

Advancing Sustainable Development Solutions



August 17, 2018

Mr. Ken Hale
Vice President, Land Development and Acquisitions
Dunn Capital Corporation
HarbourEdge Centre
40 Huron Street, Suite 300
Collingwood, Ontario
Canada L9Y 4R3

Dear Mr. Hale:

Re: Environmental Impact Statement Update, Lora Bay Development, Phase 4

Town of The Blue Mountains

1. Introduction

In August 2018 Hensel Design Group Inc. (HDG) was retained by the Landex Capital Corporation to complete an Environmental Impact Statement (EIS) Update for the Phase 4 lands of Lora Bay. This letter report provides an update to supplement the Environmental Overview Study (The Walter Fedy Partnership, 2001) and the Environmental Impact Study (HDG, 2012) which all address the Phase 4 area of the Lora Bay Development (See Figure 1). This is required to satisfy Draft Plan Approval for Phase 4 (labelled as Future Development on Appendix A). For the purposes of this Scoped EIS, the subject lands referred to in this report are only the Phase 4 lands. This 2018 report provides an update to address the present regulatory framework (Grey County OPA 80) and other natural heritage policies that apply to the subject lands, updates (2018) to species lists (SAR, SARO, NHIC) and updates to the impacts evaluation related to development of the Phase 4 lands.

2. Site Conditions

The Phase 4 lands are a 7.88ha parcel within the Lora Bay development. The subject lands are currently treed with existing residential lots to the east and surrounded by existing golf course on the north, south and west sides (See Figure 2).

3. Natural Heritage Policy

3.1 Provincial Policy Statement

The updated Provincial Policy Statement (PPS) came into effect on April 30, 2014.

3.1.1 Relevance to the Subject Lands

In our review, the proposed residential development on the Phase 4 lands is consistent with all aspects of the PPS as per our original findings from 2001 and 2012.

3.2 Grey County Official Plan

Since the completion of the HDG 2012 EIS, Grey County has updated its Official Plan (June 25, 2013) and, more significantly, added a section on Significant Woodlands. Section 2.8.4 Significant Woodlands notes the following:

"In order to be considered significant a woodland must be either greater than or equal to forty (40) hectares in size outside of settlement areas, or greater than or equal to four (4) hectares in size within settlement area boundaries. If a woodland fails to meet those criteria, a woodland can also be significant if it meets any two of the following three criteria:

- (a) Proximity to other woodlands i.e. if a woodland was within 30meters of another significant woodland, or
- (b) Overlap with other natural heritage features i.e. if a woodland overlapped the boundaries of a Provincially Significant Wetland or an area of natural and Scientific Interest, or
- (c) Interior habitat of greater than or equal to eight (8) hectares, with a 100 metre interior buffer on all sides.
- (1) No development or site alteration may occur within Significant Woodlands or their adjacent lands unless it has been demonstrated through an Environmental Impact Study, as per section 2.8.7 of the Plan, that there will be no negative impacts on the natural features or their ecological functions. The adjacent lands are defined in section 6.19 of the Plan.
 - Notwithstanding the above, projects undertaken by a Municipality or Conservation Authority may be exempt from the Environmental Impact Study requirements, provided said project is a public work or conservation project.
- (2) Notwithstanding paragraph (1), where it can be proven that a woodland identified as significant has ceased to exist, or ceased to exhibit characteristics of significance, prior to November 1, 2006, an Environmental Impact Study will not be required. Site photographs or a site visit by a qualified individual may be necessary to determine that a woodland no longer exists.
- (3) Notwithstanding paragraph (1), tree cutting and forestry will be permitted in accordance with the County Forest Management By-law.
- (4) Notwithstanding paragraph (1) and (3), fragmentation of significant woodlands is generally discouraged."



3.2.1 Relevance to The Subject Lands

The subject lands are now designated in the Grey County Official Plan as Significant Woodlands (See Appendix B). We have evaluated the County OPA 80, Significant Woodlands section 2.8.4 in relation to the existing conditions found within the subject Phase 4 lands (see Table 1).

3.3 The Blue Mountains Official Plan

The Blue Mountains Official Plan was updated in June 2016. The Goals and Objectives outlined in Section A3 of the Official Plan provide a general guideline for the review of all proposed development. All goals, objectives and policies of the Official Plan are designed to reflect the municipality's long-term vision for the future, and to have regard for the Provincial Policy Statement, not in conflict with the Niagara Escarpment Plan, and also in conformity with the County of Grey Official Plan.

According to Section A3.2.2 it is a strategic objective of the Official Plan to:

- 1. Protect *significant* natural heritage and hydrologic features and their associated habitats and *ecological functions*.
- 2. Ensure that an understanding of the natural environment, including the values, opportunities, limits and constraints that it provides, guides land use decision-making in the Town.
- 3. Make planning decisions that contribute to the protection, conservation and enhancement of water and related resources on a watershed and sub watershed basis.
- 4. Maintain and *enhance* surface and *groundwater resources* in sufficient quality and quantity to meet existing and future needs on a sustainable basis.
- 5. Discourage the loss or fragmentation of *significant* woodlands and the habitats and *ecological functions* they provide.
- 6. Recognize that an interconnected system of open spaces and natural heritage features contributes to the health and *character* of a community.
- 7. Prohibit the loss or fragmentation of *Provincially Significant Wetlands* and *significant* habitat of endangered and *threatened species*.
- 8. Maintain and *enhance significant* areas of natural and scientific interest, *significant* valleylands, escarpment slopes and related landforms, and *significant wildlife habitat* areas.



Table 1: County OPA 80 Compliance Evaluation Review

OPA 80	Summary Evaluation of Whether the Environmental Overview (2001), Addendum (2002) and Environmental Overview Status for Block 1 (2007) Addresses the OPA 80 Requirements for 2.8.4
Section 2.8.4 Significant Woodlands	
A new Section 2.8.4 entitled Significant Woodlands is hereby inserted after 2.8.3: "2.8.4 SIGNIFICANT WOODLANDS Significant Woodlands are a development constraint shown on Appendix B attached hereto and forming part of the Plan. The criteria for the identification of Significant Woodlands were developed by the County of Grey with assistance from the Ministry of Natural Resources. The identification was primarily a desk-top based Geographic Information Systems (GIS) exercise and the County acknowledges that inaccuracies or omissions in the mapping may be present. As a result site visits by qualified individuals may be required at the application stage to scope any potential studies.	Based on the new policy the woodlands located within the subject property meet the criteria by being greater than or equal to four (4) hectares in size within settlement area boundaries. Therefore using this criteria alone, the woodlands located within the subject property are considered significant woodlands under OPA 80 policy. The contiguous woodland area within the 2012 existing conditions have been fragmented by previously approved golf course and existing residential development. The Significant Woodlands Schedule B to OPA 80 is inaccurate in that it doesn't recognize approved and existing development (golf course and residential) in this area and maps woodlands where woodland
In order to be considered significant, a woodland must be either greater than or equal to forty (40) hectares in size outside of settlement areas, or greater than or equal to four (4) hectares in size within settlement area boundaries. If woodlands fails to meet those criteria, a woodland can also be significant if it meets any two of the following three criteria: (a) Proximity to other woodlands i.e. if a woodland was within 30 metres of another significant woodland, or	does not presently exist (See Figure OP-1).



 (b) Overlap with other natural heritage features i.e. if a woodland overlapped the boundaries of a Provincially Significant Wetland or an Area of Natural and Scientific Interest, or (c) Interior habitat of greater than or equal to eight (8) hectares, with a 100 metre interior buffer on all sides. 	
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(1)No development or site alteration may occur within Significant Woodlands or their adjacent lands unless it has been demonstrated through an Environmental Impact Study, as per section 2.8.7 of this Plan, that there will be no negative impacts on the natural features or their ecological functions. The adjacent lands are defined in section 6.19 of this Plan.	An original Environmental Overview was prepared by The Walter Fedy Partnership in 2001, was approved and construction of community infrastructure was completed <i>prior to the Approval of OPA 80</i> (June 25, 2012 and October 9, 2012 by the OMB). The woodland area within Phase 4 is part of the planned, Town OP designated and zoned (See Appendix C) Lora Bay development plan which includes road construction and individual lot servicing
Notwithstanding the above, projects undertaken by a Municipality or Conservation Authority may be exempt from the Environmental Impact Study requirements, provided said project is a public work or conservation project.	in this area. The Phase 4 site area is presently planned for single family home construction. Some mitigation of impacts from tree removal on each lot may be achieved through landscaping/tree planting using native indigenous species. The majority of trees within the Phase 4 area will require removal due to grading and servicing thus the Significant Woodlands policy 2.8.4. cannot be complied with in this situation. Recognition of the prior County and Town development approvals and related existing site alterations creates a unique situation that can only be addressed by acknowledging the present OP designation and zoning of the lands and the inability to conform to 2.8.4.
(2)Notwithstanding paragraph (1), where it can be proven that a woodland identified as significant has ceased to exist, or ceased to exhibit characteristics of significance, prior to November 1, 2006, an	N/A



Environmental Impact Study will not be required. Site photographs or a site visit by a qualified individual may be necessary to determine that a woodland no longer exists.	
(3) Notwithstanding paragraph (1), tree cutting and forestry will be permitted in accordance with the County Forest Management Bylaw.	N/A
(4) Notwithstanding paragraph (1) and (3), fragmentation of significant woodlands is generally discouraged."	The Phase 4 lands were OP designated and zoned for residential use prior to the approval of OPA 80. The lands have already been fragmented by previous approved development. The woodland fragment represented by the Phase 4 lands are isolated by golf course and development on all sides.



9. Promote and establish programs to increase the forest cover of the Town.

Section B5 addresses the policies specific to Natural Heritage Features.

3.3.1 Relevance to the Development Proposal

The subject lands are designated as Residential Recreational Area on Schedule A-1 of the Town Official Plan (See Appendix C). Recognition of the prior County and Town development approvals and related existing site alterations creates a unique situation that can only be addressed by acknowledging the present OP designation and zoning of the lands and the inability to conform to 2.8.4. (See Table 1).

4. Species Lists Updates

Table 2 provides an updated assessment of the flora and fauna observed on the subject lands during previous field studies. It should be noted that there is no habitat and/or no breeding habitat for significant bird species on the Phase 4 lands (See Table 2), and Butternut and Wild Bergamot are along the Georgian Trail (protected and left intact).

4.1 Vegetation

Vegetation cover types within the Phase 4 development lands are predominantly Cultural Woodland and Cultural Meadow (See Figure 2). **CUT** - Cultural Thicket comprised of "whips" and pole-sized green ash, trembling aspen, white elm, pussy willow, common buckthorn, choke cherry, red-osier dogwood, wild grape, alternate-leaved dogwood, poison ivy and Missouri willow, along with **CUW** – Green Ash Poplar Cultural Woodland comprised of green ash, trembling aspen, common buckthorn, choke cherry, poison ivy and white elm

4.2 Breeding Birds

Breeding bird data collected from the 2000-2002 field surveys and overview status (GLL 2007) (See Appendix E) as well as the species list from the Breeding Bird Atlas were reviewed against current Species At Risk lists (Federal and Provincial). Since the completion of the earlier reports for the subject lands, the status for some species has changed Federally (Species At Risk Act, SARA) and Provincially (Species At Risk in Ontario, SARO) (See Table 2).

4.3 Reptiles/Amphibians

The current conditions of the subject lands remain non-conducive for breeding amphibian and breeding reptile habitat.



Table 2. Up-dated Assessment of Flora and Fauna Species Observed on the Subject Property

Common Name	Scientific Name	SARO	SARA	County	Comments
Wild Bergamot	Monarda fistulosa			R	- found along the edges of the Georgian Trail, likely the result of a native plant species mix used when the trail was built for revegetating the disturbed areas. Unaffected by the Phase 4 development.
Butternut	Juglans cinerea	END	END		 two butternut trees and one sapling found within the Georgian Trail right-of-way and will remain intact. Unaffected by the Phase 4 development.
Red-bellied Woodpecker	Melanerpes carolinus			R	 preferred breeding habitat is dead or dying branches in healthy trees located in tracts of mature deciduous forest, with large-diameter trees and snags no habitat exists on the Phase 4 lands*
Eastern Wood Pewee	Contopus virens	SC			 preferred breeding habitat is mid-canopy layer of forest clearings and edges of deciduous and mixed forests, mostly abundant in intermediate-age mature forest stands with little understory vegetation no habitat exists on the Phase 4 lands*
Barn Swallow	Hirundo rustica	THR	THR		 preferred breeding habitat is human-made structures such as barns, under bridges and in culverts no habitat exists on the Phase 4 lands*
Wood Thrush	Hylocichla mustelina	SC	THR		 preferred breeding habitat is mature deciduous and mixed (conifer-deciduous) forests, in moist stands of trees with well-developed undergrowth and tall trees for singing perches no habitat exists on the Phase 4 lands*
Northern Parula	Parula americana			R	 preferred breeding habitat is mature, moist coniferous forests and in moist spruce bogs or hemlock swamps no habitat exists on the Phase 4 lands*



Boblink	Dolichonyx oryzivorus	THR	THR	- preferred breeding habitat is hayfields, open meadows and dense grasslands - no habitat exists on the Phase 4 lands*
Eastern Meadowlark	Sturnella magna	THR	THR	 preferred breeding habitat is primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas no habitat exists on the Phase 4 lands*
Western Chorus Frog	Pseudacris triseriata		THR	 preferred breeding habitat is woodland ponds, damp meadows, marshes, bottomland swamps and temporary ponds in open country no habitat exists on the Phase 4 lands*
Monarch	Danaus plexippus	SC	SC	 preferred breeding habitat for caterpillars are fields, meadows and open areas with milkweed plants adult butterflies are found in more diverse habitats, feeding on wildflower nectar no habitat exists on the Phase 4 lands*

^{*} vegetation communities on the Phase 4 lands comprised of **CUT** - Cultural Thicket comprised of "whips" and pole-sized green ash, trembling aspen, white elm, pussy willow, common buckthorn, choke cherry, red-osier dogwood, wild grape, alternate-leaved dogwood, poison ivy and Missouri willow, along with **CUW** – Green Ash Poplar Cultural Woodland comprised of green ash, trembling aspen, common buckthorn, choke cherry, poison ivy and white elm

STATUS CODES

R - Rare if breeds in <25% Grey County OBBA squares

THR, - Threatened based on Species At Risk Ontario (SARO), *Endangered Species Act, 2007*

SC, - Special Concern based on Species At Risk Ontario (SARO), *Endangered Species Act, 2007*

,THR – Threatened based on Species At Risk Act (SARA) Schedule 1, Species At Risk Act, 2002

,SC - Special Concern based on Species At Risk Act (SARA) Schedule 1, Species At Risk Act, 2002

THR (or SC), THR (or SC) - Threatened (or Special Concern) based on Species At Risk Ontario (SARO),

Endangered Species Act, 2007 and Threatened based on Species At Risk Act (SARA) Schedule 1, Species At Risk Act, 2002



4.4 Natural Heritage Information Centre (NHIC)

HDG conducted a search of the NHIC database for element occurrence or rare species on or abutting the subject property on August 16, 2018. Two 1 km x 1km square blocks (recorded sightings) overlap the subject and adjacent lands, element occurrence record squares 17NK3936 and17NK3937. Searches of both squares revealed the presence of a total of two (2) element occurrences for rare species on or directly adjacent to the subject property.

A fish species, Lake Sturgeon (*Acipenser fulvescens*) was listed as observed in Georgian Bay (EO ID 104238) in 2010. Lake Sturgeon is designated as Threatened both Federally and Provincially. As the subject lands are inland, there is no habitat on the subject or adjacent land for this species.

EO 59755, Shining Branch Hawthorn (*Crataegus magniflora*) was observed in 1975. This plant species has an S-rank of S3 and was not observed during past site inventories.

5. Impacts to Development

This small woodland area is isolated because it is surrounded by golf course on three sides and residential on one side.

Impacts due to future woodland cover removal will include reduced habitat for breeding birds and a shift in representative bird species to those with greater tolerance for disturbance and human presence. Wildlife representation within the Phase 4 development lands will be less diverse and will also demonstrate a shift to species commonly associated with urban environments (skunk, raccoon, opossum). The existing habitat represented within the Cultural Woodland community does not contain any significant features or significant representative species.

6. Recommendations and Mitigation

6.1 Vegetation

- 1. A naturalized landscaping regime is encouraged for the development plan using native species suited to the site's soils and conditions for re-vegetation on all new lots (See native plants from the Lora Bay lands in Appendix D), homes and areas surrounding any stormwater discharge features. It is recommended to use plants with high value for wildlife habitat and browse. Where feasible, harvest seeds and plant material from within the proposed vegetation removal areas to maintain genetic integration with the surrounding landscape for use during naturalization efforts.
- 2. As a condition of Draft Plan Approval tree management/tree preservation plans for the proposed Phase 4 development area should be prepared considering setbacks and site engineering.



3. Future residents are encouraged to use naturalistic landscaping methods to reduce urban residential-based nutrient contributions to the soil, surrounding lands, and Georgian Bay. This could be carried out through training sessions, a website, creation of a neighbourhood Community Association, and/or stewardship information brochures to new homeowners. This would assist with minimizing impacts to adjacent lands and retained features. Future residents are also encouraged to use native and/or drought-tolerant and/or non-invasive plants in their landscaping, reducing both the chance of non-native or invasive garden species from establishing, and the contribution to pre-existing invasive species problems. These practices, especially if encouraged at the outset of the sale of the future residences, would allow the resulting development to exist in concert with the practices employed by the Lora Bay Golf Club's enrolment and certification in the Audubon Cooperative Sanctuary Program for Golf Courses (ACSP).

6.2 Wildlife

6.2.1 Mammals

- 1. Residents are encouraged to use raccoon-proof garbage and compost facilities in order to limit animal nuisance issues.
- 2. A Tree Management/Tree Preservation Plan for each single family lot should be created to maximize remaining wildlife habitat where possible and practical.
- 3. Snags and woody debris within any tree preservation areas should be left to retain denning opportunities and habitat for wildlife, as well as provide habitat for prey species. Brush piles (haphazardly stacked twigs and branches of various sizes) could be established from the tops of removed trees and they would act as an ideal wildlife shelter and a compensatory measure for lost habitat.
- 4. New residents are encouraged to integrate species with high wildlife value (ie. berry and nut bearing) into lot level naturalized landscaping designs.

6.2.2 Breeding Birds

- The amount of retained vegetation, especially mature trees, must be maximized wherever possible and practical. Considerations for native edge shrub species are encouraged to be planted along the new edges of retained vegetation in order to provide shelter from wind and for nesting habitat.
- 2. Landscape designs that incorporate berry-bearing species, native vines, and other plantings of high wildlife value throughout the Phase 4 development area should be encouraged. A wide variety of levels and diverse structure should be planned for in the planting design in order to best mimic the habitat that was removed and provide varied structure to shelter and accommodate for the needs of a variety of bird species.



- 3. Birdhouses that are designed to exclude non-native cavity nesting species and designed for native secondary-cavity-nesting species, such as Eastern Screech Owl (Megascops asio), Barn Swallows (Hirundo rustica), Tree Swallows (Tachycineta bicolor), and Eastern Bluebirds (Sialia sialis), are recommended to be erected in suitable areas both within and near blocks of retained vegetation in order to allow the ensuing population influx of non-native birds to be supplemented with native species.
- 4. Snags (dead trees) should be left wherever possible (where safety can be assured for residents) to provide perching and roosting/nesting habitat.

6.2.3 Insects

1. Landscape designs within the Phase 4 development area are encouraged to consider plant species that will attract/benefit Monarch Butterfly.

7. Conclusion

The Phase 4 lands were previously Town OP designated and zoned for single family home development several years ago. The principle of development has been historically confirmed for these lands however the new County of Grey Official Plan policy, Section 2.8.4. Significant Woodlands presents a new compliance test for the Phase 4 lands. Recognition of the prior County and Town development approvals and related existing site alterations creates a unique situation that can only be addressed by acknowledging the present OP designation and zoning of the lands and the inability to conform to 2.8.4.

From a natural heritage perspective, impacts to the features and functions of the Cultural Woodland, which is the only feature within the Phase 4 lands will remove the limited function of the woodland that supports the current bird and mammal populations. There are no significant habitat or species represented within the Phase 4 lands. Mitigation of impacts may be achieved to some extent by landscaping of the single family home lots using native trees and shrubs with enhanced habitat characteristics (berries, nuts, etc.). See Section 6 herein for recommended approaches to landscaping.

In summary, in so long as the recommendations and mitigations outlined in Section 6 are implemented, the compensation for woodland area loss will in time partially restore the limited habitat function that the existing isolated woodland presently provides.



If you require additional information regarding this submission, please do not hesitate to contact us.

Yours sincerely,

HENSEL DESIGN GROUP INC.

Michael J. Hensel, O.A.L.A., C.S.L.A. Senior Development Consultant

Enclosures:

Figure 1: Location

Figure 2: Ecological Land Classification

Figure OP-1: OPA 80 Evaluation Appendix A: Phase 2 Lands

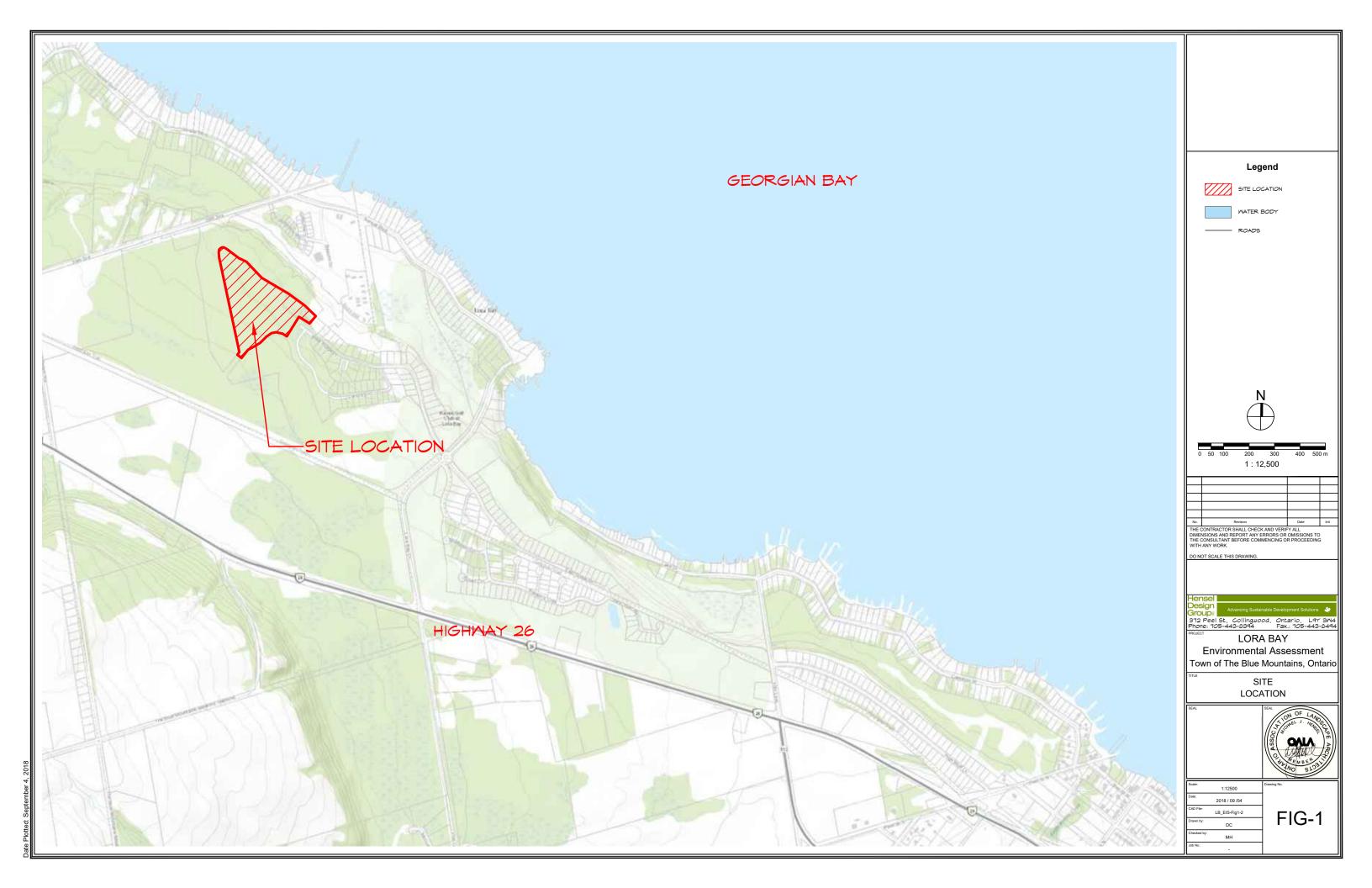
Appendix B: Grey County Official Plan Significant Woodlands

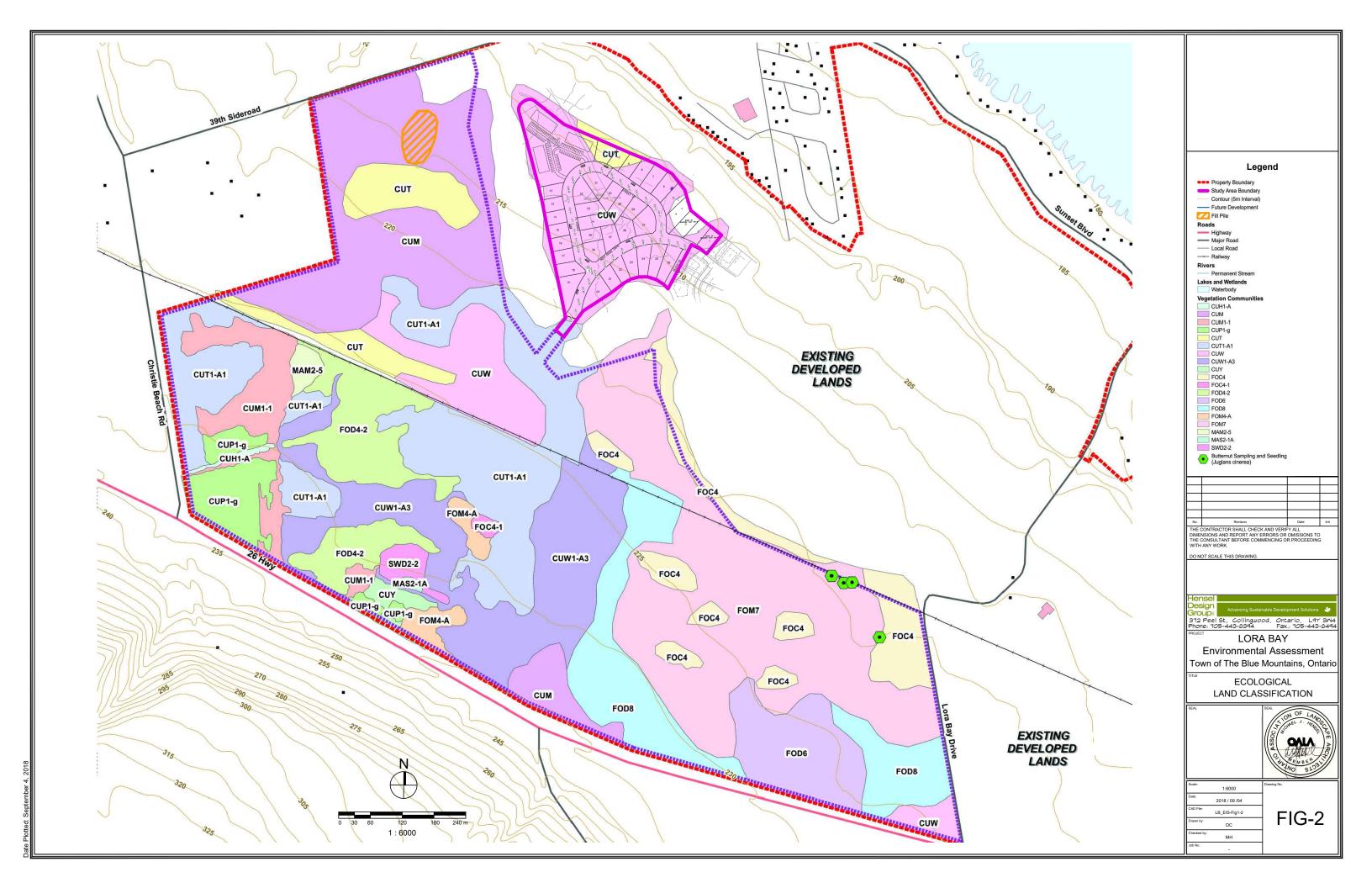
Appendix C: Town of The Blue Mountains Official Plan

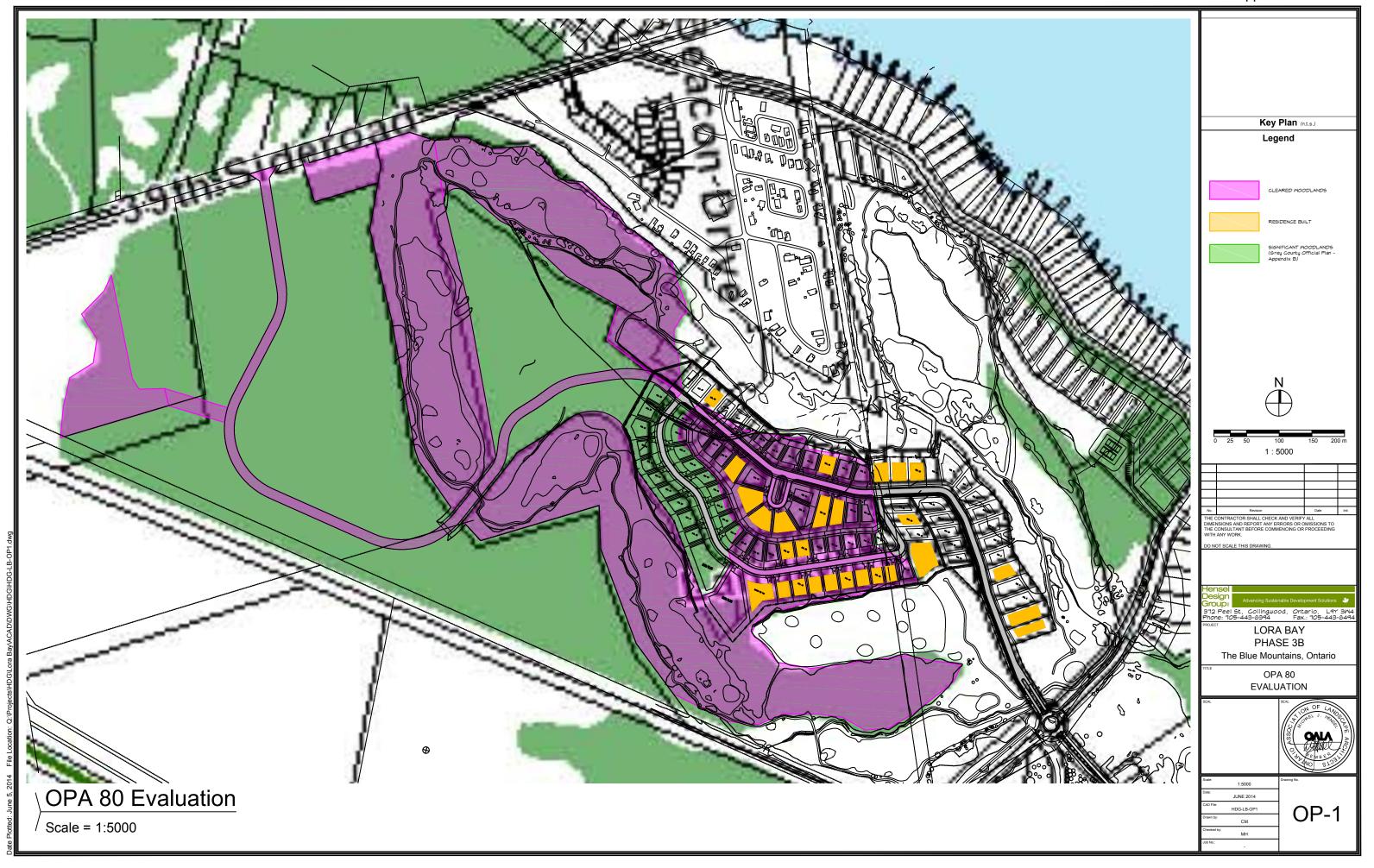
Appendix D: Plant List for Lora Bay Lands

Appendix E: Breeding Bird List for Lora Bay Lands

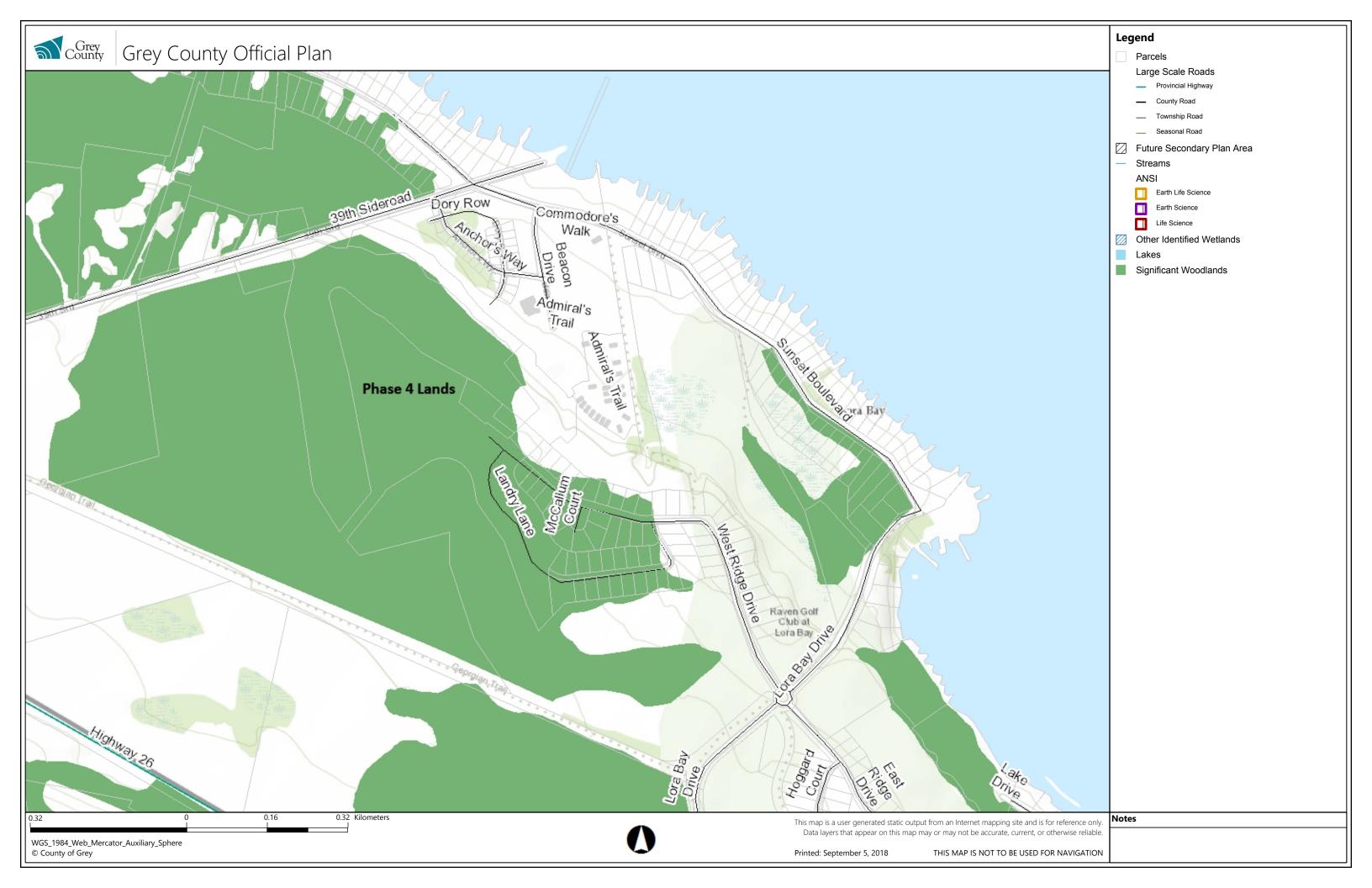


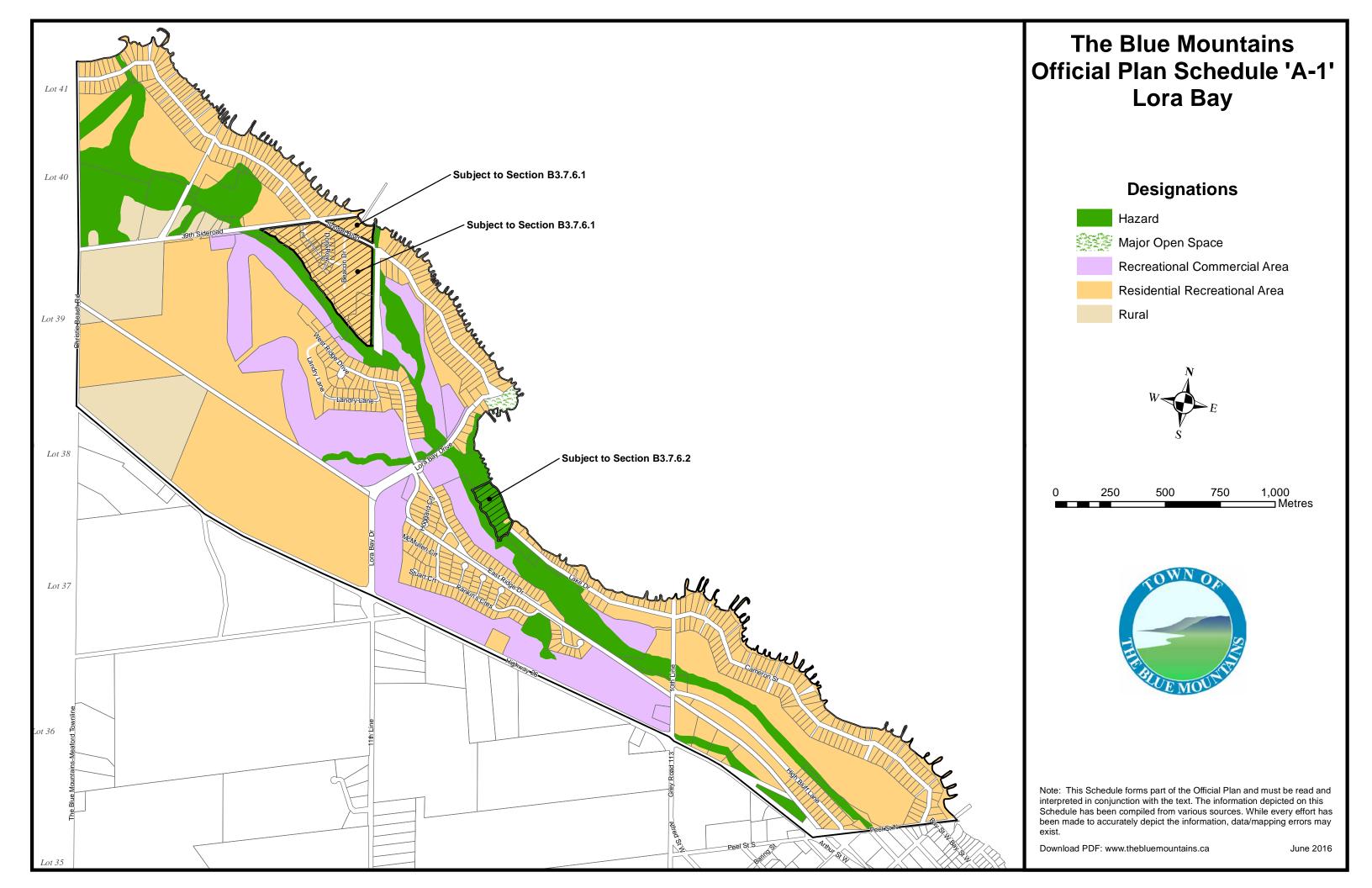












Family / Species	Common Name		Status		FOC4	FOM4-A	FOM7	FOD4-2	FOD6-1	FOD8	CUW	CUT	CUM	CUP1-g	CUH1-A	SWD2-2	MAS2-1A	MAM2-5	Wet Po
ranny / Species	Common realic		Status	Rare	1004	rom-A	rom,	1004-2	TOD6-1	ТОВ	com	cer	COM	COI I-g	cent-x	311D2-2	MA32-1A	MAM2-5	71611
		non-	Rare in	in															
		native	ON ('18)	Grey															
Acer negundo L.	Manitoba Maple							х			х	X							İ
Acer rubrum L.	Red Maple										x				x	x			
Acer saccharinum L.	Silver Maple											x	x						
Acer saccharum Marsh.	Sugar Maple					x	x	x	x	x	x	x			x				
Achillea millefolium L.	Yarrow	+										x	x	x					
Agrimonia gryposepala Wallr.	Agrimony						x		x	x	x	x	x	x	x				
Agropyron repens (L.)	Quack Grass	+										x	x	x					
Agrostis gigantea Roth.	Redtop	+										x						X	
Agrostis stolonifera L.	Creeping Bent Grass											x							
Ambrosia artemisiifolia L.	Common Ragweed											x	x						
Anemone virginiana L.	Thimbleweed										x	x							
Apocynum androsaemifolium L.	Spreading Dogbane											x							
Arctium minus (Hill) Bernh.	Common Burdock	+										x	x	х					1
Arisaema triphyllum (L.) Schott	Jack-in-the-pulpit						x		x	x						x			
Asclepias syriaca L.	Common Milkweed								x			x	x						1
Aster cordifolius L.	Heart-leaved Aster					x					x	x							1
Aster lanceolatus Willd.	Tall White Aster						x		x	x									
Aster novae-angliae L.	New England Aster										x	x	x	x	x				
Betula papyrifera Marsh.	Paper Birch							x		x		x							
Bromus inermis Leyss.	Smooth Brome Grass	+										x	x	x	x				
Carex bebbii (Bailey) Fern.	Bebb's Sedge							x				x				x	x		
Carex deweyana Schw.	Dewey's Sedge							x				x							
Carex intumescens Rudge	Bladder Sedge						x		x	x									
Carex lupulina Muhl. ex Willd.	Hop Sedge						x		x	x						x	x		
Carex sp.	Sedge				x					"	x								
Carex stipata Muhl. ex Willd.	Awl-Fruited Sedge						x		x	x	x					x		x	
Carex tribuloides Wahl.	Blunt Broom Sedge						X		x	x									
Carex vulpinoidea Michx.	Fox Tail Sedge									x									
Centaurea maculosa Lam.	Spotted Knapweed	+								"		x	x						
Chrysanthemum leucanthemum L.	Ox-eye Daisy	+							x	x		x	X						
Cinna latifolia (Goepp.) Griseb.	Nodding Wood Grass						x		x	x									
Circaea lutetiana L.	Enchanter's Nightshade				x	x													
Cirsium arvense (L.) Scop.	Canada Thistle	+							x	x		x	x						
Cirsium vulgare (Savi) Tenore	Bull Thistle	+										x	x						
Conyza canadensis (L.) Cronq.	Horse-Weed					x					x	x							
Cornus alternifolia L.f.	Alternate-leaved Dogwood					x	x	x	x	x	x	x		x	x	x	x		
Cornus stolonifera Michx.	Red-osier Dogwood						X			"	x	x	x						
Crataegus sp.	Hawthorn sp.							x			X	x			x				
Crataegus submollis Sarg	Quebec Hawthorn										l "	x	x		"				1
Dactylis glomerata L.	Orchard Grass	+							x	х		x	x		x				1
Daucys gomeraia L. Daucus carota L.	Wild Carrot, Queen Anne's Lace	+								_ ^		X	X		Α				1
Decodon verticillatus (L.) Ell.	Water Willow	· ·										^	^						1
Dianthus armeria L.	Deptford Pink	+										x							1
Dipsacus fullonum L.	Teasel	+	1									x	x						1
Dryopteris carthusiana (Vill.) H.P.Fuchs	Spinulose Wood Fern	'					x	x	x	х		Α	A						
Echium vulgare L.	Viper's-bugloss	+					Α.	Α.	Α	_ ^		x	x	x					
Echiam vatgare L. Epilobium hirsutum L.	Hairy Willowherb	+								x		^	^	^					1
Epilobium nirsulum L. Epilobium leptophyllum Raf.	Narrow-leaved Willowherb	т -					x		x	X									1
Epitobium tepiophytium Kaj. Epilobium parviflorum Schreb.	Small-flowered Willowherb	+					X X		X	X	v						x		
Epitobium parvitorum schreb. Epipactis helleborine (L.) Crantz	Helleborine						X X		X	X X	X X					1	^		

E 7 /G :	C N	1	Ct t		Po.C/	mores :	2014	non.	non:	none	corne:		ation	CW7D4	OTTER :	OWEN -	34.024	371370 -	T
Family / Species	Common Name		Status	Rare	FOC4	FOM4-A	FOM7	FOD4-2	FOD6-1	FOD8	CUW	CUT	CUM	CUP1-g	CUH1-A	SWD2-2	MAS2-1A	MAM2-5	Wet P
		non-	Rare in	in															
		native	ON ('18)	Grev															
Equisetum arvense L.	Field Horsetail		011 (10)	911)		х		х			х	х	х	х	х				\dagger
Erigeron philadelphicus L.	Philadelphia Fleabane					Α	x	Α.	х	x	x	Α	Α.	^	^				
Erigeron strigosus L.	Daisy Fleabane						x		x	x	x	x	x						
Euthamia graminifolia (L.) Nutt.	Narrow-leaf Goldenrod								X	x		x	x						
Fragaria virginiana Dene.	Common Strawberry						x		X	x	x	x	x						
Fraxinus americana L.	White Ash					x	X	x	x	x	x	x			x				
Fraxinus pennsylvanica Marsh.	Green Ash					x	x	x	x	x	x	x	x			x	x		
Galium mollugo L.	Wild Madder	+										x	x						
Galium trifidum L.	Small Bedstraw						x		x	x	x	x	x						
Geranium robertianum L.	Herb Robert	+			x	x	X		x	x	X	x							
Geum aleppicum Jacq.	Yellow Avens					x		x				x	x						
Geum canadense Jacq.	White Avens								x	x									
Hesperis matronalis L.	Dame's-rocket	+										x			x				
Hieracium caespitosum Dumort.	Yellow Hawkweed	+	I				x		x	x	x	x	x		1				
Hypericum perforatum L.	Common St. John's-wort	+	I			x		x	"	~	x	x	x						
Inula helenium L.	Elecampane	+	I			"			x	x	~	x	x						
Juglans cinerea L.	Butternut		END				x												
Juncus dudleyi Wieg.	Dudley's Rush																		
Juncus effusus L.	Rush						x		x	x			x			x	x		
Juncus tenuis Willd.	Path Rush											x							
Lathyrus latifolius L.	Everlasting Pea	+										x	x						
Lepidium campestre (L.) R. Br.	Field Pepper-grass	+										x	x						
Linnaea borealis L.	Twinflower	'					x		x	x		Α	Α.						
Lolium perenne L.	Perennial Rye-grass	+										x	x						
Lotus corniculatus L.	Bird-foot Trefoil	+										x	x						
Lycopus americanus Muhl.	American Water-horehound	'							x	x		Α				x	x		
Malus pumila Miller	Apple						x		X	X	x	x	x	x		^	^		
Matteuccia struthiopteris (L.) Todaro	American Ostrich Fern								x	x				"					
Medicago lupulina L.	Black Medic	+										x	x						
Melilotus alba Medic.	White Sweet-clover	+										x	x						
Monarda fistulosa L.	Wild Bergamot	'		R			x					Α							
Nepeta cataria L.	Catnip	+		K			Α.						x						
Oenothera biennis L.	Hairy Yellow Evening-primrose	'							x	x		x	x	x					
Onoclea sensibilis L.	Sensitive Fern								x	x	x	Α		^		x	x	x	
Phleum pratense L.	Timothy	+							Α.	^	^	x	x			^	^	^	
Pinus strobus L.	White Pine	'										x	x						
Plantago lanceolata L.	English Plantain	+										x	X						
Plantago major L.	Broad-leaved Plantain	+	I									X	X						
Poa annua L.	Annual Blue Grass	+										^	X X						
Poa compressa L.	Canada Blue Grass	-									х		X						
Poa palustris L.	Fowl Meadow Grass								х	х	^		Λ						
Poa pratensis L.	Kentucky Blue Grass	+						x	^	^	х	x	x						
Populus balsamifera L.	Balsam Poplar	-			x		x	X	х	х	X	X	X						
Populus nigra L.	Lombary Poplar	+			^		^	^	^	^	X	X	X						
Populus tremuloides Michx.	Trembling Aspen	-	I		x	x	x	x	x	x	X X	X	X X	x	x				
Potentilla argentea L.	Silvery Cinquefoil	+	I		^	^	Α.	Λ.	^	^	^	Λ	X X	^	^				
Potentilla argentea L. Potentilla recta L.	, i	+	I									x							
Prunella vulgaris L.	Rough-fruited Cinquefoil Rough-fruited Cinquefoil	+	I			v	v		v	v			x						
Prunus virginiana L.	Choke Cherry	+	I			X v	X X		X	X	v	x x	X X						
Prunus virginiana L. Pteridium aquilinum (L.) Kuhn	Eastern Bracken		I			Х	Х		X	X	X	Х	X						
					v	v	v	v	X	X	X	v	v	v					
Ranunculus acris L.	Tall Buttercup	+	I		X	X	X	X	X	Х	X	x	X	X					
Rhamnus cathartica L.	Common Buckthorn	+				х					X	X	_	X					
Rhamnus frangula L.	Glossy Buckthorn	+	I		X		X		X	X	X	X	X	X	I	ı	l	I	ı

												Loc	cation				Location							
Family / Species	Common Name		Status		FOC4	FOM4-A	FOM7	FOD4-2	FOD6-1	FOD8	CUW	CUT	CUM	CUP1-g	CUH1-A	SWD2-2	MAS2-1A	MAM2-5	Wet Pocket					
		non- native	Rare in ON ('18)	Rare in Grey																				
Rhus radicans L.	Poison-ivy				X	x	x		X	Х	X	X	х			х			х					
Rhus typhina L.	Staghorn Sumac										X	X	X		X									
Ribes hirtellum Michx.	Canada Gooseberry						X		X	x														
Ribes lacustre (Pers.) Poiret	Swamp Black Currant						X		X	X									X					
Rosa multiflora Thumb.	Multiflora Rose	+											x	X										
Rubus idaeus L.	Wild Red Raspberry				x		x	X	X	x	x	x	x						X					
Rumex crispus L.	Curly Dock	+								x	x	x	x											
Salix discolor Muhl.	Pussy Willow											x					X							
Salix eriocephala Michx.	Heart-leaved Willow											x												
Salix petiolaris Sm.	Slender Willow										x								X					
Saponaria officinalis L.	Bouncing-bet	+										X	X											
Satureja vulgaris (L.) Fritsch	Wild Basil						X		X	x	X	X							X					
Scirpus atrovirens Willd.	Black Bulrush											x				X	X	X						
Scirpus cyperinus (L.) Kunth	Wool-grass								X	x			X			X	X	X						
Scirpus microcarpus J. Presl. & C. Presl.	Red Tinged Bulrush																		x					
Silene vulgaris (Moench) Garcke	Bladder Campion	+											x											
Sium suave Walt.	Water-parsnip								x	x						x	x		x					
Solanum dulcamara L.	Bittersweet Nightshade	+					x		x	x	x	x				x	x		x					
Solidago altissima L.	Tall Goldenrod										x	x	x	x										
Solidago canadensis L.	Canada Goldenrod					x	x	x	x	x	x	x	x	x	x				x					
Sonchus arvensis L.	Field Sow-thistle	+										x												
Sorbus aucuparia L.	European Mountain-ash	+										x	x											
Taraxacum officinale Weber	Dandelion	+				x	x		x	x	x	x	x											
Tilia americana L.	Basswood						x		x	x		x	x		x									
Tragopogon dubius Scop.	Goat's-beard	+										x	x											
Tragopogon pratensis L.	Meadow Goat's-beard	+										x												
Trifolium hybridum L.	Alsike Clover	+											x											
Trifolium pratense L.	Red Clover	+										x	x	x										
Trifolium repens L.	White Clover	+										x	x	x										
Tussilago farfara L.	Coltsfoot	+																	x					
Ulmus americana L.	American Elm						x	x	x	x	x	x	x		x	x			x					
Verbascum thapsus L.	Common Mullein	+										x	x											
Veronica chamaedrys L.	Germander Speedwell	+										x												
Veronica officinalis L.	Common Speedwell	+					x		x	x	x													
Vicia cracca L.	Bird Vetch	+						x				x	x											
Vicia tetrasperma (L.) Schreb.	Sparrow Vetch	+										X	x											
Vitis riparia Michx.	Riverbank Grape	1		l			x		x	x	x	x	x	x	x				x					

+ - Non-native species
END -Endangred in Ontario - Species At Risk Ontario (SARO), Endangered Species Act, 2007

R - Rare in Grey County

Appendix E – Breeding Birds Observed on the Subject Lands

Appoint L - Diceting bilds C	boserved on the Subject Lands		A	T-4-1-#
Common Name	Scientific Name	Status**	Area-sensitive (OMNR*)	Total # Territories
Ruffed Grouse	Bonasa umbellus			1
Wild Turkey	Meleagris gallopavo			3
Sharp-shinned Hawk	Accipiter striatus		Α	1
Killdeer	Charadrius vociferus			2
Wilson's Snipe	Gallinago delicata			4
American Woodcock	Scolopax minor			2
Mourning Dove	Zenaida macroura			1
Black-billed Cuckoo	Coccyzus erythropthalmus			1
Ruby-throated Hummingbird	Archilochus colubris			1
Red-bellied Woodpecker	Melanerpes carolinus	R		1
Yellow-bellied Sapsucker	Sphyrapicus varius		Α	1
Downy Woodpecker	Picoides pubescens			2
Hairy Woodpecker	Picoides villosus		Α	2
Northern Flicker	Colaptes auratus			5
Pileated Woodpecker	Dryocopus pileatus		Α	1
Eastern Wood-Pewee	Contopus virens	SC,		6
Willow Flycatcher	Empidonax traillii			3
Least Flycatcher	Empidonax minimus		Α	3
Eastern Phoebe	Sayornis phoebe			1
Great Crested Flycatcher	Myiarchus crinitus			13
Eastern Kingbird	Tyrannus tyrannus			5
Blue-headed Vireo	Vireo solitarius		А	1
Warbling Vireo	Vireo gilvus			6
Red-eyed Vireo	Vireo olivaceus			10
Blue Jay	Cyanocitta cristata			3
American Crow	Corvus brachyrhynchos			3
Tree Swallow	Tachycineta bicolor			1
Barn Swallow	Hirundo rustica	THR,THR		1
Black-capped Chickadee	Poecile atricapillus			15
White-breasted Nuthatch	Sitta carolinensis		Α	1
Brown Creeper	Certhia americana		А	1
House Wren	Troglodytes aedon			10
Winter Wren	Troglodytes troglodytes		А	1
Wood Thrush	Hylocichla mustelina	SC,THR		1
American Robin	Turdus migratorius			14
Gray Catbird	Dumetella carolinensis			6
Brown Thrasher	Toxostoma rufum			1
European Starling	Sturnus vulgaris			3
Cedar Waxwing	Bombycilla cedrorum			12

Nashville Warbler	Vermivora ruficapilla			4
Northern Parula	Parula americana	R	Α	1
Yellow Warbler	Dendroica petechia			10
Chestnut-sided Warbler	Dendroica pensylvanica			1
Yellow-rumped Warbler	Dendroica coronata			1
Black-throated Green Warbler	Dendroica virens		Α	1
Black-and-white Warbler	Mniotilta varia		Α	5
American Redstart	Setophaga ruticilla		Α	5
Ovenbird	Seiurus aurocapillus		Α	3
Common Yellowthroat	Geothlyphis trichas			12
Scarlet Tanager	Piranga olivacea		Α	1
Chipping Sparrow	Spizella passerina			1
Field Sparrow	Spizella pusilla			8
Savannah Sparrow	Passerculus sandwichensis		Α	1
Song Sparrow	Melospiza melodia			18
White-throated Sparrow	Zonotrichia albicollis			6
Northern Cardinal	Cardinalis cardinalis			8
Rose-breasted Grosbeak	Pheucticus Iudovicianus			3
Indigo Bunting	Passerina cyanea			5
Bobolink	Dolichonyx oryzivorus	THR,THR	Α	2
Red-winged Blackbird	Agelaius phoeniceus			25
Eastern Meadowlark	Sturnella magna	THR,THR	Α	2
Common Grackle	Quiscalus quiscula			10
Brown-headed Cowbird	Molothrus ater			7
Baltimore Oriole	Icterus galbula			9
American Goldfinch	Cardeulis tristis			20

Number of Species: 65

Number of (provincial and national) Species at Risk: 5 Number of S1 to S3 (provincially rare) Species: 0

Number of Regionally Rare Species: 2 Number of Area-sensitive Species: 18

* Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide (Appendix G). 151 p plus appendices.

STATUS CODES

- ** R Rare if breeds in <25% Grey County OBBA squares
- THR, Threatened based on Species At Risk Ontario (SARO), *Endangered Species Act, 2007*
- SC, Special Concern based on Species At Risk Ontario (SARO), Endangered Species Act, 2007
- ,THR Threatened based on Species At Risk Act (SARA) Schedule 1, Species At Risk Act, 2002
- ,SC Special Concern based on Species At Risk Act (SARA) Schedule 1, Species At Risk Act, 2002
- THR (or SC), THR (or SC) Threatened (or Special Concern) based on Species At Risk Ontario (SARO), *Endangered Species Act, 2007* and Threatened based on Species At Risk Act (SARA) Schedule 1, *Species At Risk Act, 2002*