

Updated Natural Heritage Evaluation Of Four Parcels At Highway 26 and Grey Road 113 In the Town of the Blue Mountains



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**Updated Natural Heritage Evaluation
Of Four Parcels
At Highway 26 and Grey Road 113
In the Town of the Blue Mountains**

prepared for:

1290337 Ontario Inc & 10 Keith Avenue Inc.

by:

Tarandus Associates Limited

November 2022

Executive Summary

In the early spring of 2019, Tarandus Associates Limited was retained by 1290337 Ontario Inc & 10 Keith Avenue Inc. To undertake a Natural-Heritage Evaluation (NHE) of four parcels of land in the Town of the Blue Mountains. The purpose of this initiative was to describe the natural-heritage features and functions in the study area and to satisfy various requirements of the planning and development process.

The four parcels that constitute the study area are located north and east of the intersection of Highway 26 and Grey County Road 113 (10th Line) in the Town of the Blue Mountains. They total about 5.7 ha and virtually all of the four parcels are in agricultural land use. An intermittent drainage feature flows eastward along the south side of the study area approximately parallel to Highway 26.

Existing background natural-heritage information was acquired from a range of sources and mapping obtained for the study area included 1:50,000 topographic maps and 1:10,000 Ontario Base Maps, as well as colour orthophotos. An initial scope of work for the NHE was prepared by Tarandus and provided to the GSCA for review and after receipt of comments, the scope was adjusted accordingly. Multi-season field studies were initiated by Tarandus in the spring of 2019 and continued through the summer and fall of that year. The initial NHE was submitted to the Grey Sauble Conservation Authority for review; and after receipt of comments in July, 2022, the NHE was updated to include the most recent Draft Plan and to address GRCA comments.

Three breeding amphibian surveys were undertaken between April 21 and June 24th, 2019, and two breeding -bird surveys were undertaken at the beginning and end of June. A plant list was compiled over the course of several site visits, and mammalian presence was determined by sight and sign (prints, scat, etc). The on-site intermittent drainage feature does not constitute direct fish habitat and has no aquatic invertebrates, so no collection of these aquatic biota was undertaken.

A total of 18 bird species were noted in the vicinity of the study area during the breeding-bird surveys. Two species - Blue Jay and Song Sparrow - were confirmed as breeding on site, and one species - Red-winged Blackbird - is considered as probably breeding on site. Mourning Dove and Eastern Kingbird are possible on-site breeders. The only SAR bird species observed during the surveys was Barn Swallows which were occasionally noted foraging over farm fields. This bird is classified as Threatened in Ontario. Barn Swallows are not breeding on or near the subject properties and there is no breeding habitat for this bird nearby. There is no amphibian breeding habitat in the study area, but several species of frog were heard calling from the wetland east of the subject parcels. No floral or faunal species at risk was found in the study area.

The intermittent drainage feature is the only substantive constraint to development on site. It is also, however, a natural-heritage opportunity, in that it can be rehabilitated with the use of natural-channel design principles so as to provide higher and better-quality ecological functions.

The development of the study area is proposed to consist of up to 38 single-family dwellings, all on municipal servicing. The proposed development is in compliance with relevant natural-heritage planning principles.

Potential effects of the development include some additional disturbances from light and noise as well as increased predation of birds and small mammals by pets. These are not considered significant effects.

Mitigation measures are proposed to avoid or minimize the effects potentially resulting from construction activities.

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Updated Natural Heritage Evaluation Of Four Parcels At Highway 26 and Grey Road 113 In the Town of the Blue Mountains

Introduction

In the early spring of 2019, Tarandus Associates Limited was retained by 1290337 Ontario Inc & 10 Keith Avenue Inc. To undertake a Natural-Heritage Evaluation (NHE) of four parcels of land in the Town of the Blue Mountains. The purpose of this initiative was to describe the natural-heritage features and functions in the study area and to satisfy various requirements of the planning and development process. The initial NHE report was submitted to the Grey Sauble Conservation Authority (GRCA) for review. It presented a summary of existing background information, the results of multi-season field surveys, a review of relevant environmental policies, and a description of natural-heritage constraints and opportunities in the study area. The NHE was submitted to the Grey Sauble Conservation Authority for review; and after receipt of comments in July, 2022, the NHE was updated to include the most recent Draft Plan and to address GRCA comments.

The Study Area

The proponents hold five parcels north and east of the intersection of Highway 26 and Grey County Road 113 (10th Line) in the Town of the Blue Mountains (Figure 1a). The four westernmost parcels constitute the study area for this NHE (Figure 1b). They total about 5.7 ha and virtually all of the four parcels are in agricultural land use. Grey County Road 113 and a municipal pumping station are located offsite to the west. Highway 26 and agricultural lands are to the south, and an existing residential development is located north of the subject lands. Offsite to the east is a strip of land now owned by the Township. An intermittent drainage feature flows eastward along the south side of the study area approximately parallel to Highway 26. Flow in this feature originates at a golf course storm pond to the west of Grey County Road 113, and it discharges to the Little Beaver Creek located approximately 650 m to the east of the study area.

The easternmost of the five parcels is virtually 100% wetland and is not proposed for development. It is understood that the owners of that easternmost property intend to convey it to public ownership.

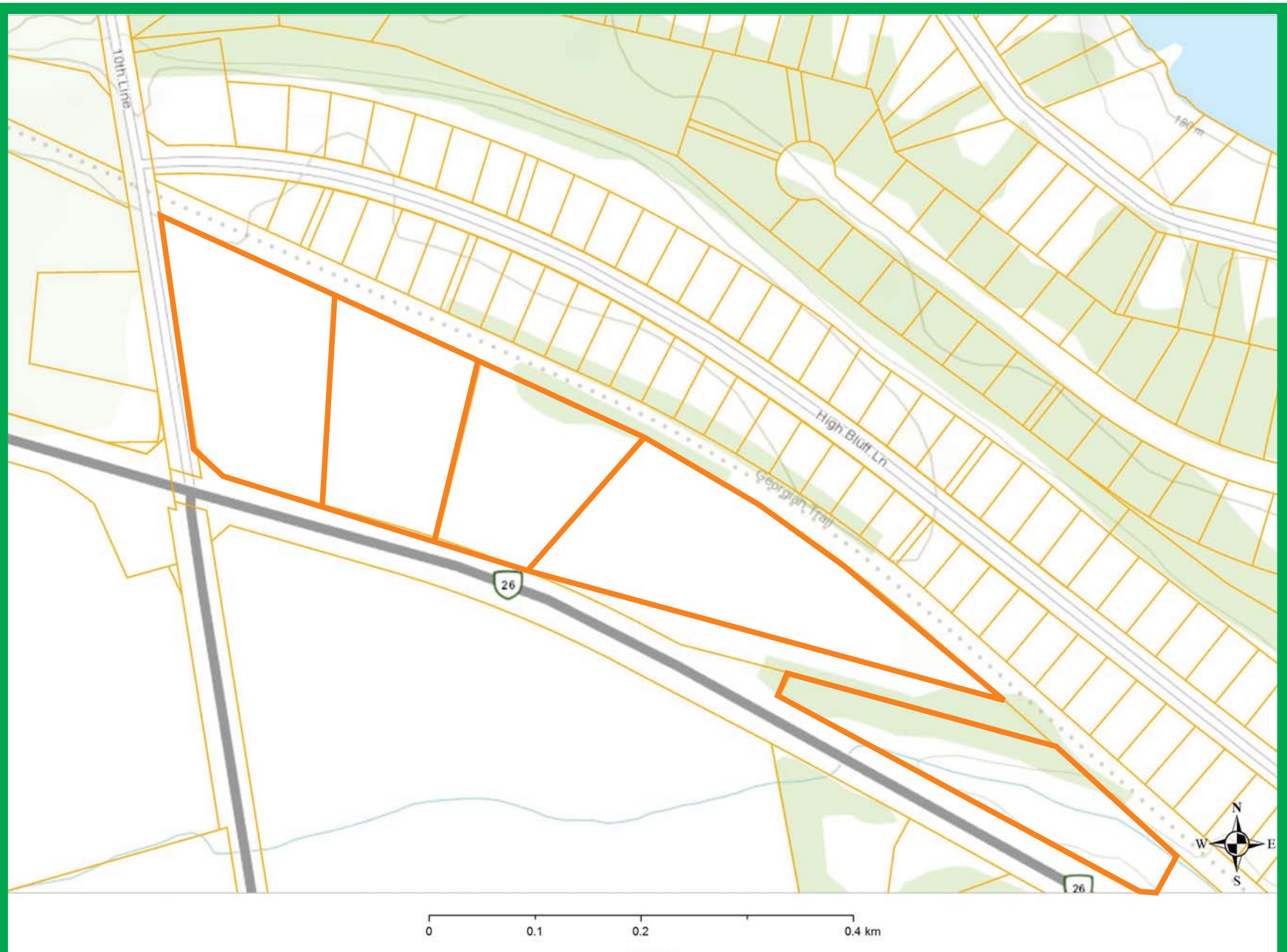
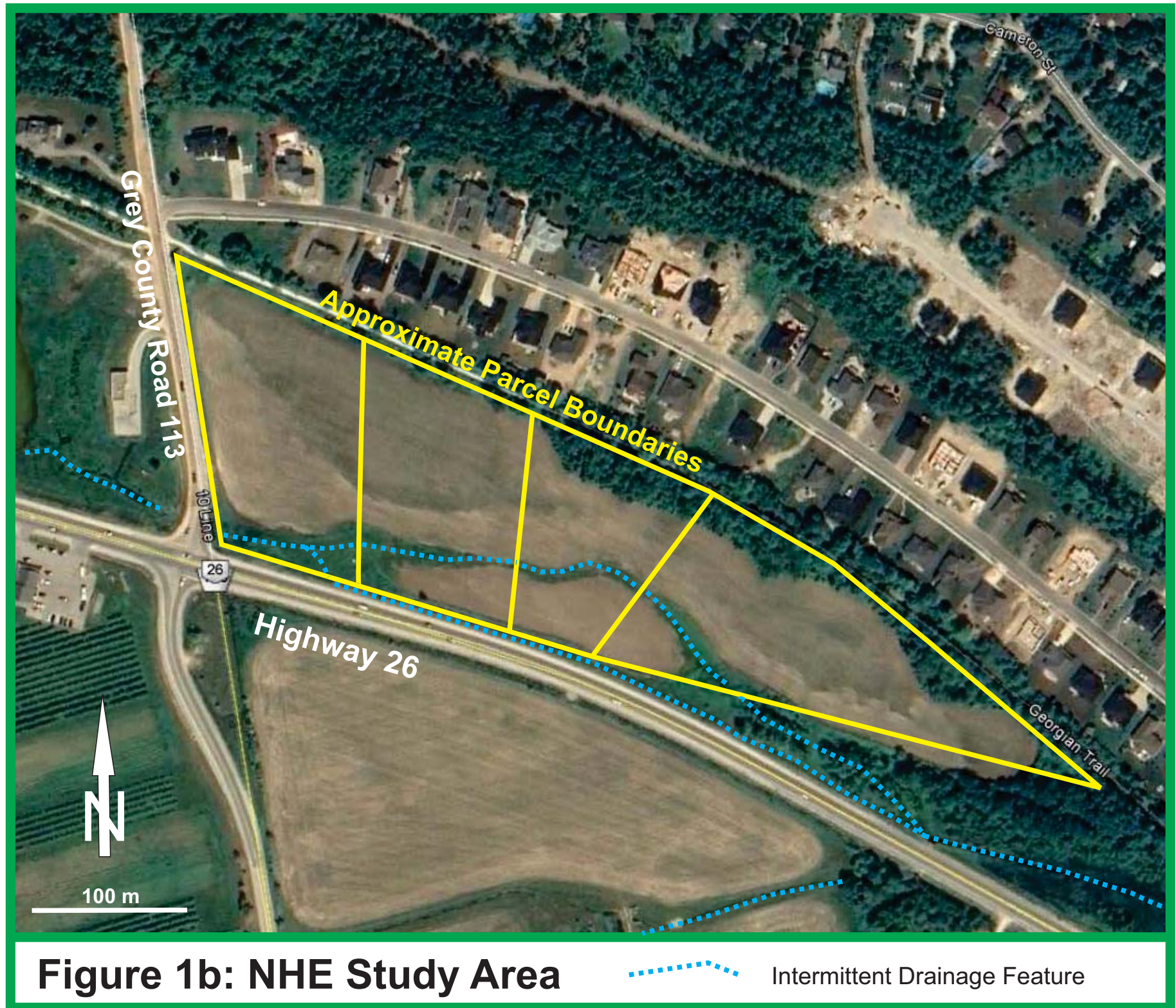


Figure 1a: Parcels Held by 1290337 Ontario Inc & 10 Keith Avenue Inc.



Study Methods

Existing background natural-heritage information was acquired from a range of sources including the Ontario Ministry of Natural Resources and Forestry (MNRF), the Grey Sauble Conservation Authority (GSCA) and the Town of the Blue Mountains. Mapping obtained for the study area included 1:50,000 topographic maps and 1:10,000 Ontario Base Maps, as well as colour orthophotos.

An initial scope of work for the NHE was prepared by Tarandus and provided to the GSCA for review' and after receipt of comments, the scope was adjusted accordingly. Multi-season field studies were initiated by Tarandus in the spring of 2019 and continued through the summer and fall of that year.

Aquatic Environment

The one on-site aquatic feature is an intermittent watercourse which originates at stormwater pond a short distance upstream of the study area. This drainage feature does not constitute direct fish habitat and no aquatic invertebrates were ever observed during any of the field work at site. A review of historical aerial photographs also indicates that this feature is regularly ploughed through. As a result of these considerations, no collections of fish or aquatic invertebrates were undertaken.

Terrestrial Environment

Terrestrial vegetation was initially evaluated with the use of background data, aerial photographs, and the various site surveys conducted throughout 2019. Samples of vegetation which could not be identified with certainty in the field were collected for subsequent detailed taxonomic inspection and confirmation of identification.

Breeding-amphibian surveys were undertaken on April 21st, May 14th, and June 24th by a Tarandus biologist qualified and experienced with breeding amphibian surveys. Survey methods were generally in accordance with those of the North American Amphibian protocol.

Breeding-bird surveys were completed by Tarandus personnel on June 4th and June 23rd. Survey methods generally followed those of the Ontario Breeding Bird Atlas Protocol (2001). Incidental observations of birds were also noted throughout the site visits.

Mammalian presence was determined by direct observation and by sign (prints, scat, etc).

Results and Discussion

Aquatic Environment

The only aquatic feature in the four-parcel study area is a watercourse which originates with roadside drainage along part of Grey County Road 113 as well as a golf-course stormwater pond to the east. Downstream of the culvert beneath the County Road, the drainage feature bifurcates, with some flow accommodated by the ditch adjacent to Highway 26 and the remaining flow conveyed in a poorly defined channel in the agricultural field to the north (Figure 1). The two branched join again near the eastern end of the study area. In most years, this drainage feature has no riparian vegetation because of agricultural cultivation (see Appendix I, Photos 7 and 8) . In years of high rainfall, though, it has patches of riparian vegetation which may emerge when the lands are not ploughed. (Appendix I, Photo 5). The watercourse does not constitute direct fish habitat and it does not have aquatic invertebrates. It does, however, provide indirect support to downstream fish communities, fish habitat, and wetlands.

It is worth noting that the Ontario Base Map based on 1983 air photography and published in 2001 shows no drainage feature(s) in the study area. It is probable that it came to be during the construction of the storm-pond discharge associated with the golf course to the west.

Terrestrial Environment

Vegetation

Most of the study area is under agricultural land use (Appendix I, Photos 1, 2, 7, and 8). In 2019, a crop of soybeans had been cultivated (Appendix I, Photo 3), but corn has been grown there in the past. The Ecological Land Classification (ELC) of this farmed area is OAGM1 (Annual Row Crops).

Along the northeast edge of the study area, a hedgerow of mixed woodland is located. At about 0.3 ha, it is too small to be considered an ELC polygon, but has been categorized as a mixed woodland ecosite inclusion (Appendix I, Photo4). The tree community in this feature includes white ash, sugar maple, black cherry, spruce, and eastern white cedar, along with buckthorn and sumach. Other plant species noted in this unit included wild grape, mullein, dandelion, queen Anne's lace, burdock, raspberry, various grasses and two invasive species - garlic mustard and wild parsnip (Appendix III).



Figure 2: ELC Classification

OAGM1 - Annual Row Crops
WOMM3 - Dry-Fresh Mixed Woodland Ecosite

Some riparian wetland vegetation is associated with the intermittent drainage feature which traverses the southern part of the study area from west to east. A review of historical aerial photographs (Appendix I, Photos 7 and 8) indicates that this vegetation is ploughed under from time to time and that vegetation becomes re-established when left undisturbed. Plant species noted along this feature included cattail, purple loosestrife, mullein, cinquefoil, burdock, and *Phragmites sp* - and exotic and invasive plant.

No species-at-risk (SAR) plants were noted in the study area.

A vegetation list for the ELC unit WOMM3 is presented in Appendix II.

Breeding Birds

A total of 18 bird species were noted in the vicinity of the study area during the breeding-bird surveys of 2019. Two species - Blue Jay and Song Sparrow - were confirmed as breeding in the wooded area along the northeast side of the site. One species - Red-winged Blackbird - is considered as probably breeding on site; and Mourning Dove and Eastern Kingbird are possible on-site breeders. The only SAR bird species observed during the surveys was Barn Swallows which were occasionally noted foraging over farm fields. This bird is classified as Threatened in Ontario. Barn Swallows are not breeding on or near the subject properties and there is no breeding habitat for this bird nearby.

Detailed Results of the breeding-bird surveys are presented in Appendix II.

Breeding Amphibians

There is no habitat for breeding amphibians on any of the four parcels that make up the study area. There were no amphibians observed on site during any site visit and no amphibian calls were heard on site during any of the three breeding-amphibian surveys in 2019. To the east of the study area, however, various amphibian calls were heard emanating from the wetland bounded in part by the Georgian Trail, Highway 26, and Peel Street North (Appendix I, Photo 6). These included wood frog and spring peepers during the April 21 survey, grey tree frog and spring peepers during the May 14th survey, and green frog during the June 24th survey. None of these amphibians are considered SAR, although because there are more than two frog species apparently breeding there, that feature is considered Significant Wildlife Habitat.

Mammals

No mammals were observed in the study area during the 2019 surveys, but tracks of racoon and deer were noted on site as was canid scat - possibly dog or coyote. Other mammals that would be expected in such a setting include squirrels, skunk, voles, and other small mammals, all of which are tolerant of or have adapted to human presence.

Species At Risk

A search of MNRF's Natural Heritage Information Centre's database indicates that there are no records of any SAR on or in the vicinity of the subject properties. One insect species of note - the monarch butterfly - was observed occasionally during some site visits. This species is ranked as "*special concern*" both provincially and nationally, mostly due to habitat degradation in their overwintering sites in Mexico.

Significant Wildlife Habitat

There is no Significant Wildlife Habitat (SWH) on any of the four parcels in the study area. Offsite to the east, however, is wetland habitat which is near the intersection of Peel Street North and Highway 26 which may meet the criteria for SWH because of the presence of three or more breeding frog species. Further detailed study of that feature would be required to confirm the status of that wetland habitat.

Natural-Heritage Constraints and Opportunities

Constraints

The only noteworthy natural-heritage constraint to the development of the 4 subject parcels is the on-site intermittent drainage feature which flows west-to-east across the southern part of the study area. This poorly-defined watercourse is significantly degraded because of the ongoing cultivation of the subject lands. It does not constitute direct fish habitat; no aquatic invertebrates were found in it; and what riparian vegetation that does manage to become established is ploughed under on a regular basis. This notwithstanding, it does provide indirect support to downstream fish communities and aquatic habitat.

The woodland ELC inclusion along the northeast edge of the study area is not considered a constraint to development. It is possible that much or all of that feature can remain, and may even be a back-lot asset because of its natural characteristics and the screening functions it provides.

Opportunities

The obvious natural-heritage opportunity associated with this proposed development is the rehabilitation of the on-site intermittent drainage feature with the use of natural-channel design principles. With the implementation of an appropriate design, the channel would become stable and would convey water as required including under regional-storm conditions. With riparian plantings and other natural-channel characteristics, the watercourse would be expected to have higher and better ecological functions. These could include reduced sediment loading to downstream waters, the provision of habitat for aquatic and terrestrial biota, the shading (i.e.) cooling of conveyed water, erosion reduction, etc.

Proposed Development Concept

The development proposal consists of a residential subdivision with 38 single-detached dwellings along an east-west municipal road off of Grey County Road 113 and terminating at the east end with a round-about. It also includes the rehabilitation of the existing drainage feature on site with the use of natural-channel design principles. A stormwater management facility (SWMF) will be constructed in the southeast corner of the development next to the existing watercourse to provide the requisite water quantity and quality controls for the development. The grade across the site will be raised and shaped to provide positive drainage to the SWMF and raise all homes above the groundwater table. The development will be serviced with municipal sanitary sewer and watermain and the available utilities in the area.

The vegetation bordering the Georgian Trail to the north of the development will be preserved, as will the vegetation on the Hazard Lands to the east of the subdivision.

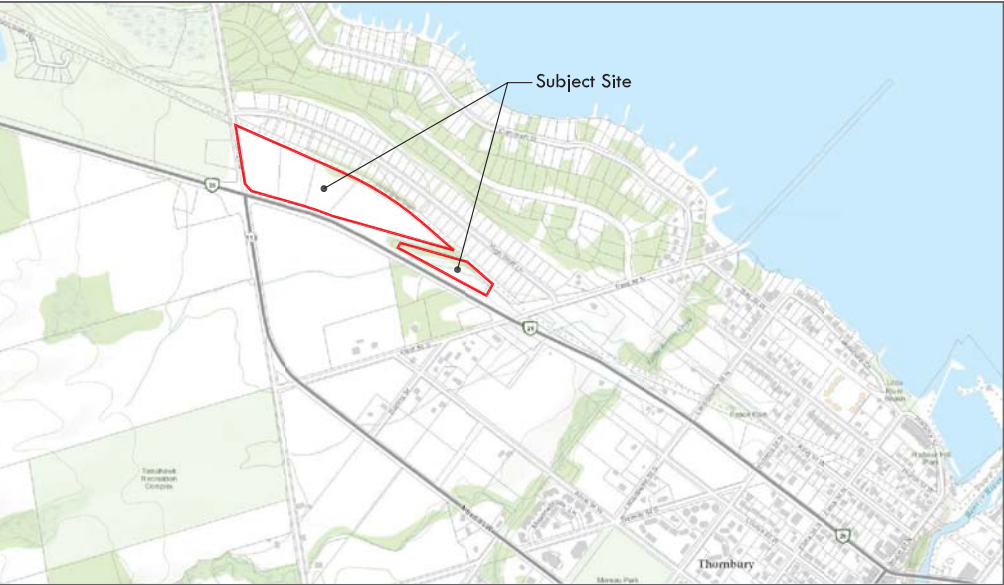
The Draft Plan for the proposed subdivision is presented in Figure 3.

Figure 3:
Draft Plan of
Subdivision

DRAFTING

Draft Plan
of Subdivision

42T(R)-
Plan Wells Associates



Key Plan
Schedule of Land Use

1 : 20 000

PROPOSED LAND USE	Legend	REFERENCE Lots / Blocks / Sheets	YIELD Units / Blocks	ha (Ac.)	AREA (Ac.) %
1) Single Detached Lots 21.4m (70) min.		Lots 1 - 24, 34 - 38	29	2.909	[7.19] 40.9
2) Single Detached Lots 22.3m (73) min.		Lots 25 - 33	9	0.736	[1.82] 10.4
3) 30.0 m Floodway Channel Corridor		Block A	-	1.005	[2.48] 14.1
4) 6.0 m Walkway Linkage		Block B	-	0.024	[0.06] 0.3
5) S.W.M. Facility		Block C	-	0.449	[1.11] 6.3
6) Hazard Lands		Block D	-	1.021	[2.52] 14.4
7) 20.1 m Public Road R.O.W.		Sheet A	-	0.963	[2.38] 13.6
8)					
9)					
TOTALS			38	7.107	[17.56] 100

Additional Information

REQUIRED UNDER SECTION 51 (17) OF THE PLANNING ACT

a Shown on Draft Plan and Surveyor's Certificate

b Shown on Draft and Key Plans

c Shown on Key Plan

d Land to be used in accordance with Land Use Schedule

e Shown on Draft Plan

f Shown on Draft Plan

g Shown on Draft and Key Plans

h Municipal Water Supply will be provided

i Soil Is

j Shown on Draft Plan

k Full Municipal Services will be provided

l Shown on Draft Plan

Owner's Authorization

I/We, being the Registered Owner of the Subject Lands, hereby Authorize
Plan Wells Associates to prepare and submit this Draft Plan of Subdivision for Approval.

Signed _____ Date _____

Name, President _____

Company _____

Surveyor's Certificate

I hereby Certify that the Boundaries of the Subject Lands and their relationship
to the Adjacent Lands are accurately and correctly shown on this Plan.

Signed _____ Date _____

Paul R. Thomson, O.L.S.
Zubec, Emo, Patten & Thomson Limited, Ontario Land Surveyors

02
01	01	Submission.	mvs	2021-05-19
No.	PLAN	REVISION	BY	DATE

REVISIONS
SOURCES

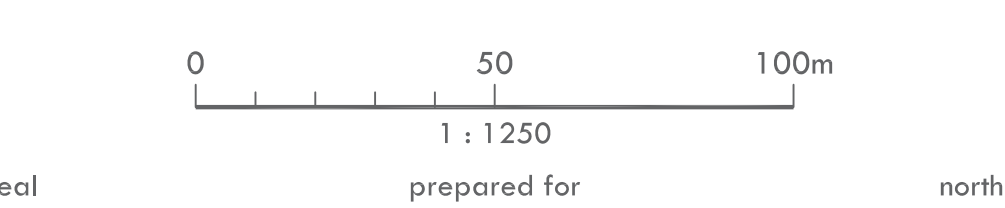
Base information comprised of a
Plan of Survey by Zubec, Emo, Patten & Thomson Limited, Job No. 84-17-5, Dated June 19, 2019, with
Surveyed Topographic Features by Tatham Engineering Limited.

The Contractor shall verify and be responsible for all dimensions.
No scale the drawing; any errors or omissions shall be reported to Plan Wells Associates without delay.
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Reproduction or use for any purpose other than that authorized by Plan Wells Associates is forbidden.

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DRAFT PLAN of Subdivision

PART OF LOTS 35 and 36
CONCESSION 10
(FORMERLY TOWNSHIP OF COLLINGWOOD)
TOWN OF THE BLUE MOUNTAINS
COUNTY OF GREY



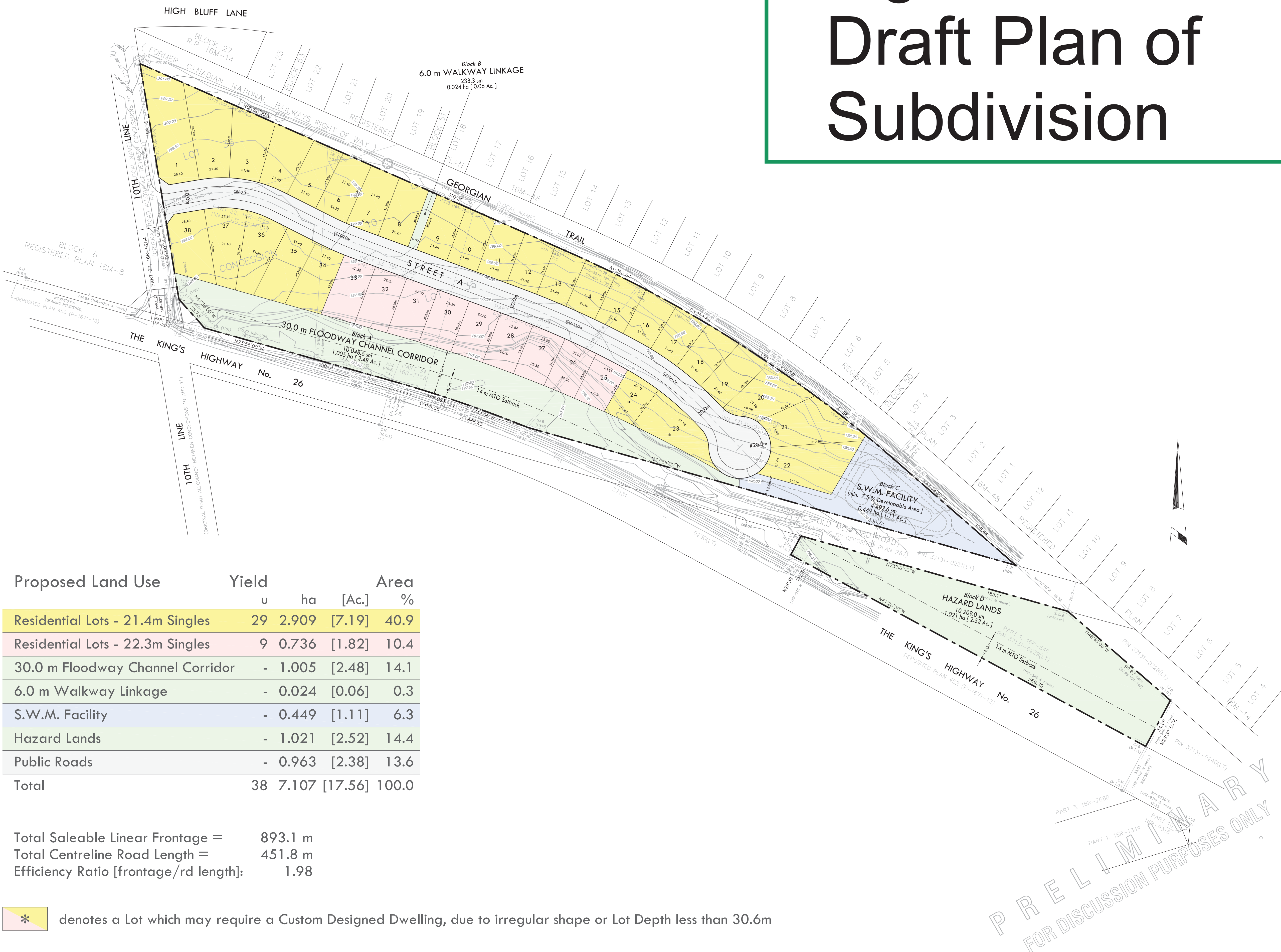


CLIENT

PROJECT	DATE	DESIGN	SCALE
Hwy 26 + 10th Line	2022-07-28	miCAD	1:1250



Planning Consultants
Development Approvals
705-444-5812 planwells.com



Proposed Land Use	Yield u	ha	Area [Ac.]	%
Residential Lots - 21.4m Singles	29	2.909	[7.19]	40.9
Residential Lots - 22.3m Singles	9	0.736	[1.82]	10.4
30.0 m Floodway Channel Corridor	-	1.005	[2.48]	14.1
6.0 m Walkway Linkage	-	0.024	[0.06]	0.3
S.W.M. Facility	-	0.449	[1.11]	6.3
Hazard Lands	-	1.021	[2.52]	14.4
Public Roads	-	0.963	[2.38]	13.6
Total	38	7.107	[17.56]	100.0

Total Saleable Linear Frontage = 893.1 m
Total Centreline Road Length = 451.8 m
Efficiency Ratio [frontage/rd length]: 1.98

* denotes a Lot which may require a Custom Designed Dwelling, due to irregular shape or Lot Depth less than 30.6m

Natural Heritage Policy Review

Provincial Policy Statement

The 2014 Provincial Policy Statement (PPS) states, in part:

2.1.3 Natural heritage systems shall be identified in Ecoregions 6E & 7E, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.

The subject property is not in Ecoregion 7E and the small hedgerow feature along the northeast side of the study area is not part of any identified natural-heritage system in Ecoregion 6E. The subject parcels are also not located in any core natural area, linkage, or significant natural feature identified in The County of Grey's report titled *Green in Grey - Final Report* (Natural Resource Solutions Inc.; 2017)

The PPS further states:

2.1.4 Development and site alterations shall not be permitted in:

- a) Significant wetlands in Ecoregions 5E, 6E, and 7E, and*
- b) Significant coastal wetlands.*

There are no provincially significant wetlands or significant coastal wetlands on or in the vicinity of the study area.

The PPS also states:

2.1.5 Development and site alterations shall not be permitted in:

- a) Significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E, and 7E;*
- b) Significant woodlands in Ecoregions 6E and 7E;*
- c) Significant valleylands in Ecoregions 6E and 7E;*
- d) Significant wildlife habitat;*

e) Significant areas of natural and scientific interest; and

f) Coastal wetlands in Ecoregions 5E, 6E, and 7E that are not subject to Policy 2.1.4 (b)

unless it is demonstrated that there will be no negative impacts on the natural features or their ecological functions.

The subject property is not located in the Canadian Shield north of Ecoregions 5E, 6E or 7E; and there are no coastal wetlands on or near the sites. The subject property is not in any significant woodlands, significant valleylands, or significant wildlife habitat. There are no significant areas of natural and scientific interest (ANSIs) on or near the property

The PPS also states:

2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

The study area is not in any fish habitat.

The PPS also states:

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

The MNRF NHIC database has no records of any threatened or endangered species within the 1 km grid square in which the subject property is located, nor is there any habitat for any endangered or threatened species on site.

The PPS further states:

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

The Ontario Natural Heritage Reference Manual for Policy 2.3 of the Provincial Policy statement defines “adjacent lands” as:

- 120 m from - provincially significant wetlands;
- 50 m from
 - significant woodlands,
 - significant valleylands,
 - significant wildlife habitat,
 - significant portions of habitat for threatened or endangered species,
 - significant ANSIs; and
- 30 m from - fish habitat.

There are no significant natural-heritage features on lands adjacent to the subject property.

The PPS also states:

3.1.1 Development shall generally be directed to areas outside of:

- a) hazardous lands adjacent to the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes which are impacted by flooding hazards, erosion hazards and/or dynamic beach hazards;*
- b) hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards; and*
- c) hazardous sites.*

The subject properties are traversed by an intermittent drainage feature which is regulated by the Grey Sauble Conservation Authority. This watercourse is on actively cultivated lands; and as a result, is subject to significant ongoing disturbance.

Grey Sauble Conservation Authority

Parts of the subject parcels are regulated by the Grey Sauble Conservation Authority (GSCA); and as such, a permit is required before development of the site. As previously noted, an intermittent drainage feature traverses the study area along the south side from west to east. This watercourse is regularly disturbed by cultivation of the lands. The proposed development includes the rehabilitation of that watercourse and associated riparian habitat with the implementation of a natural-channel design described in The Water's Edge report, dated September 14th, 2022, and in Tatham Engineering's report titled *Lora Greens Development, Town of the Blue Mountains* and dated June 14th 2022.

County of Grey

The Official Plan (2019) of the County of Grey, Schedule C, indicates that the subject properties are not in any of the Natural Heritage System Core Areas or Linkages. Appendix B, Map C, confirms that the study area is not on or near any Significant Woodlands, Significant Valleylands, or Significant Area of Natural or Scientific Interest (ANSI),

Town of the Blue Mountains

The Town of the Blue Mountains' Official Plan (2016) Schedule A1 Designates part of the study area as "Residential Recreational Area" and the drainage-feature corridor as "Hazard". Section B5.4.1 of the Town's OP states that permitted uses of Hazard lands include:

b) *uses connected with the conservation of water, soil, wildlife and other natural resources;*

As previously noted, much of the on-site intermittent drainage feature which traverses all four parcels in the study area

- is the object of periodic ploughing;
- does not constitute direct fish habitat;
- contributes eroded sediments to downstream fish habitat; and
- has no long-term riparian vegetation.

The proposed development concept includes provision for the rehabilitation of that drainage feature with the use of natural-channel design principles. This would be in keeping with Section B5.4.1 b) of the Town's OP. It would also result in an ecologically more functional aquatic feature, a more stable watercourse, the erosion of less sediment into downstream waters, and more and better-quality wildlife habitat.

Potential Effects

The four subject parcels are on actively cultivated farmland located adjacent to a highway, existing residential development, and a golf course. With the exception of a small wooded hedgerow along the northeastern border of the study area - much or all of which is expected to remain post-development - there is extremely little in the way of natural-heritage features or functions associated with the development footprint. Nevertheless, the development of the site is expected to have the potential for some effects, summarized as follows:

1. Although there are existing disturbances from light and sound associated with vehicular traffic along Highway 26, the development of the study area will likely increase the levels of these disturbances. Given the minimal natural-heritage features and functions associated with the site, this potential effect is not considered significant.
2. With the addition of added residences, predation of birds and small mammals by pets can be expected to increase. This potential effect is also not considered significant.
3. In the absence of appropriate mitigation measures there is the potential for the release of sediments and other deleterious substances into the intermittent drainage feature on site. There is also the potential for increased erosion.

Proposed Mitigation Measures

A comprehensive program of mitigation measures will be finalized as part of the development-approval process and will be implemented prior to construction. The following measures are intended to form the core of the mitigation plan. It is expected that these measures may be further refined and enhanced prior to development.

Construction Mitigation Measures

1. Construction methods will incorporate techniques which will achieve relevant provincial and municipal standards to minimize the effects of siltation and erosion.
2. Any fill materials deposited in the development area should conform to the fill-quality standards of the relevant regulatory authorities.
4. Any stockpiled soils and materials used during construction should be located away from the water. Appropriate sediment-control measures should be implemented between any stockpiled fill materials and the water.
5. All fueling and maintenance of construction equipment should be completed away from water to minimize the possibility of water contamination. All on-site fuels, oils and chemicals should also be stored at least 150 meters from any surface waters.
6. Soil-stabilization measures should be implemented to minimize erosion and siltation. The application of plant mulches, chemical stabilization, or matting should be used, as appropriate, to reduce the effects of rainfall and runoff.
7. Excess construction materials should not be deposited anywhere where they could be reintroduced into the aquatic environment.
8. Environmental monitoring of construction activities should be undertaken by appropriate qualified personnel.
9. Any required tree removal should be undertaken outside the bird-nesting season which extends from about mid March to mid August.

Appendix I

Photographs



Photo 1: Study Area, viewed west to east (15 July 2019).



Photo 1: Study Area, viewed east to west (15 July 2019).



Photo 3: Soybean crop in study area (15 July 2019).



Photo 4: Wooded hedgerow along northeast border of study area (15 July 2019).



Photo 5: Intermittent drainage feature and riparian vegetation, viewed west to east (15 July 2019).



Photo 6: Wetland east of study area at Peel Drive and Highway 26 (15 July 2019)

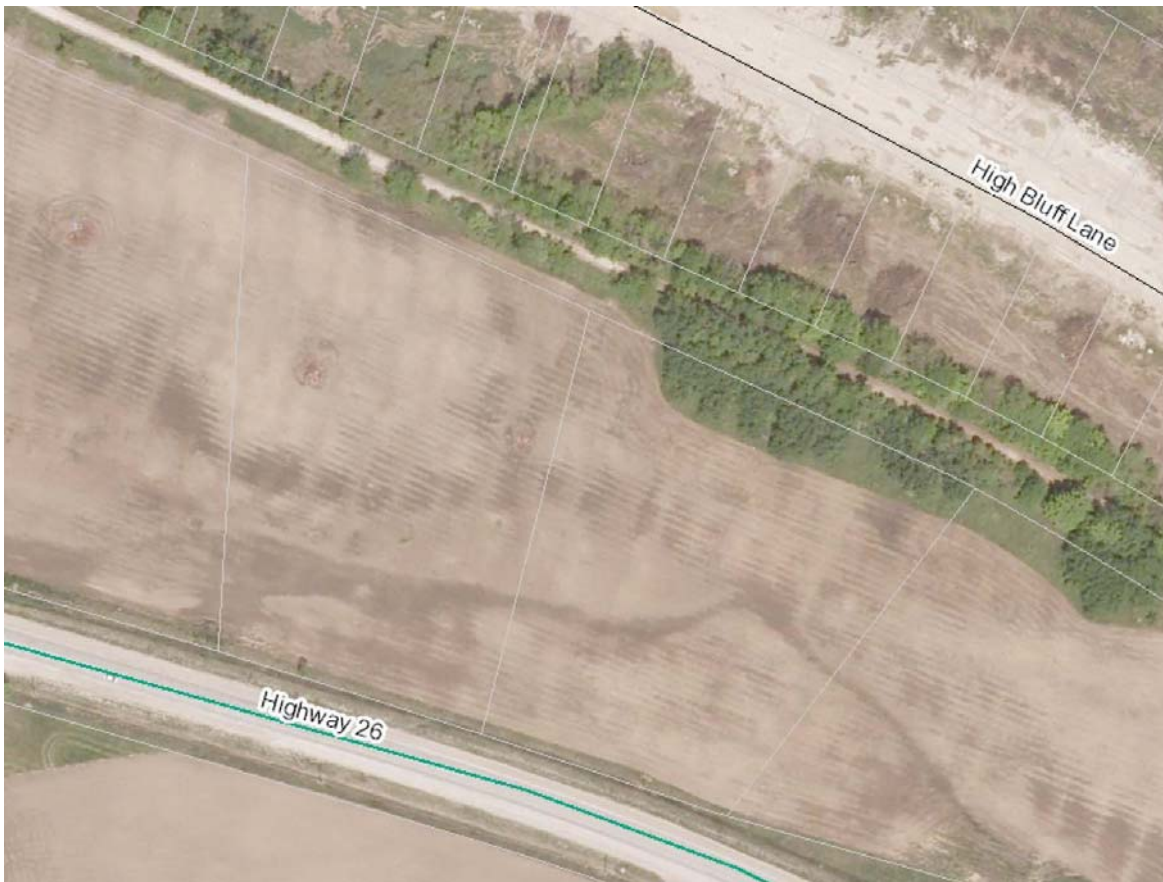


Photo 7: Intermittent drainage feature in 2006 - no riparian vegetation (Grey County Photo).

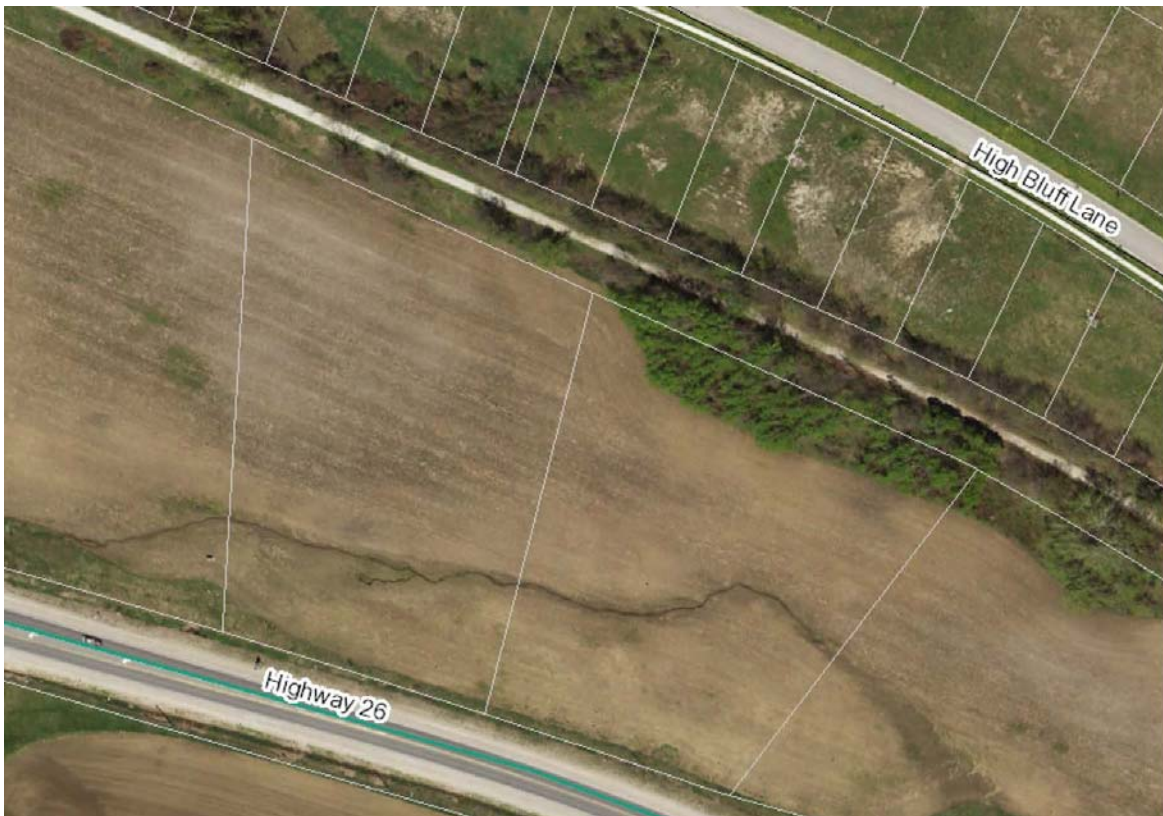


Photo 8: Intermittent drainage feature in 2016 - no riparian vegetation (Grey County Photo).

Appendix II

Breeding Bird Survey Results

Breeding Bird Surveys – Lora Bay Site

Location: Northeast of the intersection of Highway 26 and Grey County Road 113

of Surveys: 2

Date of Survey 1: 04 June, 2019

Time: 5 AM - 12:20 PM

Weather: 7.5oC at start; mix of sun and cloud, light breezes.

Date of Survey 2: 23 June, 2019

Time: 4:30 AM - 12:10 PM

Weather: 10oC at start; mix of sun and cloud with light breezes.

List of Bird Species Present

Species List	Abundance – Survey 1 04 June, 2019	Abundance – Survey 2 23 June, 2019
Great Blue Heron		1
Turkey Vulture	1	1
Red-tailed Hawk	1	2
Ring-billed Gull	6	8
Mourning Dove	1	2
Eastern Kingbird	1	1
Blue Jay	2	1
American Crow	2	3
Barn Swallow	3	4
Black-capped Chickadee	2	3
White-breasted Nuthatch		1
American Robin	5	8
European Starling	12	14
Song Sparrow	1	2
Northern Cardinal	1	1
Red-winged Blackbird	3	3
Common Grackle	1	2
House Sparrow	1	2
Total Species: 18	44	61

Breeding Evidence – Survey 1 – 04 June, 2019

Species	Breeding Code			
	Obs.	PO	PR	CO
Turkey Vulture	X			
Red-tailed Hawk	X			
Ring-billed Gull	X			
Mourning Dove		H		
Eastern Kingbird		H		
Blue Jay				AE
American Crow	X			
Barn Swallow	X			
Black-capped Chickadee	X			
American Robin	X			
European Starling	X			
Vesper Sparrow	X			
Song Sparrow	X			
Northern Cardinal	X			
Red-winged Blackbird			A	
Common Grackle	X			
House Sparrow	X			

Breeding Evidence – Survey 2 – 23 June, 2019

Species	Breeding Code			
	Obs.	PO	PR	CO
Great Blue Heron	X			
Turkey Vulture	X			
Red-tailed Hawk	X			
Ring-billed Gull	X			
Mourning Dove		H		
Eastern Kingbird		H		
Blue Jay				AE
American Crow	X			
Barn Swallow	X			
Black-capped Chickadee	X			
White-breasted Nuthatch	X			
American Robin	X			
European Starling	X			
Song Sparrow				AE
Northern Cardinal	X			
Red-winged Blackbird			A	
Common Grackle	X			
House Sparrow	X			

Species At Risk Birds

Barn Swallow – is classified as “threatened” provincially and federally. A few individuals were observed foraging over the subject property and adjacent lands during both surveys. There is no breeding habitat for Barn Swallow on or in the vicinity of the study area.

Appendix III

Plant List

VEGETATION LIST AND ELC VEGETATION TYPES (2019)
Four Parcels at Highway 26 and Grey County Road 113

FAMILY	SCIENTIFIC NAME	COMMON NAME	WOMM3	PROV. TRACKED (Y/N)	S_RANK ¹	COSEWIC STATUS	SARO STATUS	G_RANK
Rosaceae	Prunus serotina	Black Cherry	X	N	S5			G5
Aceraceae	Acer saccharum	Sugar Maple	X	N	S5			G5
Rosaceae	Agrimonia gryposepala	Hooked Agrimony	X	N	S5			G5
Brassicaceae	Alliaria petiolata	Garlic Mustard	X	N	SNA			GNR
Asteraceae	Ambrosia artemisiifolia	Common Ragweed	X	N	S5			G5
Asteraceae	Arctium minus	Common Burdock	X	SNA			GNR	
Onagraceae	Circaea alpina	Small Enchanter's Nightshade	X	N	S5			G5
Poaceae	Dactylis glomerata	Orchard Grass	X	N	SNA			GNR
Apiaceae	Daucus carota	Wild Carrot	X	N	SNA			GNR
Oleaceae	Fraxinus americana	White Ash	X	N	S4			G5
Geraniaceae	Geranium robertianum	Herb-Robert	X	N	S5			G5
Rosaceae	Geum canadense	White Avens	X	N	S5			G5
Vitaceae	Parthenocissus quinquefolia	Virginia Creeper	X	N	S4?			G5
Apiaceae	Pastinaca sativa	Wild Parsnip	X	N	SNA			GNR
Poaceae	Phleum pratense	Common Timothy	X	N	SNA			GNR
Poaceae	Phragmites australis	Common Reed	X	N	S4?			G5
Poaceae	Poa annua	Annual Bluegrass	X	N	SNA			GNR
Poaceae	Poa compressa	Canada Bluegrass	X	N	SNA			GNR
Rhamnaceae	Rhamnus cathartica	Common Buckthorn	X	N	SNA			GNR
Anacardiaceae	Rhus typhina	Staghorn Sumac	X	N	S5			G5
Rosaceae	Rubus idaeus	Common Red Raspberry	X	N	S5			G5
Asteraceae	Symphyotrichum ericoides	White Heath Aster	X	P	S5			G5
Asteraceae	Symphyotrichum lanceolatum	Panicked Aster	X	P	S5			G5
Asteraceae	Symphyotrichum lateriflorum	Calico Aster	X	P	S5			G5
Asteraceae	Taraxacum officinale	Common Dandelion	X	N	SNA			G5
Cupressaceae	Thuja occidentalis	Eastern White Cedar	X	N	S5			G5
Scrophulariaceae	Verbascum thapsus	Common Mullein	X	N	SNA			GNR
Vitaceae	Vitis riparia	Wild Grape	X	N	S5			G5

¹ Conservation Rank and Status Information from OMNRF, Natural Heritage Information Centre

<https://www.ontario.ca/environment-and-energy/get-natural-heritage-information>

SRANK DEFINITIONS

S1	Critically Imperiled — Critically imperiled in the province or state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation
S2	Imperiled — Imperiled in the province or state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the province or state
S3	Vulnerable — Vulnerable in the province or state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation
S4	Apparently Secure — Uncommon but not rare; some cause for long-term concern due to
S5	Secure — Common, widespread, and abundant in the nation or state/province
S#S#	Range Rank — Used to indicate any range of uncertainty about the status of the species or community. Ranges
SNR	Unranked — Province or state conservation status not yet assessed
SU	Unrankable — Currently unrankable due to lack of information or due to substantially
SNA	Not Applicable — not suitable target for conservation activities

CONSERVATION STATUS

NAR	Not At Risk — A species that has been evaluated and found to be not at risk.
SC	Special Concern — Lives in the wild in Ontario, is not endangered or threatened, but may become threatened or endangered due to a combination of biological characteristics and identified threats
THR	Threatened — Lives in the wild in Ontario, is not endangered, but is likely to become endangered if steps are not
END	Endangered — Lives in the wild in Ontario but is facing imminent extinction or extirpation