thursday, July 16, 2015 at 10:00 a.m. at the Municipality of Brockton Office to discuss preliminary results of the Species At Risk assessment completed by NRSI for the proposed East Ridge Business Park (ERBP). The following were in attendance:

Mark Gaynor Deb Roth	))	Municipality of Brockton
Ryan Archer Brett Woodman	))	Natural Resource Solutions Inc. (NRSI)
Lisa Courtney	)	B. M. Ross and Associates Limited (BMROSS)

The following matters were discussed:

ACTION

1.0 Species At Risk Assessment

The meeting began with Ryan A. explaining that the three bird surveys have been completed as per the requirements of the Ministry of Natural Resources and Forestry (MNRF) Bobolink and Eastern Meadowlark survey protocol. During the surveys, NRSI staff observed multiple occurrences of Bobolinks and Eastern Meadowlarks in the ERBP study area. Ryan explained that these species are protected under the Endangered Species Act and that there are specific policies within O. Reg. 242/08 relating to Bobolink and Eastern Meadowlark.

2.0 Registration and Permitting

Brett W. stated that under O. Reg 242/08 the MNRF has implemented a streamlined process for exemptions to the permit process for works associated with Bobolink and Eastern Meadowlark habitat loss in sites less than 30 hectares. He suggested that the soccer field area be considered separately from the remainder of the ERBP, since it comprises an area <30 ha, which would allow it to proceed within the desired timeline. He explained the standard MNRF permitting process under Section 17(2)(c) of the ESA can take over a year to complete.

Ryan outlined the three conditions that must be met to allow a development to proceed under the streamlined registration process. The first is filing a Notice of Activity with MNRF. The Notice provides details of the planned development activities and the details and timing of the removal of habitat. Once the Notice of Activity is received by MNRF, they provide a confirmation of receipt within 2 days. The second requirement for the registration process is the completion of a draft habitat management plan which details habitat compensation requirements and other measures to avoid or minimize impact to the species. The last requirement is providing MNRF a written undertaking to manage the created/enhanced compensation habitat for up to 20 years following habitat creation/enhancement. It will be the Municipality's responsibility to manage and monitor the habitat compensation lands for the 5-year period following habitat creation/enhancement, following which the MNRF will take responsibility for these activities. He also explained that habitat compensation must be greater in area than habitat removed, even if only slightly greater. For the soccer field areas, the area that must be compensated for is approximately 8.6 ha, meaning that habitat compensation area(s) must be at least 8.61 ha in size.

3.0 Habitat Compensation

The requirements for habitat compensation for Eastern Meadowlark and Bobolink are: can comprise more than 1 parcel of land, no parcel of land smaller than 4 ha and land must be at least 200 m wide. Brett explained that if agricultural lands (i.e., row cropped areas) are to be considered, the lands must have a perennial grass crop such as hay. Specifically, at least 60-80% of the compensation area must be comprised of at least 3 different grass species, at least one species of which must grow greater than 50 cm high under normal growing conditions. The remainder of the compensation area must comprise forbs or legumes. Any habitat created will also require rough-cutting, once a year to prevent woody plant species from becoming established.

The group reviewed aerial photography of the lands surrounding the ERBP, and identified potential areas for habitat compensation for the soccer fields. NRSI will do a brief field visit to the areas surrounding the ERBP following the meeting. Brett suggested that decommissioned landfills have been successfully utilized as compensation lands in other municipalities, and should be considered. **NRSI**

Deb R. informed the group that an area of the Walkerton-Hanover landfill has been decommissioned and may be suitable. BMROSS and NRSI will obtain more information on the landfill. Brett suggested that the lands earmarked for future landfill expansion could be kept in row crop agriculture (e.g. corn) that is not used as habitat by Bobolink or Eastern Meadowlark in order to prevent their use of the area. Deb asked if the presence of the birds will impact the rental of the lands in the ERBP to farmers for agriculture. Brett responded that if it is used for compensation, the farmers would be required not to harvest any hay crop between April 1and July 31. Deb also asked about a recently sold lot in the ERBP and the implications under the Endangered Species Act. Ryan explained that the owner of the property is responsible to meet the requirements of the Endangered Species **BMROSS/NRSI**

Act. Brett suggested that the land could be included in the same Notice of Activity filing as the proposed soccer fields.

It was discussed by the group that the remainder of the ERBP lands, outside of the planned soccer facility, should proceed through the standard ESA permitting process (i.e., a C-permit). Because development of the ERBP is a long-term process, the longer time frame of the C-permit application process will not be problematic. As well, Deb and Mark agreed that it would be preferable to obtain ESA clearance for these lands by receiving an approved C-permit from MNRF prior to selling to individual landowners. With the Municipality undertaking the permitting process for the entire ERBP, this requirement is not imposed on the future landowners.

4.0 Next Steps

Town staff indicated the priority of the development of the soccer field area. Ryan informed the group that other species at risk were observed in the study area (barn and bank swallows); however, the ERBP is not considered nesting habitat for these species. Therefore, habitat mitigation requirements for these species are not expected in association with the soccer field development. Additionally, two trees with suitable bat cavities were identified, which may be used by SAR bats. However, as these trees are not part of a larger treed area, they are not considered habitat based on guidance NRSI has previously received from MNRF Midhurst District for a separate development. Ryan indicated that these assumptions will be confirmed through correspondence with the MNRF Midhurst District Management Biologist.

To allow construction of the soccer fields to continue, the registration process will need to start immediately. BMROSS and NRSI will work on identifying potential compensation lands (a total > 8.6 ha) within the municipality. Mark G. stated the next meeting of Council is on August 24 and asked if a draft compensation plan could be completed within that timeframe. BMROSS and NRSI will work towards that deadline. **BMROSS/NRSI**

The meeting concluded at 11:00 a.m. Should there be any errors or omissions to these meeting notes, please notify the undersigned.

Meeting Notes prepared by:
B. M. ROSS AND ASSOCIATES LIMITED

Lisa J. Courtney, M.Sc.

Distribution:
Municipality of Brockton
Natural Resource Solutions Inc.