

WOODLAND STUDY FOR INGERSOLL

1.0 Introduction

The Provincial Policy Statement (PPS, 2005) provides municipalities with a framework to guide land use planning decisions. Section 2.1 of the PPS addresses Natural Heritage and identifies the components of a natural heritage system as being:

- wetlands
- endangered and threatened species and their habitat
- fish and their habitat
- woodlands
- valley lands, and
- wildlife habitat

The terrestrial natural heritage that remains on the southern Ontario landscape is largely contained within the remaining woodland patches, wetlands and vegetated riparian buffers.

2.0 Town of Ingersoll - Landscape Context

The Town of Ingersoll lies on the northern edge of the eastern deciduous forest region within the Carolinian Canada life zone, one of Canada's most significant landscapes. A warm climate accounts for the presence of many rare species of plants and animals. The Town is also located within the South Thames Watershed. Information on the forest conditions, surface water quality and watershed features is summarized in the South Thames Watershed Report Card. Highlights are as follows:

- the South Thames watershed area is 220 sq. km. The Town of Ingersoll is 12.6 sq. km (Figure 1, yellow line).
- it is estimated that 77 % of the land use is agriculture with 10 % urban and 11 % woodland
- 55 % of the woodlots in the South Thames Subwatershed are very small (< 4 ha)
- 26 % of the woodlots are small (4-10 ha)
- 14 % are mid-sized (10-30 ha)
- 0 % are large (30-40 ha)
- 5 % are very large (>40 ha)
- 23 % of the riparian zone (20 metres on either side of all watercourses) is forested, which is close to the average for the entire Upper Thames watershed
- Of the six significant wetlands found within the catchment, three are located within 1 km of the Town of Ingersoll (*i.e.* Five Points Woods, Heslop Swamp and Ingersoll Wetland).

This study included natural woodlands and riparian areas that exhibited natural woodland characteristics within the corporate boundary of the town of Ingersoll, as well as lands within 1 km of the Town boundary. Natural woodlands are defined as both remnant woodland patches that have not been manicured into parklands and areas that have been replanted and left to naturalize. It is noted that while the Town of Ingersoll has a relatively small amount of natural woodland area, the Town does have a significant tree cover that is comprised of individual trees or groupings of trees. The understorey of these areas is typically manicured and as a result, no significant habitat function is provided. While it is accepted that this

“individual” tree cover will generally provide a complimentary function to the natural heritage system, the individual trees and groupings of trees have not been included in this woodland inventory. It is also noted that Ingersoll is an urban growth centre and that this must be taken into consideration when identifying future woodland cover targets or when comparing existing natural woodland cover for the Town of Ingersoll to the surrounding rural areas.

3.0 Description of Remnant Woodlands

A site reconnaissance was undertaken in the fall of 2004 to identify natural woodland cover in the Town of Ingersoll. April 2000 air photography, 1:2000 and 1:10,000 Ontario Base Mapping (OBM) was reviewed to identify candidate woodland and riparian areas for investigation. Candidate woodlands include all forested areas in the Town of Ingersoll. A field investigation was undertaken in the fall of 2004 to determine which candidate woodland patches exhibited natural vegetation features and habitat function, and which candidate woodland patches were being anthropogenically managed (*i.e.* understorey mowed, planting of showy non-natives, *etc.*). The field investigation involved viewing all of the candidate woodland patches from road allowances. Based on this reconnaissance, all anthropogenically managed patches were removed.

In general, the woodland natural heritage areas that remain in the Town of Ingersoll (Table 1) consist of:

- “naturalized” remnant woodland patches that are associated with golf courses and open space lands
- “natural” remnant woodland patches that are found in the Town residential neighbourhoods or that are associated with large industrial parcels
- “natural” remnant woodland patches that are surrounded by agricultural uses, particularly in the 1 km buffer of the Town boundary
- “riparian” and flood plain areas along the South Thames, Halls Creek, Henderson Creek and Whiting Creek and along small watercourses and open municipal drains
- “plantations” of conifer species

Figure 1 is a map showing the 91 remaining woodlands in both the Town of Ingersoll (yellow line) and in the 1 km buffer around the township boundary (thick red line). The total area of all remaining woodlands is approximately 364 ha. Approximately 90 ha of woodland (25 %) are in the Town boundary while 274 ha (75 %) are found in the buffer area. Given that the total area of the Town of Ingersoll is 1260 ha, only 7 % of the Town is covered in woodland. The total area of the buffer is 1780 ha, which means that 15 % of the buffer area is covered in woodland. When the area of the Town and the 1 km buffer are combined, the woodland cover is 12 %. This is the same as the overall average of 12% forest cover for Oxford County.

Table 1 shows the breakdown of remnant woodlands in the Town of Ingersoll and in the 1 km buffer. Approximately 2 % are managed as naturalized woodlands and are associated with golf courses and open space lands, 74 % are natural woodland remnants found along the edge of the Town boundary or in the agricultural 1 km buffer zone, 6 % are plantations centered around the railroad track in the west side of the Town and 18 % are riparian woodlands associated with flood plains. The riparian areas occurred along streams and drains as long, linear strips of varying width. In the Town of Ingersoll, the riparian areas were degraded with fallen trees, encroachment and some removal of the understorey.

4.0 Analysis of Woodland Features and Functions

In general, the Town of Ingersoll has few remaining natural heritage vegetation patches. In the 1 km buffer surrounding the Town boundary, woodland cover is more than triple the woodland cover in the Town. This pattern is typical of most of the municipalities in southern Ontario. The woodland patches within the Town boundary are generally small and unable to maintain the full range of ecological functions. In general, the woodland patches in the center of the Town are more disturbed and have more edge (less interior) habitat than woodlands on the edge of Town. The woodland patches within the 1 km buffer are larger with more interior habitat and less edge, but are also scattered within the agricultural landscape with no forested corridors or linkages between them.

The results of this study can be used to provide context for site specific EIS's that may be required for proposed land use changes adjacent to, or within, these natural heritage features. Although all woodlands found in the Town of Ingersoll are common and typical within the regional landscape and do not appear to contain any natural features or functions that would constrain development in these areas, a more rigorous analysis would have to be conducted. Local woodlands in urban areas also provide a number of important societal benefits, including the opportunity for a local "woodland" experience. It is evident from the cultural use of some of these woodland areas that they are important "natural areas" within the Town. These benefits may reduce development pressure which, in turn, may have a significant impact on the larger woodlands immediately outside of the Town boundary where the preservation of ecological functions are more important. Recognizing that urban areas tend to have limited woodland cover, it is recommended that ecological, socio-economic and aesthetic values be considered when planning for development in order that woodlands remain for recreational purposes as well as for natural heritage functions.

Riparian habitats are also very important for a variety of animal species, for human recreation and for aesthetic values. The presence of a diversity of community types, habitat features such as size of the riparian patch, tree cavities and a reliable source of water, make riparian areas attractive locations for breeding birds, mammals and amphibians/snakes/reptiles which are common near urban settings. Any removal of vegetation along the drains will reduce the habitat value of these narrow riparian areas, and has the potential to reduce other riparian functions that may include bank stabilization and stream shading. Given the low percentage cover of natural woodlands within the Town, the maintenance of the remaining natural woodlands and riparian areas for their natural heritage function and local community value may be desirable.

Table 1. Remnant woodlands in the Town of Ingersoll and in the 1 km buffer (refer to Figure 1 for location)

Woodland ID No.	Woodland Definition	Area (ha)	Town Area (ha)	Buffer Area (ha)	Total Area (ha)
1	Naturalized	1.0124			1.0124
2	Naturalized	1.3243			1.3243
3	Naturalized	0.6031			0.6031
4	Naturalized	0.7036			0.7036
5	Naturalized	0.5172			0.5172
6	Naturalized			0.6399	0.6399
7	Naturalized	2.0675			2.0675
8	Naturalized	1.2298			1.2298
Area of Woodland		7.4579		0.6399	8.0978
9	Natural Woodland			1.8243	1.8243
10	Natural Woodland			3.2682	3.2682
11	Natural Woodland			1.184	1.184
12	Natural Woodland			4.8912	4.8912
13	Natural Woodland			14.3865	14.3865
14	Natural Woodland			1.578	1.578
15	Natural Woodland			80.3902	80.3902
16	Natural Woodland			2.7283	2.7283
17	Natural Woodland			1.2205	1.2205
18	Natural Woodland			1.1191	1.1191
19	Natural Woodland			2.7457	2.7457
20	Natural Woodland			2.24	2.24
21	Natural Woodland	2.4119			2.4119
22	Natural Woodland			1.7712	1.7712
23	Natural Woodland			1.0962	1.0962
24	Natural Woodland			8.8858	8.8858
25	Natural Woodland	1.1925			1.1925
26	Natural Woodland	2.0157			2.0157
27	Natural Woodland	2.5999			2.5999
28	Natural Woodland	0.7988			0.7988
29	Natural Woodland	2.3294			2.3294
30	Natural Woodland			3.1302	3.1302
31	Natural Woodland			1.9965	1.9965
32	Natural Woodland			10.5612	10.5612
33	Natural Woodland			0.589	0.589
34	Natural Woodland			0.7602	0.7602
35	Natural Woodland			11.9822	11.9822
36	Natural Woodland			0.5032	0.5032
37	Natural Woodland	2.2978			2.2978
38	Natural Woodland	9.3896			9.3896
39	Natural Woodland			0.8008	0.8008
40	Natural Woodland	2.5629			2.5629
41	Natural Woodland	1.1682			1.1682
42	Natural Woodland			4.502	4.502
43	Natural Woodland			1.9992	1.9992
44	Natural Woodland	7.7768			7.7768
45	Natural Woodland	2.003			2.003
46	Natural Woodland	0.8676			0.8676
47	Natural Woodland	1.2818			1.2818
48	Natural Woodland			7.4402	7.4402
49	Natural Woodland			7.4755	7.4755

50	Natural Woodland	0.5717		0.5717
51	Natural Woodland		0.9559	0.9559
52	Natural Woodland	0.6793		0.6793
53	Natural Woodland		20.7782	20.7782
54	Natural Woodland		0.7943	0.7943
55	Natural Woodland		1.2761	1.2761
56	Natural Woodland		5.3191	5.3191
57	Natural Woodland		4.4208	4.4208
58	Natural Woodland		0.8652	0.8652
59	Natural Woodland		9.0276	9.0276
60	Natural Woodland		5.4418	5.4418
	Area of	39.9469	229.948	269.89
	Woodland		4	53
67	Plantation		1.1509	1.1509
68	Plantation		0.7432	0.7432
69	Plantation		5.4805	5.4805
70	Plantation	2.1214		2.1214
71	Plantation	1.4016		1.4016
72	Plantation	3.1507		3.1507
73	Plantation		0.7491	0.7491
74	Plantation		0.969	0.969
75	Plantation		4.2287	4.2287
76	Plantation	2.047		2.047
	Area of	8.7207	13.3214	22.042
	Woodland		1	1
77	Riparian		0.9169	0.9169
78	Riparian		0.6767	0.6767
79	Riparian		0.5443	0.5443
80	Riparian	1.4191		1.4191
81	Riparian		0.6227	0.6227
82	Riparian		4.6265	4.6265
83	Riparian	1.2401		1.2401
84	Riparian	2.4569		2.4569
85	Riparian	0.6659		0.6659
86	Riparian		14.3599	14.3599
87	Riparian	4.2977		4.2977
88	Riparian	4.8307		4.8307
89	Riparian	2.4159		2.4159
90	Riparian	2.5315		2.5315
91	Riparian	5.9635		5.9635
92	Riparian	3.3969		3.3969
93	Riparian	2.5000		2.5000
94	Riparian	2.1372		2.1372
95	Riparian		1.9653	1.9653
96	Riparian		5.1932	5.1932
97	Riparian		2.2111	2.2111
	Area of	33.8554	30.2248	64.080
	Woodland			2
	Total Woodland	89.9809	274.134	364.11
	Area		5	54

