



Kim and Dave Stewart
1214 Gladstone Drive
Mossley, ON
N0L 1V0

May 29, 2015

Dear Kim and Dave Stewart:

Re: Environmental Impact Study - Kim and Dave Stewart, 2525 & 2695 Dingman Drive, London, ON

Introduction

BioLogic was retained to conduct an Environmental Impact Study (EIS) for a proposed lot adjustment between 2695 Dingman Drive and 2525 Dingman Drive to provide for a wider lot at 2695 and still allow construction of a second single family residence at 2525 Dingman Drive. For the purposes of this report, both existing lots are collectively referred to as the subject lands [Figure 1].

The eastern boundary of 2695 Dingman Drive would be shifted further east by 80-90m making the new property frontage 90-100m. This would provide an adequate lot width to accommodate a required 60m CPR rail line setback, as well a single detached dwelling and a sufficient westerly interior side yard.

This EIS assesses potential impacts and mitigation strategies of the proposed development on relevant natural heritage system features and functions.

Legal Parcel

General Background

2695 Dingman Drive consists of a single family residence fronting Dingman Drive. 2525 Dingman is a vacant lot. Collectively, the rear of the subject lands consists of Dingman Creek and a wooded area to the south. The subject lands are bound by Dingman Drive to the north, a CN railroad to the east, rural residential properties to the west and agricultural land to the south.

Soils throughout the majority of the subject lands consist of silt loam, loam and silty clay loam with well to imperfect drainage characteristics with a small area of eroded channel (narrow, shallow channels cut by small streams) throughout the central portion (Hagerty & Kingston, 1992).

In the general area topography is nearly level to very gently sloping (Hagerty & Kingston, 1992). Site specific topography is also nearly level however gently sloping from north to south towards Dingman Creek.

Land Use Designations

The north portion of the subject lands is designated Rural Settlement while the south portion is

BioLogic Incorporated
110 Riverside Drive, Suite 201
London, Ontario N6H 4S5
Telephone: 519-434-1516
Fax: 519-434-0575

www.biologic.ca

Windsor Office
2280 Ambassador Drive
Windsor, Ontario N9G 4E4
Telephone: 519-966-1645
Fax: 519-966-1645

designated Open Space by the City [Figure 2] (City of London Official Plan - Schedule A, 2014).

At the back portion of the subject lands there is an Unevaluated Vegetation Patch, Potential ESA, Significant Corridor, Big Picture Meta Cores and Corridors and a Maximum Hazard Line [Figure 3] identified by the City (City of London Official Plan - Schedule B1, 2014). These features are consistent with the Open Space designation on Figure 2.

The north portion of the subject lands is zoned Urban Reserve (UR6) while the remaining lands are zoned Open Space (OS4) and Environmental Review (ER) [Figure 4]. A zoning by-law amendment is required from Urban Reserve (UR6) to Residential (R1-17) zoning which would be consistent with the Official Plan land use designation.

The majority of the subject lands are within the UTRCA regulation limit for hazards associated with Dingman Creek [Figure 5].

Pre-consultation

A scoping meeting was held on January 27, 2015 with the City of London and it was agreed that given the distance between the Dingman Creek and the area for house and servicing construction along the Dingman Drive frontage, the EIS could be scoped. Several lot adjustment options were discussed at a subsequent Issues Summary Scoping Meeting with City Staff (J. MacKay and E. Lalonde) and EEPAC (S. Levin) on March 31, 2015. The proponent has elected to retain the proposed lot line adjustment. As a result, the zone line crosses through an Environmental Review patch south of Dingman Creek. Based on the March 31, 2015 scoping meeting, it was agreed that with this option, the proponent would convert the ER zone to OS4 in lieu of a full three season inventory to assess the patch.

Therefore, the scope of the EIS is to provide an overview of the natural heritage features and functions and to confirm appropriate setbacks to Dingman Creek and the woodland south of the creek.

Natural Heritage Features and Functions

Provincially Significant Areas

There are no provincially significant areas (PSW's or ANSI's) identified within or adjacent to the subject lands (LIO, 2015).

Vegetation Communities

An evaluation of vegetation [Appendix A] within the subject lands was conducted on May 8, 2015 by Will Huys, certified by MNRF to conduct ELC, and on May 22, 2015 by Dylan Morse and Will Huys and the results are summarized below.

The north portion of the subject lands consists of an existing single family residence fronting 2695 Dingman Drive and a vacant lot where a former residential dwelling existed at 2525 Dingman Drive.

A CUP/CUM1 Cultural Plantation/Mineral Cultural Meadow complex (Community 2) extends from the south boundary of the anthropogenic residential area nearly to Dingman Creek [Figure 6]. The community was planted with trees of mixed species about three years ago according to the landowner. The planted trees are still fairly small. Planted species include Silver Maple, White Spruce and White Pine. There are a few naturally occurring, young Black Walnut and Poplar in the community as well with

some Common Buckthorn and Grey Dogwood. Ground layer plants are a mix of Queen Anne's Lace, Goldenrod, Orchard Grass, Reed-canary Grass and Canada Anemone. The community is mowed between the rows of trees once or twice a year. Soil probes produced very fine Sandy-Clay with moisture regimes of 4 (moderately moist) and 5 (moist). There are abundant garbage and debris piles, including abandoned vehicles throughout this community. This community type triggers a further review under the Ontario Wetland Evaluation (H. Riddell, MNRF, August 21, 2014). Although this community is located within the Dingman Creek floodplain, planted White Spruce and White Pine which prefer drier upland habitat are thriving and the soil moisture regime was assessed as 4 (moderately moist) - 5 (moist). Therefore, based on plant dominance, this community would not be considered a wetland under the Ontario Wetland Evaluation System (OWES) protocol.

Beyond the residential area and cultural plantation/cultural meadow is a mid-age FOD7 Fresh-Moist Lowland Deciduous Forest (Community 3) straddling Dingman Creek and extending south to the property boundary [Figure 6]. Community 3 consists of a canopy dominated by Black Walnut and Manitoba Maple and a Manitoba Maple dominated sub-canopy. Understorey and ground layer species consist of Dogwood, Garlic Mustard (dominant), Goldenrod, Canada Anemone, Jewelweed, Nettle and Violet species. This community type triggers a further review under the Ontario Wetland Evaluation (H. Riddell, MNRF, August 21 2014). Although this community is located within the floodplain, the dominant plants are not wetland and the soil moisture regime was assessed as 3 (fresh), therefore this community would not be considered a wetland under the Ontario Wetland Evaluation System (OWES) protocol.

Along the southeast portion of the subject lands there is a mature FOD5-3 Dry-Fresh Sugar Maple-Oak Deciduous Forest on top of a ridge. The canopy and sub-canopy consist of Sugar Maple, Red Oak, American Elm, Black Walnut, Basswood and Poplar species. The understory consists of Red Ash, Gray Dogwood, Common Buckthorn and American Elm while the ground layer is dominated by False Solomon's Seal with Lily-of-the-valley, Golden Rods and Garlic Mustard associates. Along the east portion of the woodland there is a slope extending to the lowland community.

Aquatic

There are no aquatic Species At Risk identified within or adjacent to the subject lands (NHIC, 2015). Additionally, DFO SAR mapping does not identify any fish or mussel SAR or critical habitat within or adjacent to the subject lands (DFO, 2014).

Dingman Creek traverses the central portion of the subject lands and flows in an east-west direction before its confluence with the Thames River several kilometres downstream.

Flora

There is potential for ten floral species of provincial interest to be found within 1km of the subject lands [Appendix B]. Of these species, three are listed as Endangered while the remaining are ranked three are ranked S1-S3, SH and Special Concern.

No suitable habitat (no sandy plains, savannah, prairies) exists for Bird's Foot Violet, Tall Nutrush, Erect Knotweed or Sundial Lupine within the subject lands.

However, suitable habitat exists for Eastern Green Violet, Spoon-leaved Moss, Stiff Gentian and Chinese Hemlock Parsley in Community 3 and for Drooping Trillium and Yellow Bartonian in both Community 3

& 4 within the subject lands.

In addition, MNRF pre-screening response [Appendix B] notes there is also the potential for Eastern Flowering Dogwood, Broad Beech Fern and Witchgrass in the general area although there are no known occurrences of Species-at-Risk within the subject lands [Appendix B].

There are no suitable pastures, crop fields or orchards for Witchgrass within the subject lands. However suitable habitat exists for Eastern Flowering Dogwood in the Community 4 and Broad Beech Fern in Community 3 on site.

During initial site investigation, conditions were appropriate to identify Butternut and American Chestnut and neither species was observed within 25m of the proposed development footprint. No further consideration of these species is required.

No site specific floral inventories were required by the City for this scoped EIS. Instead, for the purposes of this submission, Eastern Green Violet, Spoon-leaved Moss, Stiff Gentian, Chinese Hemlock Parsley Drooping Trillium, Yellow Bartonian, Eastern Flowering Dogwood and Broad Beech Fern are assumed to be present in woodlands south of the Creek where there is suitable habitat. There is no suitable habitat for species of interest in the floodplain or lands north of the Dingman Creek.

Wildlife

Two faunal species of provincial interest have the potential to be found within 1 km of the subject lands [Appendix B] (NHIC, 2015). Of these species, one is ranked Endangered (Blanding's Turtle) and one listed as S3 (Eastern Ribbonsnake).

Suitable habitat exists for Blanding's Turtle in Dingman Creek and for Eastern Ribbonsnake in the lowland woodland on site. However, within the subject lands Dingman Creek is relatively shallow and provides only marginal habitat for turtle overwintering. Site specific soils are not conducive with turtle nesting, however Blandings Turtle may use the subject lands as a movement corridor within the creek.

Additionally, MNRF pre-screening response [Appendix B] notes there is also potential for Snapping Turtle, Milksnake, Eastern Meadowlark, Barn Swallow, American Badger, Slender Bluet, Eastern Amberwing and Double Striped Bluet within 1km of the subject lands [Appendix B].

No suitable habitat exists (no expansive grasslands or wet fields, no artificial nesting structures, no animal burrows, permanent lakes or ponds) for Eastern Meadowlark, Barn Swallow, American Badger or Slender Bluet within the subject lands.

However, suitable habitat exists for Snapping Turtle, Eastern Amberwing and Double Striped Bluet along Dingman Creek and for Milksnake within the subject lands.

No site specific faunal inventories were required by the City for this Scoped EIS. Instead, for the purposes of this submission, using the precautionary principle, Blanding's Turtle, Eastern Ribbonsnake, Snapping Turtle and Milksnake are assumed to be present in Dingman Creek and/or the woodland(s) south of the Creek where there is suitable habitat. There is no suitable habitat for species of interest in lands north of the floodplain with the exception of possible Milksnake.

Wildlife Habitat

Candidate significant wildlife habitat is identified by evaluating vegetation communities using the habitat criteria outlined in the Significant Wildlife Habitat Technical Guide (MNR, 2000) and the supporting Criteria Schedules (MNR, 2012). Based on the presence of a deciduous woodland OR deciduous swamp on site there is candidate SWH for the following [Appendix C]:

- Turtle Wintering Area - Dingman Creek (Community 3)
- Amphibian Breeding Habitat (woodland) - Community 3
- Special Concern and Rare Wildlife Species - Community 3

Candidate significant wildlife habitat must meet wildlife use thresholds (i.e., target species, population numbers, etc.) to be considered confirmed significant wildlife habitat. To date detailed floral and faunal surveys have not been completed to confirm the candidate significant wildlife habitat present within the subject lands.

Policy Review

Provincial

Based on our review of the 2014 Provincial Policy Statement, the following provincially significant features/functions will need further consideration to address Provincial policy:

- Candidate Significant Wildlife Habitat
- Fish Habitat
- Habitat of Endangered and Threatened Species

Municipal

Based on a review of the City of London Official Plan, 2006, Section 15.4 - Components of the Natural Heritage System, the following natural heritage features/functions require further consideration:

- Potential Environmentally Significant Area's (ESA's)
- Species at Risk
- Wildlife Habitat
- Fish Habitat
- Unevaluated Vegetation Patches

Conservation Authority

The majority of the subject lands are regulated by UTRCA for flood hazards associated with Dingman Creek [Figure 5].

Summary/Conclusion

The proponent is seeking consent for land severance and a zoning by-law amendment to facilitate the creation of a new residential dwelling on 2525 Dingman Drive with adjusted lot lines [Figure 7]. The first step of the process is to expand the current size of the 2695 Dingman Drive property through the severance and conveyance of lands from 2525 Dingman Drive. The second step of the proposal is to re-zone the northerly portion of the new 2525 Dingman Drive that is outside of the flood hazard area of Dingman Creek and the UTRCA regulation limit. The lands would be re-zoned from the current Urban Reserve (UR6) zone to a Residential (R1-17) zone. As agreed with the City, no further life science inventories were needed if the ER zone is also amended to OS4 at the same time. The remaining floodplain area and habitat would remain as OS4.

Based on site specific investigation and a policy review the following natural heritage features and functions will need further consideration prior to any site alteration or development:

- Candidate Significant Wildlife Habitat/Wildlife Habitat
- Fish Habitat
- Habitat of Endangered and Threatened Species (potential Blanding's Turtle in creek)
- Potential Environmentally Significant Area's
- Species at Risk
- Unevaluated Vegetation Patches

There are no direct impacts anticipated to the aforementioned natural heritage features by constructing a house and septic service on the revised lot of 2525 Dingman Drive. All construction work is beyond the regional flood limit for the Dingman Creek. Additionally, the proposed single family residence and septic bed at 2525 Dingman Drive are located 50-55m from the woodland edge and 60-75m from Dingman Creek. This 50+m setback of cultural plantation/cultural meadow between the proposed development and woodland/Dingman Creek is more than sufficient to protect the aforementioned natural heritage features and habitat that warrant consideration.

Regarding Blanding's Turtle, all Category 1 (overwintering site + 30m) and Category 2 (30m around suitable wetlands and waterbodies) habitat is located within the lowland woodland (Community 3), upland woodland (Community 4) and the cultural plantation/cultural meadow (Community 2). Both communities are beyond the development limit and will be retained and available as a corridor for Blanding's Turtle to access suitable habitat along Dingman Creek, if present.

In addition, the revised property line extends through a portion of the Environmental Review zone south of Dingman Creek. To mitigate this lot adjustment, it is proposed the ER zone be amended to an OS4 zone which would provide long term protection for the Dry-Fresh Sugar Maple - Oak Deciduous Forest (Community 4) south of Dingman Creek. The floodplain would remain OS4.

While no direct impacts are anticipated from the expansion of 2695 Dingman Drive, re-zoning of the ER lands and constructing a single family residence at 2525 Dingman Drive, some additional mitigating measures are recommended during and immediately following construction to protect features and functions to be retained.

Sediment and Erosion Control Measures

The most critical time for the protection of natural heritage features and functions is during the construction stage. There is sufficient setback from the woodland feature that traditional sediment and erosion control measures for the site would be sufficient.

Recommendation 1: Prior to construction, dual purpose tree protection/sediment and erosion control fencing should be installed along the development limit. This fence will:

- act as a barrier to keep species off-site and construction equipment and spoil out of adjacent features;
- prevent erosion and sedimentation; and
- protect existing trees

Recommendation 2: Tree protection/sediment and erosion control fencing should be inspected prior to construction to ensure it was installed correctly and during construction to ensure the fencing is being maintained and functioning properly.

Recommendation 3: Sediment and erosion control will be installed according to the Guidelines for Erosion and Sediment Control for Urban Construction Sites (OMNR, 1987) and the applicable standards established in the Ontario Provincial Standard Specification /Ontario Provincial Standards Drawings (OPPS/OPSD) documents.

Post-Construction Mitigation Measures

Although the most critical time for the protection of natural heritage features and functions is during the construction stage, post-development mitigation measures are also required.

Recommendation 1: Sediment and erosion control fencing should not be removed until adequate re-vegetation and site stabilization has occurred. Additional re-vegetation planting and/or more time for vegetation to establish may be required, however two growing seasons are typically enough to stabilize most sites.

Recommendation 2: All disturbed areas should be re-seeded as soon as possible to maximize erosion protection and to minimize volunteer populations of non-native species.

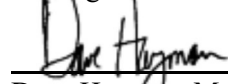
Recommendation 3: Roof runoff to bare ground can generate considerable sediment movement beyond the construction limits. Until the rear yard has been vegetated and is stable, the roof leader should be directed to the street or nearby stabilized vegetated areas.

We have evaluated the proposed development and any potential negative impacts to the natural heritage system have been avoided and/or mitigated with the above recommendations. Provided these recommendations are addressed, it is our opinion, from the perspective of natural heritage, the development can proceed.

Should you wish to clarify any questions or require additional information as part of this letter EIS, do not hesitate to contact us.

Yours truly,

BioLogic



Dave Hayman, M.Sc.

Stewart - Dingman Drive - EISFinal.wpd

Attachments

Figure 1-8 and Appendices A-C (details on following page)

BioLogic Incorporated
110 Riverside Drive, Suite 201
London, Ontario N6H 4S5
Telephone: 519-434-1516
Fax: 519-434-0575

www.biologic.ca

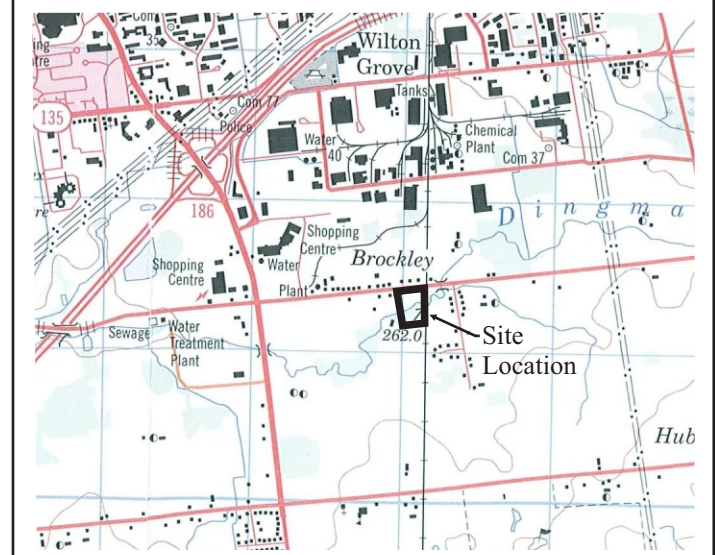
Windsor Office
2280 Ambassador Drive
Windsor, Ontario N9G 4E4
Telephone: 519-966-1645
Fax: 519-966-1645

Figure 1: Site Location
Figure 2: Land Use
Figure 3: Natural Heritage Features
Figure 4: Zoning
Figure 5: UTRCA Regulations
Figure 6: Vegetation Communities
Figure 7: Development Proposal
Figure 8: Development Proposal Overlay

Appendix A - ELC Information
Appendix B - MNR SAR Information
Appendix C - Preliminary Significant Wildlife Habitat Evaluation



Figure 1: Site Location
(2014 City of London Air Photo)



0 1,000
Scale 1:50,000
Key Plan

Print on 11X17, Landscape Orientation

0 25

Scale 1:1250
May 2015



- | | | | | | | | |
|-------------------------------------|---------------------------------|--|-------------------------|----------------------|--------------------|---------------------------------|-----------------------|
| Downtown Area | Community Commercial Node | Auto-Oriented Commercial Corridor | Low Density Residential | Office Business Park | Regional Facility | Urban Reserve Community Growth | Environmental Review |
| Enclosed Regional Commercial Node | Neighbourhood Commercial Node | Multi-Family, High Density Residential | Office Area | General Industrial | Community Facility | Urban Reserve Industrial Growth | Agricultural |
| New Format Regional Commercial Node | Main Street Commercial Corridor | Multi-Family, Medium Density Residential | Office/Residential | Light Industrial | Open Space | Rural Settlement | Urban Growth Boundary |

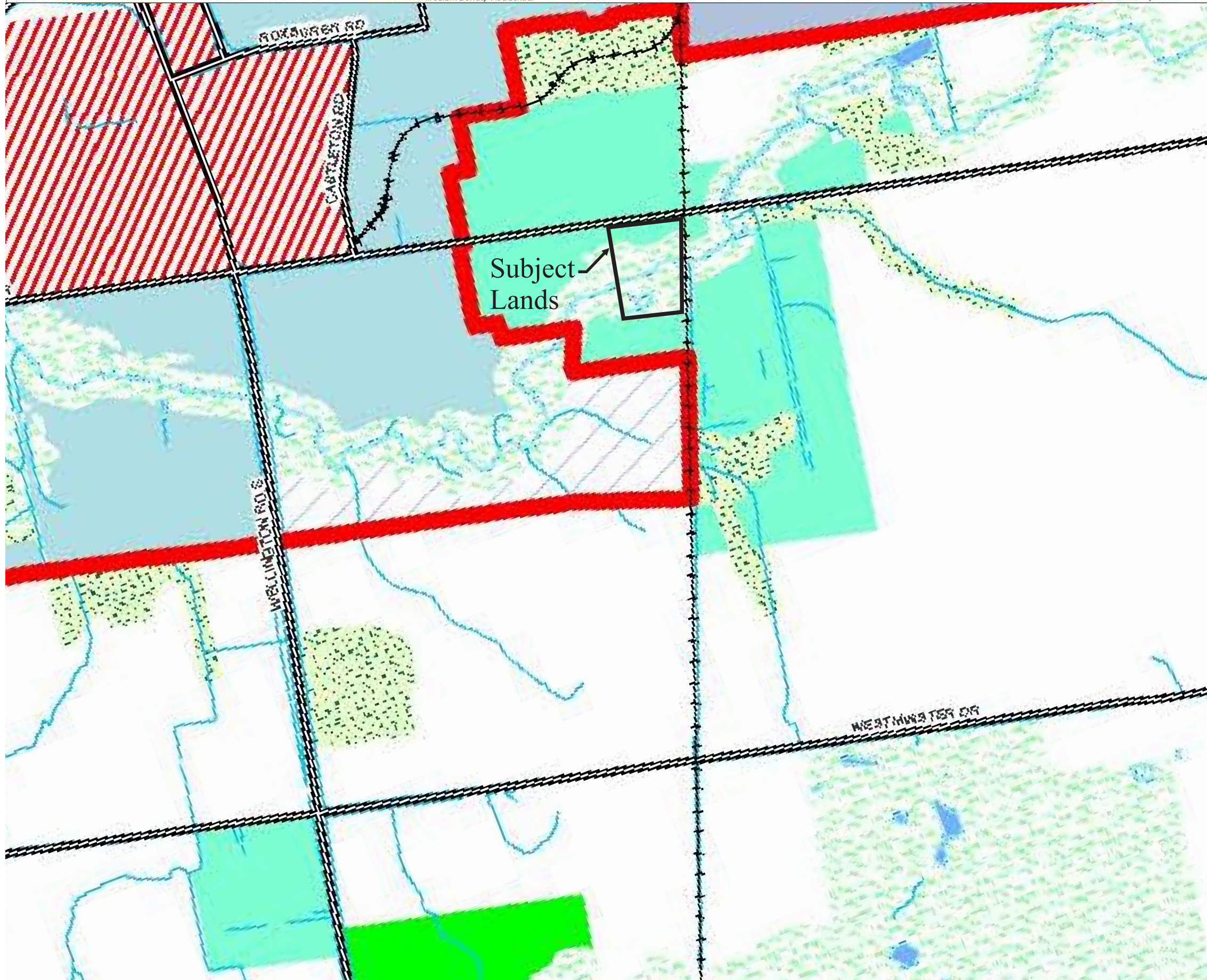
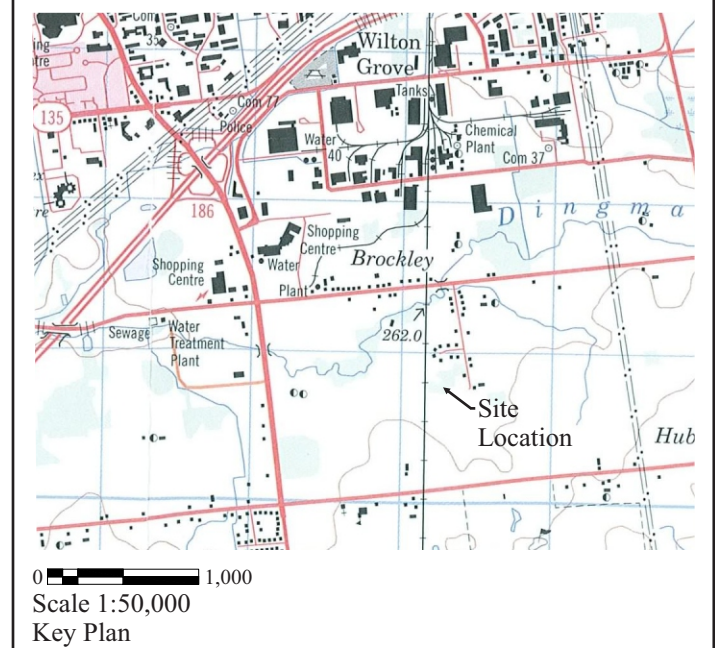
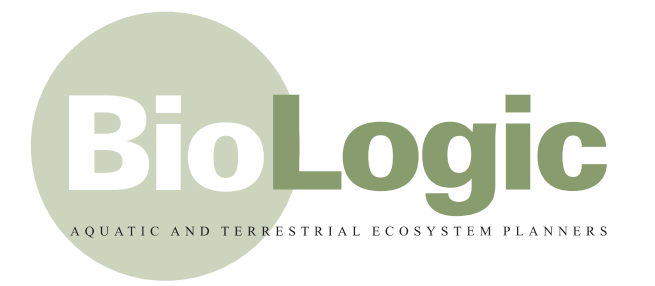


Figure 2: Schedule A - Land Use
City of London Official Plan, Working Consolidation July 23, 2014



Print on 11X17, Landscape Orientation
Scale 1:1250
May 2015



- | | | | | | |
|-----------------------|--------------------------------|------------------------------|-------------------------|-----------------------|---|
| ESAs | Woodlands | Unevaluated Corridors | Unevaluated Wetlands | Ground Water Recharge | SWS Bndry |
| Potential ESAs | Unevaluated Vegetation Patches | Prov Significant Wetlands | Pot Naturalization Area | Max Hazard Line | Big Picture Meta-Cores and Meta-Corridors |
| Significant Woodlands | Significant Corridors | Locally Significant Wetlands | Pot Upland Corridor | Cons. Authority Bndry | |

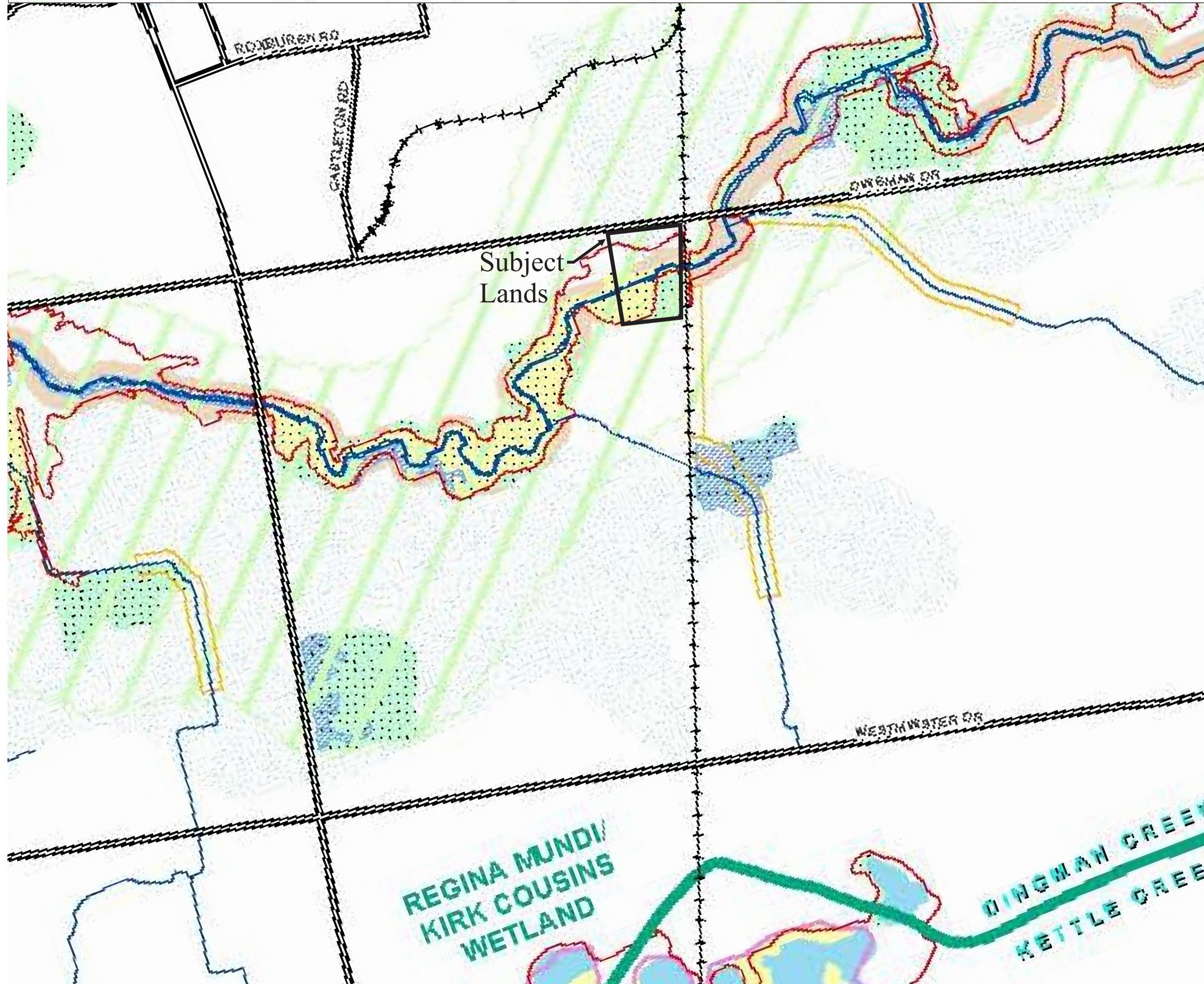
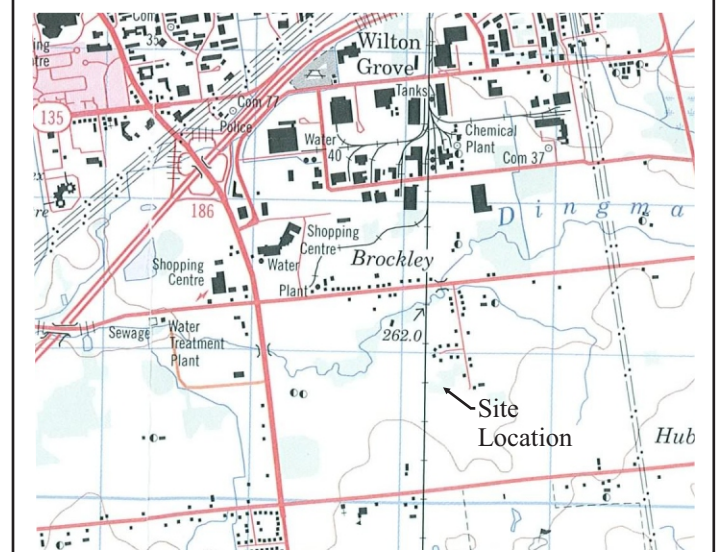


Figure 3: Schedule B1 - Natural Heritage Features

City of London Official Plan, Working Consolidation July 23, 2014



0 1,000
Scale 1:50,000
Key Plan

Print on 11X17, Landscape Orientation

0 25

Scale 1:1250
May 2015



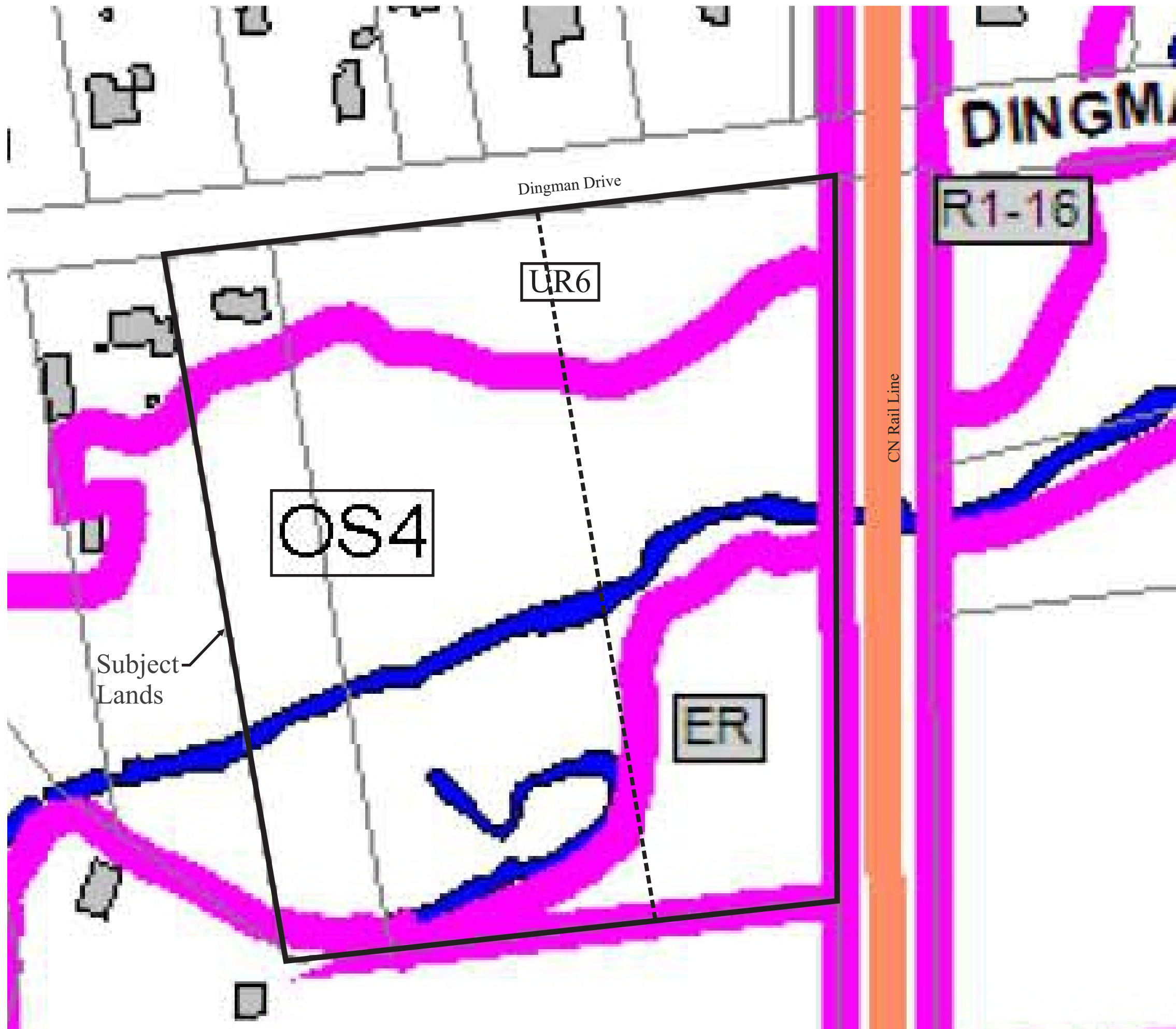
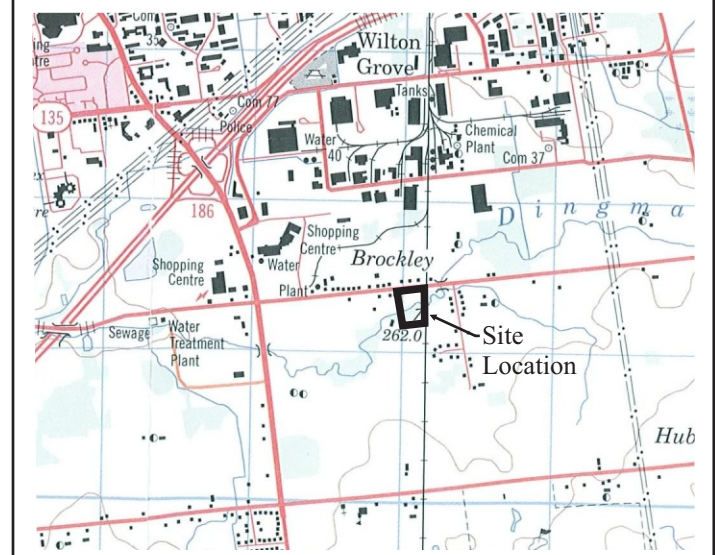


Figure 4: Zoning



0 1,000
Scale 1:50,000
Key Plan

Legend

----- Proposed new lot boundary

Print on 11X17, Landscape Orientation

0 25

Scale 1:1250
May 2015



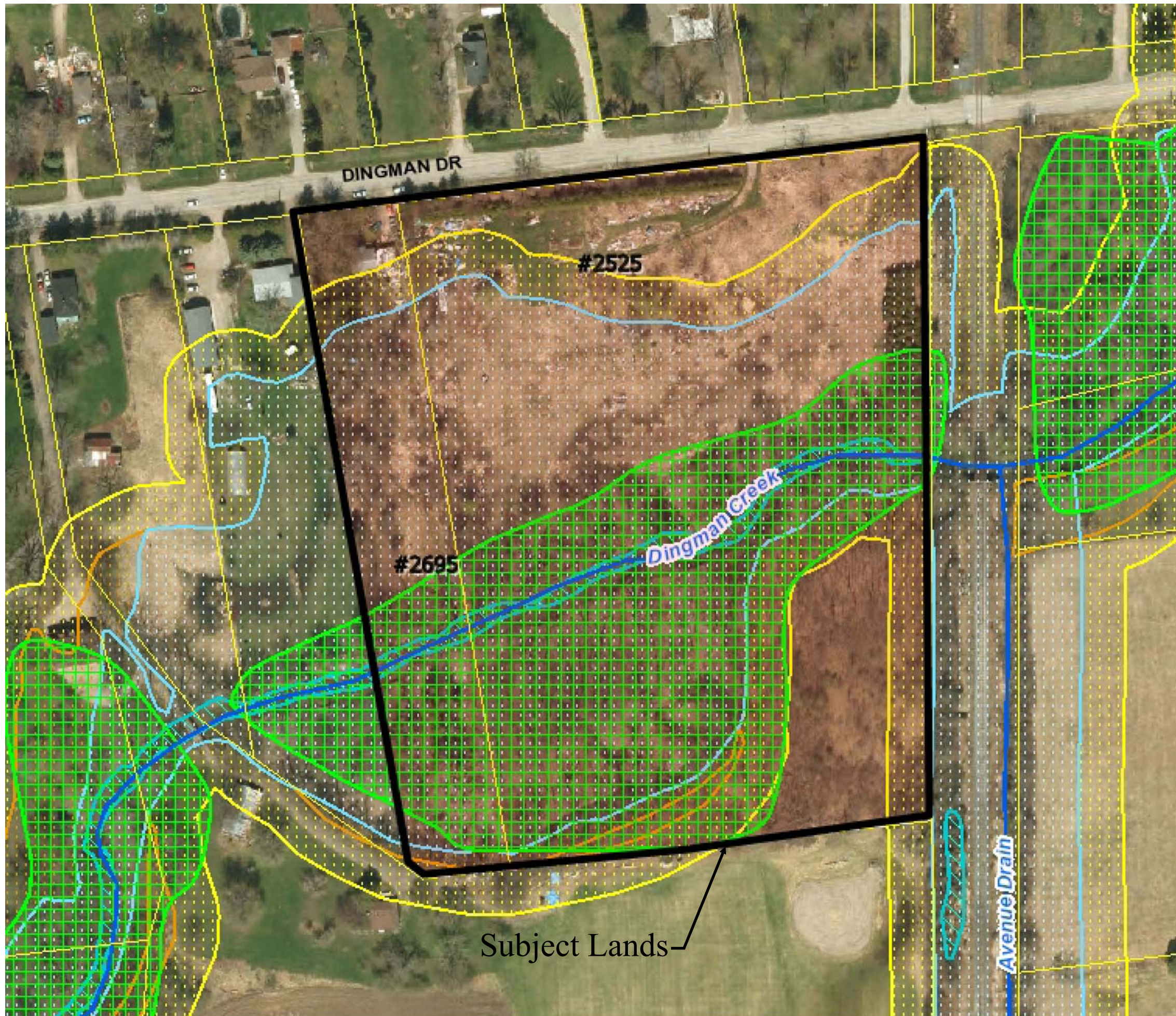
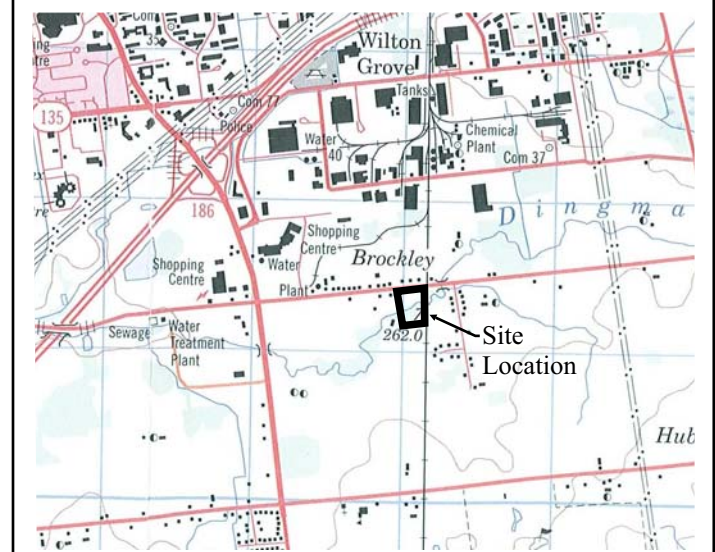


Figure 5: UTRCA Regulation Limit



0 1,000
Scale 1:50,000
Key Plan

Legend

- Road Labels (1:64K)
- Assessment Parcel
- Watercourse
 - Open
 - Tiled
- Middlesex NHS Woodland
 - No Criteria Met
 - 1+ Criteria Met
- MNR Wetland Unit (May 2011)
- Evaluated Wetland (MNR)
- Unevaluated Wetland (UTRCA)
- Flooding Hazard
- Erosion Hazard
- Wetland Interference
- Regulation Limit

Print on 11X17, Landscape Orientation

0 40

Scale 1:2000
May 2015





Figure 6: Vegetation Communities
(2014 City of London Air Photo)



0 1,000
Scale 1:50,000
Key Plan

Legend

- R1 - Residential/Anthropogenic Area
- 2 CUP/CUM1 Cultural Plantation/Mineral Cultural Meadow (0.9ha)
- 3 FOD7 Fresh-Moist Lowland Deciduous Forest (1.5ha)
- 4 FOD5-3 Dry-Fresh Sugar Maple-Oak Deciduous Forest (0.7ha)

----- Regional Floodline

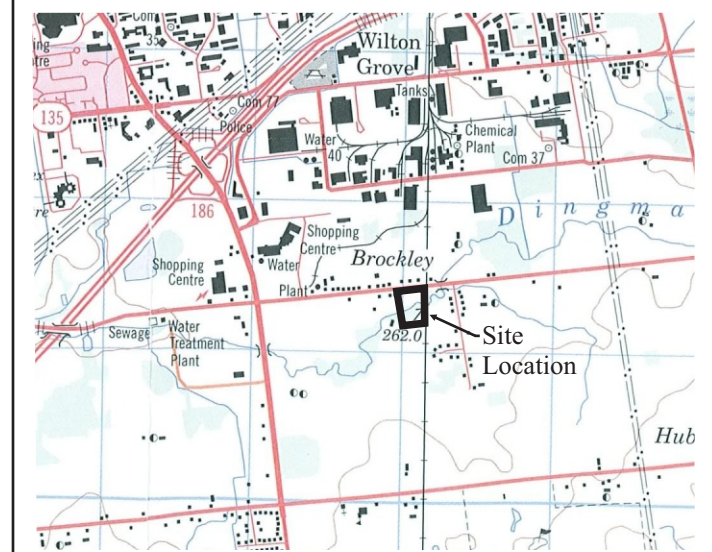
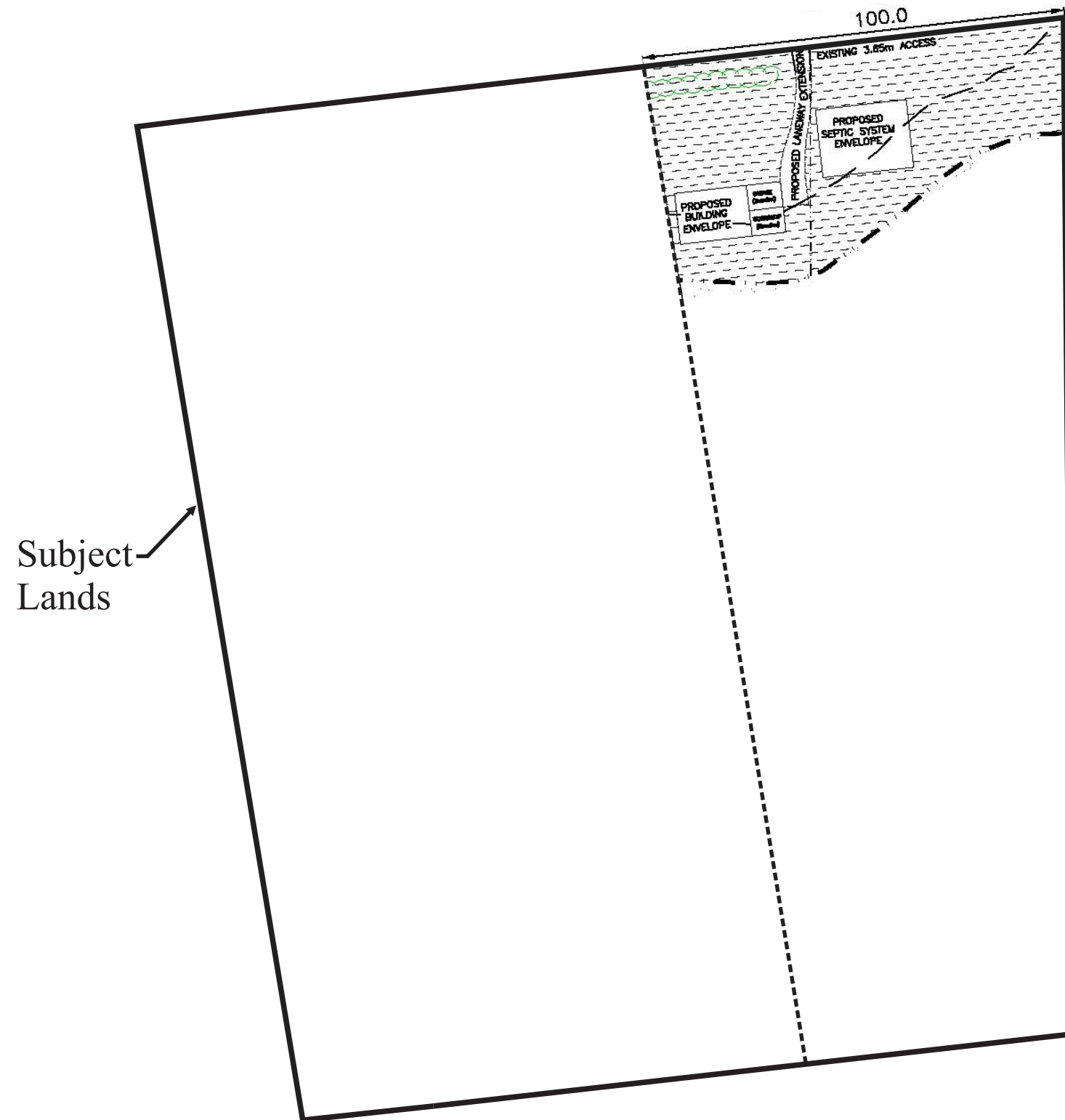
Print on 11X17, Landscape Orientation

0 25

Scale 1:1250
May 2015



Figure 7: Development Proposal



0 1,000
Scale 1:50,000
Key Plan

Print on 11X17, Landscape Orientation
0 25
Scale 1:1250
May 2015



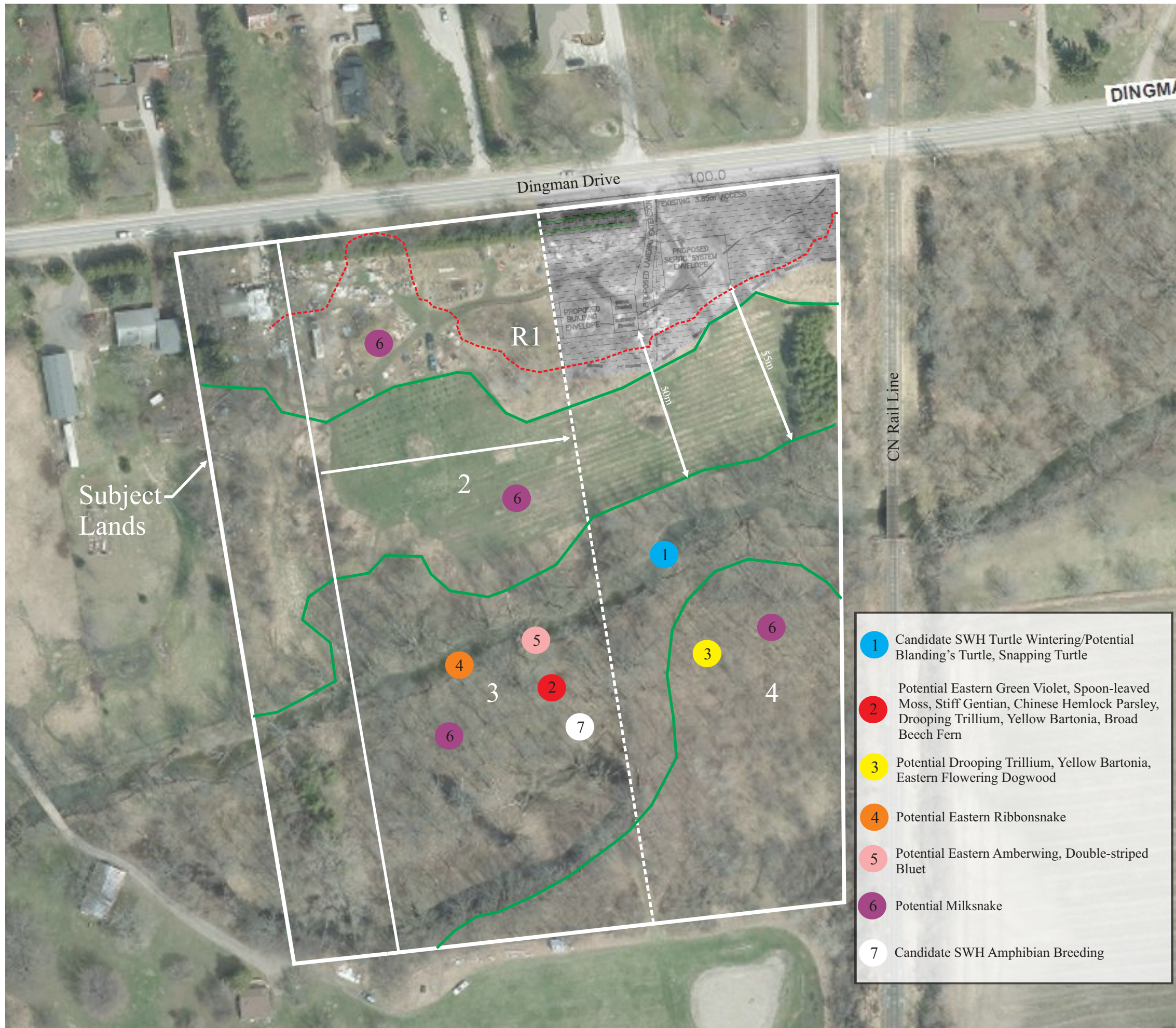
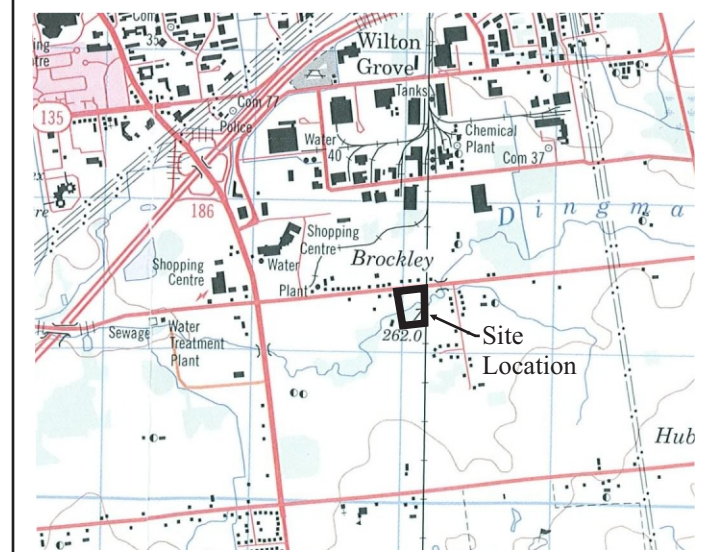


Figure 8: Development Proposal Overlay (2014 City of London Air Photo)



0 1,000
Scale 1:50,000
Key Plan

Legend

- R1 - Residential/Anthropogenic Area
- 2 CUP/CUM1 Cultural Plantation/Mineral Cultural Meadow (0.9ha)
- 3 FOD7 Fresh-Moist Lowland Deciduous Forest (1.5ha)
- 4 FOD5-3 Dry-Fresh Sugar Maple-Oak Deciduous Forest (0.7ha)
- Regional Floodline

- 1 Candidate SWH Turtle Wintering/Potential Blanding's Turtle, Snapping Turtle
- 2 Potential Eastern Green Violet, Spoon-leaved Moss, Stiff Gentian, Chinese Hemlock Parsley, Drooping Trillium, Yellow Bartonias, Broad Beech Fern
- 3 Potential Drooping Trillium, Yellow Bartonias, Eastern Flowering Dogwood
- 4 Potential Eastern Ribbonsnake
- 5 Potential Eastern Amberwing, Double-striped Bluet
- 6 Potential Milksnake
- 7 Candidate SWH Amphibian Breeding

Print on 11X17, Landscape Orientation

0 25

Scale 1:1250
May 2015



Appendix A

ELC Information



GENERAL SITE INFORMATION FIELD SHEET

Project: Steward - Dwigman Deveraux

Date: May 8, 2015

Project Manager: DM

Collector(s): WJ

Visit #: 1

Time started: 4:00

Time finished: _____

Combined collectors' hours: _____

NHIC List MNR EO's none not provided to collector

WEATHER CONDITIONS				WIND SCALE			
Temp. <u>28</u>	Wind: <u>1</u>	Cloud Cover (%) <u>0</u>	Precipitation Today: <u>no</u>	0	Calm		
	Direction: <u>W</u>		Yesterday: <u>no</u>	1	Smoke Drifts		
DATA FOCUS				2	Wind Felt on Face		
<input type="checkbox"/> Birds 1_2_	<input checked="" type="checkbox"/>	ELC's	<input type="checkbox"/> Dripline	3	Leaves in constant motion		
<input type="checkbox"/> Mammals	<input checked="" type="checkbox"/>	Floral V_ X_S_ _A_	<input type="checkbox"/> Aquatic - Physical	4	Wind raises dust and paper		
<input type="checkbox"/> Amphibians 1_2_3_	<input type="checkbox"/>	Wetland	<input type="checkbox"/> Aquatic - Biological	5	Small trees sway		
<input type="checkbox"/> Reptiles	<input type="checkbox"/>	Butternut	<input type="checkbox"/> Faunal Habitat	6	Large branches sway		
<input type="checkbox"/> Invertebrates	<input type="checkbox"/>	other SAR		7	Lots of resistance when walking into		
FEATURES (with GPS co-ordinates where applicable)				8	Limbs breaking off trees		
Man-made Structures:				<input type="checkbox"/> None observed	Mapped	Follow-up Req'd	
					Yes	No	Who
<input type="checkbox"/>	Barns/Footings/Wells/other(list)						
<input type="checkbox"/>	Rock Piles						
<input type="checkbox"/>	Garbage						
Natural Vegetation:				<input type="checkbox"/> None observed			
<input type="checkbox"/>	Fallen Logs outside woods (#'s)						
<input type="checkbox"/>	Brush Piles						
<input type="checkbox"/>	Snags (raptor perch)						
<input type="checkbox"/>	Tree Cavities (nesting)						
<input type="checkbox"/>	Sentinel Trees						
<input type="checkbox"/>	Mast Trees (6E)	<input type="checkbox"/>	Berry Shrubs (6E)				
Wildlife Features:				<input type="checkbox"/> None observed			
<input type="checkbox"/>	Waterfowl nesting (large #'s, # of species)						
<input type="checkbox"/>	Exposed Banks (nesting swallows)						
<input type="checkbox"/>	Stick Nests						
<input type="checkbox"/>	Animal Burrows (>10cm)						
<input type="checkbox"/>	Heronry						
<input type="checkbox"/>	Crayfish mounds						
<input type="checkbox"/>	Sand/gravel on site						
<input type="checkbox"/>	Marsh/open country/shrub						
<input type="checkbox"/>	Winter Deer yards						
<input type="checkbox"/>	Corridor from pond to woods (ampibian movement)						
<input type="checkbox"/>	Bat corridor (shorelines, escarpments)						
<input type="checkbox"/>	Bat hibernacula (caves, mines, crevices, etc.)						
Aquatic Features:							
<input type="checkbox"/>	Perm. pond in woodland	<input type="checkbox"/> emergents/submergents/logs	<input type="checkbox"/> temp.				
<input type="checkbox"/>	Perm. pond in open	<input type="checkbox"/> emergents/submergents/logs	<input type="checkbox"/> temp.				
<input type="checkbox"/>	Water in woodland	<input type="checkbox"/> pools <input type="checkbox"/> flowing <input type="checkbox"/> dry					
<input type="checkbox"/>	Waterways	flowing dry pools					
<input type="checkbox"/>	natural stream	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	swale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None observed		
<input type="checkbox"/>	open drain	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	Seeps/Springs	<input type="checkbox"/>	<input type="checkbox"/>				
Incidental Observations:							
→ Community 1 is junk piles with man, maple, butternut and poplar with some willow							
→ Dwigman community is Man Maple, Willow Swamp, walnut on south side of creek.							

Graphic Attached or Name

Checked by Project Manager

Date: _____

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Stewart - Pingman Drive</i>		POLYGON: <i>3</i>
	SURVEYOR(S): <i>O. Morse</i>	DATE: <i>May 22, 2015</i>	TIME: start <i>12:45</i> finish <i>2:15</i>
	UTMZ:	UTME:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
<input checked="" type="checkbox"/> TERRESTRIAL <input type="checkbox"/> WETLAND <input type="checkbox"/> AQUATIC	<input type="checkbox"/> ORGANIC <input checked="" type="checkbox"/> MINERAL SOIL <input type="checkbox"/> PARENT MIN. <input type="checkbox"/> ACIDIC BEDRK. <input type="checkbox"/> BASIC BEDRK. <input type="checkbox"/> CARB. BEDRK.	<input type="checkbox"/> LACUSTRINE <input type="checkbox"/> RIVERINE <input checked="" type="checkbox"/> BOTTOMLAND <input type="checkbox"/> TERRACE <input type="checkbox"/> VALLEY SLOPE <input type="checkbox"/> TABLELAND <input type="checkbox"/> ROLL UPLAND <input type="checkbox"/> CLIFF <input type="checkbox"/> TALUS <input type="checkbox"/> CREVICE / CAVE <input type="checkbox"/> ALVAR <input type="checkbox"/> ROCKLAND <input type="checkbox"/> BEACH / BAR <input type="checkbox"/> SAND DUNE <input type="checkbox"/> BLUFF	<input type="checkbox"/> NATURAL <input type="checkbox"/> CULTURAL	<input type="checkbox"/> PLANKTON <input type="checkbox"/> SUBMERGED <input type="checkbox"/> FLOATING-LVD. <input type="checkbox"/> GRAMINOID <input type="checkbox"/> FORB <input type="checkbox"/> LICHEN <input checked="" type="checkbox"/> BRYOPHYTE <input type="checkbox"/> DECIDUOUS <input type="checkbox"/> CONIFEROUS <input type="checkbox"/> MIXED	<input type="checkbox"/> LAKE <input type="checkbox"/> POND <input type="checkbox"/> RIVER <input type="checkbox"/> STREAM <input type="checkbox"/> MARSH <input type="checkbox"/> SWAMP <input type="checkbox"/> FEN <input type="checkbox"/> BOG <input type="checkbox"/> BARREN <input type="checkbox"/> MEADOW <input type="checkbox"/> PRAIRIE <input type="checkbox"/> THICKET <input checked="" type="checkbox"/> SAVANNAH <input type="checkbox"/> WOODLAND <input type="checkbox"/> FOREST <input type="checkbox"/> PLANTATION
SITE		COVER			
<input type="checkbox"/> OPEN WATER <input type="checkbox"/> SHALLOW WATER <input type="checkbox"/> SURFICIAL DEP. <input type="checkbox"/> BEDROCK		<input type="checkbox"/> OPEN <input type="checkbox"/> SHRUB <input checked="" type="checkbox"/> TREED			

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1 CANOPY	2	3	<i>ACE nega >> JUG nigr > Salix sp.</i>
2 SUB-CANOPY	3.4	3	<i>ACE nega >> JUG nigr</i>
3 UNDERSTOREY	5	2	<i>RHA catk = COR stel = Cornus sp.</i>
4 GRD. LAYER	7	4	<i>ALL peti > LAP cana > Solidago sp. = ANE cana</i>

HT: CODES: 1 = >25m 2 = 10<HT<25m 3 = 2<HT<10m 4 = 1<HT<2m 5 = 0.5<HT<1m 6 = 0.2<HT<0.5m 7 = HT<0.2m

CVR: CODES 0 = NONE 1 = 0% < CVR < 10% 2 = 10 < CVR < 25% 3 = 25 < CVR < 60% 4 = CVR > 60%

STAND COMPOSITION: BA:

SIZE CLASS ANALYSIS: A < 10 A 10-24 R 25-50 N > 50

STANDING SNAGS: R < 10 R 10-24 R 25-50 N > 50

DEADFALL / LOGS: R < 10 R 10-24 R 25-50 N > 50

ABUNDANCE CODES: N = NONE R = RARE G = OCCASIONAL A = ABUNDANT

COMM. AGE: PIONEER YOUNG MID-AGE MATURE OLD GROWTH

SOIL ANALYSIS:

TEXTURE: *SiC* DEPTH TO MOTTLES / GLEY: *g = 999 G = 999*
 MOISTURE: *3* DEPTH OF ORGANICS: *1* (cm)
 HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: *999* (cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	<i>Forest</i>	ELC CODE	<i>F0</i>
COMMUNITY SERIES:	<i>Deciduous Forest</i>		<i>F00</i>
ECOSITE:	<i>Fresh-Moist Lowland Deciduous Forest</i>		<i>F007</i>
VEGETATION TYPE:			
INCLUSION			
COMPLEX			

Notes:

ELC MANAGEMENT / DISTURBANCE	SITE:				SCORE †
	POLYGON:				
	DATE:				
	SURVEYOR(S):				
DISTURBANCE / EXTENT	0	1	2	3	
TIME SINCE LOGGING	> 30 YRS	15 - 30 YRS	5 - 15 YRS	0 - 5 YEARS	
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FLOODING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: <i>Stewart - Dingman Drive</i>		POLYGON: <i>4</i>	
	SURVEYOR(S): <i>D. Morse</i>		DATE: <i>May 22, 2015</i>	TIME: start <i>12:45</i>
	UTMZ:		UTME:	UTMN:
				finish <i>2:15</i>

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
<input checked="" type="checkbox"/> TERRESTRIAL <input type="checkbox"/> WETLAND <input type="checkbox"/> AQUATIC	<input type="checkbox"/> ORGANIC <input checked="" type="checkbox"/> MINERAL SOIL <input type="checkbox"/> PARENT MIN. <input type="checkbox"/> ACIDIC BEDRK. <input type="checkbox"/> BASIC BEDRK. <input type="checkbox"/> CARB. BEDRK.	<input type="checkbox"/> LACUSTRINE <input type="checkbox"/> RIVERINE <input type="checkbox"/> BOTTOMLAND <input type="checkbox"/> TERRACE <input type="checkbox"/> VALLEY SLOPE <input checked="" type="checkbox"/> TABLELAND <input type="checkbox"/> ROLL UPLAND <input type="checkbox"/> CLIFF <input type="checkbox"/> TALUS <input type="checkbox"/> CREVICE / CAVE <input type="checkbox"/> ALVAR <input type="checkbox"/> ROCKLAND <input type="checkbox"/> BEACH / BAR <input type="checkbox"/> SAND DUNE <input type="checkbox"/> BLUFF	<input checked="" type="checkbox"/> NATURAL <input type="checkbox"/> CULTURAL	<input type="checkbox"/> PLANKTON <input type="checkbox"/> SUBMERGED <input type="checkbox"/> FLOATING-LVD. <input type="checkbox"/> GRAMINOID <input type="checkbox"/> FORB <input type="checkbox"/> LICHEN <input type="checkbox"/> BRYOPHYTE <input checked="" type="checkbox"/> DECIDUOUS <input type="checkbox"/> CONIFEROUS <input type="checkbox"/> MIXED	<input type="checkbox"/> LAKE <input type="checkbox"/> POND <input type="checkbox"/> RIVER <input type="checkbox"/> STREAM <input type="checkbox"/> MARSH <input type="checkbox"/> SWAMP <input type="checkbox"/> FEN <input type="checkbox"/> BOG <input type="checkbox"/> BARREN <input type="checkbox"/> MEADOW <input type="checkbox"/> PRAIRIE <input type="checkbox"/> THICKET <input type="checkbox"/> SAVANNAH <input checked="" type="checkbox"/> WOODLAND <input type="checkbox"/> FOREST <input type="checkbox"/> PLANTATION
SITE		COVER			
<input type="checkbox"/> OPEN WATER <input type="checkbox"/> SHALLOW WATER <input type="checkbox"/> SURFICIAL DEP. <input type="checkbox"/> BEDROCK		<input type="checkbox"/> OPEN <input type="checkbox"/> SHRUB <input checked="" type="checkbox"/> TREED			

STAND DESCRIPTION:

LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (up to 4 sp) (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY	1 4	<i>ACEsasa > QUE rubr > ULM amer > JUG nigr > T. Lamer</i>
2	SUB-CANOPY	2-3 3	<i>ACEsasa > QUE rubr > ULM amer > Populus sp.</i>
3	UNDERSTOREY	4 1	<i>FRA penn > COR foem > RHA cath = ULM amer</i>
4	GRD. LAYER	7 4	<i>MAI rare >> CON maje > Solidago sp. > ALL peti</i>

HT CODES: 1 = >25m 2 = 10<HT<25m 3 = 2<HT<10m 4 = 1<HT<2m 5 = 0.5<HT<1m 6 = 0.2<HT<0.5m 7 = HT<0.2m
CVR CODES: 0 = NONE 1 = 0% < CVR < 10% 2 = 10 < CVR < 25% 3 = 25 < CVR < 60% 4 = CVR > 60%

STAND COMPOSITION: BA: _____

SIZE CLASS ANALYSIS:	A	< 10	A	10-24	A	25-50	R/O	> 50
----------------------	---	------	---	-------	---	-------	-----	------

STANDING SNAGS:	R	< 10	R	10-24	R	25-50	N	> 50
-----------------	---	------	---	-------	---	-------	---	------

DEADFALL / LOGS:	R	< 10	R	10-24	R	25-50	N	> 50
------------------	---	------	---	-------	---	-------	---	------

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: PIONEER YOUNG MID-AGE X MATURE OLD GROWTH

SOIL ANALYSIS:

TEXTURE: *v f sc* DEPTH TO MOTTLES / GLEY: *g = 999 G = 999*
MOISTURE: *3* DEPTH OF ORGANICS: *1* (cm)
HOMOGENEOUS / VARIABLE DEPTH TO BEDROCK: *999* (cm)

COMMUNITY CLASSIFICATION:

ELC CODE

COMMUNITY CLASS:	<i>Forest</i>	<i>F0</i>
COMMUNITY SERIES:	<i>Deciduous Forest</i>	<i>F0D</i>
ECOSITE:	<i>Dry-fresh Sugar Maple - Oak</i>	<i>F0D5-3</i>
VEGETATION TYPE:	<i>Deciduous Forest</i>	
INCLUSION		
COMPLEX		

Notes:

ELC MANAGEMENT / DISTURBANCE	SITE:				
	POLYGON:				
	DATE:				
	SURVEYOR(S):				
DISTURBANCE / EXTENT	0	1	2	3	SCORE †
TIME SINCE LOGGING	> 30 YRS	16 - 30 YRS	6 - 16 YRS	0 - 5 YEARS	
INTENSITY OF LOGGING	NONE	FUEL WOOD	SELECTIVE	DIAMETER LIMIT	
EXTENT OF LOGGING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
SUGAR BUSH OPERATIONS	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF OPERATIONS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
GAPS IN FOREST CANOPY	NONE	SMALL	INTERMEDIATE	LARGE	
EXTENT OF GAPS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
LIVESTOCK (GRAZING)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF LIVESTOCK	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ALIEN SPECIES	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF ALIEN SPECIES	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
PLANTING (PLANTATION)	NONE	OCCASIONAL	ABUNDANT	DOMINANT	
EXTENT OF PLANTING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
TRACKS AND TRAILS	NONE	FAINT TRAILS	WELL MARKED	TRACKS OR	
EXTENT OF TRACKS/TRAILS	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DUMPING (RUBBISH)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DUMPING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
EARTH DISPLACEMENT	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISPLACEMENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
RECREATIONAL USE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF RECR. USE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
NOISE	NONE	SLIGHT	MODERATE	INTENSE	
EXTENT OF NOISE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
DISEASE/DEATH OF TREES	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF DISEASE / DEATH	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
WIND THROW (BLOW DOWN)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF WIND THROW	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BROWSE (e.g. DEER)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BROWSE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
BEAVER ACTIVITY	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF BEAVER	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FLOODING (pools & puddling)	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FLOODING	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
FIRE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF FIRE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
ICE DAMAGE	NONE	LIGHT	MODERATE	HEAVY	
EXTENT OF ICE DAMAGE	NONE	LOCAL	WIDESPREAD	EXTENSIVE	
OTHER	NONE	LIGHT	MODERATE	HEAVY	
EXTENT	NONE	LOCAL	WIDESPREAD	EXTENSIVE	

† INTENSITY x EXTENT = SCORE

Appendix B

MNRF SAR Information

Dylan Morse

From: Fleischhauer, Andrea (MNRF) <Andrea.Fleischhauer@ontario.ca>
Sent: Wednesday, April 15, 2015 2:04 PM
To: Dylan Morse
Cc: Dave Hayman
Subject: RE: Additional EO Information Request - 2525 & 2695 Dingman Drive, London
Attachments: 2013-02-14 Identifying wetlands and potential wetlands from ELC.doc

Dylan,

The Ministry of Natural Resources and Forestry (MNRF) understands that Biologic is conducting a natural heritage review for Kim and Dave Stewart proposed consent, rezoning and severance at 2525 & 2695 Dingman Drive; Part Lot 14, Concession 4 N & Part Lot 14, Concession 4 N, City of London.

MNRF provides the following natural heritage information in response to your request sent on February 17th, 2015.

Species at Risk (SAR)

The Species at Risk in Ontario (SARO) List (<http://www.ontario.ca/environment-and-energy/species-risk-ontario-list>) is Ontario Regulation 230/08 issued under the *Endangered Species Act, 2007* (ESA). The ESA came into force on June 30, 2008, and provides both species protection (section 9) and habitat protection (section 10) to species listed as endangered or threatened on the SARO List. The current SARO List can be found on e-laws (<http://www.e-laws.gov.on.ca/navigation?file=home&lang=en>).

An initial SAR (Endangered and Threatened species) screening has been completed for the above-noted property.

In addition to the species list provided by Biologic, there are no known occurrences of SAR on the property; however, there are known occurrences of SAR in the general project area, including:

- **Butternut** (Endangered, with general habitat protection)
- **American Chestnut** (Endangered, with general habitat protection)
- **Eastern Flowering Dogwood** (Endangered, with regulated habitat protection)
- **American Badger** (Endangered, with regulated habitat protection) - historical
- **Barn Swallow** (Threatened, with general habitat protection)
- **Eastern Meadowlark** (Threatened, with general habitat protection)

Please note that this is an initial screening for SAR and the absence of an element occurrence does not indicate the absence of species. The province has not been surveyed comprehensively for the presence or absence of SAR and MNRF data relies on observers to report sightings of SAR. Field assessments by a qualified professional may be necessary if there is a high likelihood for SAR species and/or habitat to occur within the project footprint.

It is important to note the following:

- Changes may occur in both species and habitat protection which could affect whether proposed projects may have adverse effects on SAR.
- The Committee on the Status of Species at Risk in Ontario (COSSARO) meets regularly to evaluate new species for listing and/or re-evaluate species already on the SARO List. As a result, species designations may change, which could in turn change the level of protection they receive under the ESA 2007.
- Habitat protection provisions for a species may change if a species-specific habitat regulation comes into effect.

If an activity or project will result in adverse effects to endangered or threatened species and/or their habitat, additional action would need to be taken in order to remain in compliance with the ESA. Additional action could be applying for an

authorization under section 17(2)(c) of the ESA, or completing an online registry for an ESA regulation, if the project is eligible (<http://www.ontario.ca/environment-and-energy/natural-resources-approvals>).

Please be advised that applying for an authorization does not guarantee approval and the process can take several months.

If you wish to determine whether a project may be eligible for the online registry process, please refer to MNRF's website (<http://www.ontario.ca/environment-and-energy/natural-resources-approvals>). Questions about the registry process should be directed to MNRF's Registry and Approval Services Centre at 1-855-613-4256 or at mnr.rasc@ontario.ca.

Significant Wildlife Habitat (SWH)

Significant wildlife habitat (SWH) may be present on or adjacent to the above-noted subject lands (within 120 m). Based on the presence of Dingman Creek and the appearance of an oxbow within the property area, Turtle Wintering Areas may be present in addition to potential amphibian breeding habitat (woodland).

Please consult the Significant Wildlife Habitat Technical Guide (SWHTG, OMNR 2000), the Natural Heritage Reference Manual (NHRM) and the Ecoregion Criteria Schedules for criteria on identifying and determining significance of wildlife habitat. SWH is identified by planning authorities using the criteria and processes recommended in the SWHTG and Ecoregion Criteria Schedules.

Link to the SWHTG: <https://www.ontario.ca/environment-and-energy/guide-significant-wildlife-habitat>

Link to Ecoregion 7E criteria

schedule: http://publicdocs.mnr.gov.on.ca/View.asp?Document_ID=21843&Attachment_ID=45645

MNRF completed a screening for S1-S3, SH and special concern species and the following have known occurrences in the general project area:

- Snapping Turtle (Special Concern)
- Broad Beech Fern (Special Concern)
- Milksnake (Special Concern)
- Slender Bluet (S1)
- Eastern Amberwing (S3)
- Double-striped Bluet (S3)
- Witch Grass (S3)

The habitat of provincially rare (S1-S3, SH) and Special Concern species is considered SWH under the category of 'Special Concern and Rare Wildlife Species' in the SWHTG Ecoregion Criteria Schedules. Therefore, consideration should be given to these species and whether their habitat occurs on or within 120 m of the subject lands.

Areas of Natural and Scientific Interest (ANSIs)

There are no Provincially or Regionally Significant Earth or Life Science ANSI's within or adjacent to the proposed subject lands.

Significant Woodlands

There appears to be woodland located on and adjacent to the project area. We recommend you refer to applicable Official Plans for criteria to determine the significance of woodlands near the project locations. The NHRM also contains information and criteria for determining significant woodlands.

Significant Wetlands

There are no known evaluated wetlands within or adjacent to the above-noted subject lands.

It is possible for unevaluated wetlands to occur on or adjacent to the site, e.g. they could be located within or in proximity to woodlands. Please see the attached reference sheet for a list of Ecological Land Classification (ELC) communities that could possibly be considered wetlands in Aylmer District. Site-specific investigation within the study area may find existing wetlands within such ELC communities that have not yet been evaluated or designated. It appears that an oxbow is present towards the southern portion of the subject lands which could meet the criteria for a wetland. Consideration and delineation of wetland areas should be determined using criteria and methodology as outlined in the Ontario Wetland Evaluation System (OWES) and submitted to MNRF for review.

Significant Valleylands

MNRF does not possess significant valleylands mapping. We suggest you contact the applicable conservation authorities to find out if they have information pertaining to significant valleylands. The NHRM also provides guidance on evaluation criteria for determining significant valleylands.

Fish and Fish Habitat

Dingman Creek occurs within the project area; however, no information on fish and fish habitat or mussel and mussel habitat is available.

MNRF recommends you contact the appropriate conservation authority and DFO for up-to-date fisheries, mussel and drain information.

Conservation Authorities and Official Plans may provide additional natural heritage information for this study.

Please be advised that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

If you have any questions or require additional information, please feel free to contact me.

Regards,
Andrea

Andrea Fleischhauer
District Planner, Aylmer District
Ministry of Natural Resources and Forestry

P: 519.773.4750
C: 519.765.6455
F: 519.773.9014
E: andrea.fleischhauer@ontario.ca

From: Dylan Morse [mailto:dmorse@biologic.ca]
Sent: February-17-15 3:27 PM
To: Fleischhauer, Andrea (MNRF)
Cc: Dave Hayman
Subject: Additional EO Information Request - 2525 & 2695 Dingman Drive, London

Hi Andrea,

Can you please provide any additional natural heritage information for this property? Find attached the appropriate form and site location figure.

Thank you,

Dylan Morse, BES
Assistant Biologist

BioLogic Incorporated
110 Riverside Drive, Suite 201
London, Ontario
N6H 4S5

Tel: 519-434-1516 ext. 103
Fax: 519-434-0575

Stewart - Dingman Severance

NHIC EO List	MNR EO Date
February 17, 2015	April 15, 2015

Species of Provincial Interest Table

Scientific Name	Common Name	S-Rank	Ontario ESA Listing	MNR Response
Plants				
<i>Trillium flexipes</i>	Drooping Trillium	S1	END	
<i>Viola pedata</i>	Bird's Foot Violet	S1	END	
<i>Polygonum erectum</i>	Erect Knotweed	SH		
<i>Bartonia virginica</i>	Yellow Bartonia	S2		
<i>Scleria triglomerata</i>	Tall Nutrush	S1		
<i>Gentianella quinquefolia</i>	Stiff Gentian	S2		
<i>Conioselinum chinense</i>	Chinese Hemlock Parsley	S2		
<i>Lupinus perennis</i>	Sundial Lupine	S3		
<i>Hybanthus concolor</i>	Eastern Green-violet	S2		
<i>Bryoandersonia illecebra</i>	Spoon-leaved Moss	S2	END	
<i>Juglans cinerea</i>	Butternut	S3?	END	April 15, 2015
<i>Castanea dentata</i>	American Chestnut	S2	END	April 15, 2015
<i>Cornus florida</i>	Eastern Flowering Dogwood	S2?	END	April 15, 2015
<i>Phegopteris hexagonoptera</i>	Broad Beech Fern	SC		April 15, 2015
<i>Panicum capillare</i>	Witch Grass	S3		April 15, 2015
Birds				
<i>Hirundo rustica</i>	Barn Swallow	S4B	THR	April 15, 2015
<i>Sturnella magna</i>	Eastern Meadowlark	S4B	THR	April 15, 2015
Mammals				
<i>Taxidea taxus</i>	American Badger	S2	END	April 15, 2015
Reptiles				
<i>Thamnophis sauritus</i>	Eastern Ribbonsnake	S3		
<i>Emydoidea blandingii</i>	Blanding's Turtle	S3	END	
<i>Chelydra serpentina</i>	Snapping Turtle	SC		April 15, 2015

Scientific Name	Common Name	S-Rank	Ontario ESA Listing	MNR Response
<i>Lampropeltis triangulum</i>	Milksnake	SC		April 15, 2015
Insects				
<i>Enallagma traviatum</i>	Slender Bluet	S1		April 15, 2015
<i>Perethemis tenera</i>	Eastern Amberwing	S3		April 15, 2015
<i>Enallagma basidens</i>	Double-striped Bluet	S3		April 15, 2015

Appendix C
Preliminary SWH Evaluation

Table 2: Candidate Significant Wildlife Habitat - ELC Communities

Table 1.1 – Seasonal Concentration Areas

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Waterfowl Stopover and Staging Areas (Terrestrial)	C2 - CUM1/CUT1	- no fields with spring flooding	No
Waterfowl Stopover and Staging Areas (Aquatic)	none present	- watercourse is too small to support significant waterfowl stopover	No
Shorebird Migratory Stopover Area	not present	- no shorelines of lakes, rivers, wetlands, beaches, sand bars, seasonally flooded, muddy un-vegetated shorelines	No
Raptor Wintering Area	C2 - CUM1/CUT1 C3 - FOD7	- forest and upland community present however <20ha	No
Bat Hibernacula	not present	- none present	No
Bat Maternity Colonies	C3 - FOD7	- woodland is not mature	No
Bat Migratory Stopover Area	no triggers	- not near Long Point	No
Turtle Wintering Areas	none present	- potential for overwintering in Dingman Creek	Candidate C3
Reptile Hibernaculum	C2 - CUM1/CUT1	- no rock piles, stone fences, crumbling foundations, or rock crevices, no active animal burrows observed	No
Colonially-Nesting Bird Breeding Habitat (Bank / Cliff)	C2 - CUM1/CUT1	- no steep slopes of exposed banks or cliff faces present	No
Colonially-Nesting Bird Breeding Habitat (Trees/Shrubs)	not present	- no wetlands, lakes, island or peninsulas with live or dead standing trees present	No
Colonially-Nesting Bird Breeding Habitat (Ground)	C2 - CUM1/CUT1	- no rocky islands or peninsulas associated with open water present	No
Migratory Butterfly Stopover Areas	C2 - CUM1/CUT1 C3 - FOD7	- field and forest component present however not within 5km of Lake Ontario or Lake Erie	No
Land Bird Migratory Stopover Areas	C3 - FOD7	- woodland >5ha but not within 5km of Lake Ontario or Lake Erie	No
Deer Winter Congregation Areas	C3 - FOD7	- woodland not >50ha - deer yarding areas not identified (Appendix C)	No

Table 1.2.1 – Rare Vegetation Communities

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Cliffs and Talus Slopes	not present		No
Sand Barren	not present		No
Alvar	not present		No
Old Growth Forest	C3 - FOD7	- woodland is not mature	No
Savannah	not present		No
Tallgrass Prairie	not present		No
Other Rare Vegetation	not present		No

Table 1.2.2 – Specialized Habitat for Wildlife

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Waterfowl Nesting Area	not present	- habitat adjacent to swamp is lowland	No
Bald Eagle and Osprey Nesting, Foraging, Perching	C3 - FOD7	- no stick nests observed	No
Woodland Raptor Nesting Habitat	not present	- woodland is <30ha and no interior habitat	No
Turtle Nesting Areas	not present	- no exposed mineral soil present	No
Springs and Seeps	C3 - FOD7	- no headwaters present and no seeps observed within woodland	No
Amphibian Breeding Habitat (Woodland)	C3 - FOD7	- vernal pools present within woodland	Candidate C3
Amphibian Breeding Habitat (Wetlands)	not present	- swamp is <120m from woodland habitat	No

Table 1.3 – Habitats of Species of Conservation Concern (not END or THR species)

Wildlife Habitat	ELC Codes Triggers	Additional Habitat Criteria	Candidate SWH
Marsh Bird Breeding Habitat	not present	- no wetlands present	No
Woodland Area-Sensitive Bird Breeding Habitat	C3 - FOD7	-adjacent woodland is <30ha and contains no interior habitat	No
Open Country Bird Breeding Habitat	not present	- no abandoned fields, mature hayfields or pasture land >30ha present	No
Shrub/Early Successional Bird Breeding Habitat	C2 - CUM1/CUT1	- no large fields succeeding to shrub and thicket habitats > 10ha in size	No
Terrestrial Crayfish	not present	- no meadow or marsh habitat present	No
Special Concern and Rare Wildlife Species (NHIC and MNRF pre-consultation)		- suitable habitat for Yellow Bartonnia, Stiff Gentian, Chinese Hemlock Parsley, Eastern Green-violet, Broad Beech Fern	Candidate C3

Table 1.4.1 – Animal Movement Corridors

Wildlife Habitat	ELC Codes that Trigger Consideration *	Additional Habitat Criteria	Candidate SWH
Amphibian Movement Corridors	n/a	- Significant Amphibian Breeding Habitat (wetlands) not present	No