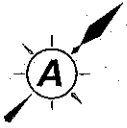


Natural Heritage Information

**Proposed Residential Development
Part of Lots 2 and 3, Registered Plan 49
Town of Newmarket
Regional Municipality of York**





Natural Heritage Information

**Proposed Residential Development
Part of Lots 2 and 3, Registered Plan 49
Town of Newmarket
Regional Municipality of York**

Prepared for:
Millford Development Limited

Prepared by:
Azimuth Environmental
Consulting, Inc.

February 2011

AEC 04-060



Environmental Assessments & Approvals

February 7, 2011

AEC 04-060

Millford Development Limited
P.O. Box 215
Newmarket, Ontario
L3Y 4X1

Attention: Mrs. Orsi

**RE: Summary of Environmental Documents and Activities
Proposed Residential Development of Part of Lots 2 and 3, Registered Plan
49, Town of Newmarket, Regional Municipality of York**

Dear Mrs. Orsi:

The following summarizes the environmental reports, memos and letters prepared by Azimuth Environmental Consulting, Inc. (Azimuth) that have been prepared for the proposed residential development for a property known as Part of Lots 2 and 3, Registered Plan 49 in the Town of Newmarket (Town). It also includes an addendum to the Tree Plan dated December 7, 2007, prepared by Cathy V. Bentley, R.P.F., and her addendum to that study dated February, 3, 2011. The purpose of the summary is to provide clarification of the sequence and give context to the attached documents for inclusion in a development application to be submitted to the Town.

The following documents are enclosed:

1. *Environmental Impact Study. Azimuth, Feb. 22, 2008.*
This report summarized the results of a background search and contained the results of field work undertaken in 2004.
2. *Tree Plan. Cathy V. Bentley, R.P.F., December 7, 2007.*
3. *Addendum to Tree Plan. Cathy V. Bentley, R.P.F., February 3, 2011.*

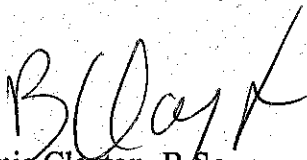
4. *Additional 2008 Environmental Field Data Addendum Report*. Azimuth, Dec. 19, 2008.
Contained the results of the spring, summer and fall surveys of vascular plants on the property during the growing season of 2008. These field survey results represent more current information for the property, additional to that presented in the Environmental Impact Assessment (Azimuth, February, 2008). The results of the additional field investigations do not change the basic conclusions of the Environmental Impact Assessment (Azimuth, February, 2008) for the property.
5. Review Comments from the Lake Simcoe Region Conservation Authority (LSRCA), dated May 26, 2009.
6. Response to Lake Simcoe Region Conservation Authority Comments. Azimuth, Aug. 10, 2009.

Additional to the various reports produced by Azimuth, staff also attended a site visit on April 15, 2009 with LSRCA staff to review the top-of bank (TOB) used in the initial development design contained in our EIS report. It was initially determined, with LSRCA staff, February 19, 2003. The revised TOB determined in 2009 did not greatly differ with the original (attached).

If you have any questions or require further information, please do not hesitate to contact me or Cathy Bentley.

Yours truly,

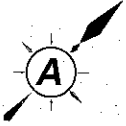
AZIMUTH ENVIRONMENTAL CONSULTING, INC.



Bonnie Clayton, B.Sc.
Senior Terrestrial Ecologist

c.c. Peter Allen, Peter E. Allen and Associates
Jason Unger, Town of Newmarket
Jackie Burkart, Lake Simcoe Region Conservation Authority

BAC:
Encl:



**Environmental Impact Assessment
For Part Lots 2 and 3
(Registered Plan 49)
Town of Newmarket
Regional Municipality of York**

Prepared For:
Millford Development, Ltd.

Prepared By:
Azimuth Environmental
Consulting, Inc.

February 2008

AEC 04-060



Environmental Assessments & Approvals

February 22, 2008

AEC 04-060

Millford Development Limited
P.O. Box 215
Newmarket, Ontario
L3Y 4X1

Attention: Mrs. Orsi

**RE: Environmental Impact Study for the Proposed Residential Development of
Part of Lots 2 and 3, Registered Plan 49
Town of Newmarket, Regional Municipality of York**

Dear Mrs. Orsi:

Azimuth Environmental Consulting (Azimuth) is pleased to submit our Environmental Impact Study (EIS) report for the abovementioned property. The completion of an EIS is a requirement of the Town of Newmarket and the Lake Simcoe Region Conservation Authority (LSRCA) because of the presence of a valley corridor feature containing a reach of Western Creek and lands designated in the new Official Plan as part of the Natural Heritage System on the property. The proposed preliminary development plan includes a mixed density residential subdivision on the south side of the property. The preliminary development plan proposes a high rise condominium building on the west side of the property with townhouses on the remainder of the developable area of the property fronting onto Eagle Street.

The preliminary development plan both proposed that the residential development of the property south of the defined top-of-bank resulting in the removal of marginal habitat for urban wildlife species and lands that no longer supports natural vegetation communities. The proposed preliminary development plan does not affect Provincially Significant Wetlands (PSW), Areas of Natural and Scientific Interest (ANSI), Significant Woodlands, Valley Lands, Wildlife Habitat or Fish Habitat on or adjacent (i.e. within 120m) of the property as defined by the Provincial Policy Statement (MMAH, 2005). The habitat of federally or provincially threatened or endangered species is also not affected by the proposed preliminary development plan.

The proposed development of the property is supported from Provincial, Regional and, for the most part, Town policies. However, the designation of 0.7ha of the property as part of the Town's Natural Heritage System as woodland, if retained, would affect the full development of the property. A detailed investigation of the treed vegetation in the area concluded the property has only 'remnants of planted areas of trees and shrubs' and that there were no 'natural areas of native forest observed in the proposed area of development' (Bentley, 2007). Designation of this area for protection is not appropriate from a natural heritage perspective because of the existing intensity of development of the surrounding lands, and level of disturbance of the natural environment of the developable lands and the structure and composition of the vegetation designated as part of the Natural Heritage System.

The potential environmental impacts of development will be negligible, providing all aspects of the proposed development occurs outside the designated valley corridor and tree replacement as outlined by in the mitigation measures is completed post-construction.

Please do not hesitate to contact us should you have any questions or require additional information regarding this property.

Yours truly,

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

COPY

Bonnie Clayton, B.Sc.
Senior Biologist

c.c. Andrew Ip, Masongsong Engineering
Cathy Bentley, Certified Arborist
Peter Allen, Peter E. Allen and Associates
Jason Unger, Town of Newmarket
Leslie Roach, Lake Simcoe Region Conservation Authority

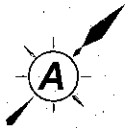
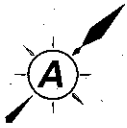


TABLE OF CONTENTS

	page
transmittal letter	
1.0 INTRODUCTION.....	1
2.0 STUDY APPROACH.....	1
3.0 PLANNING CONTEXT	2
3.1 PROVINCIAL PLANNING POLICY	2
3.2 REGIONAL MUNICIPALITY OF YORK.....	3
3.3 TOWN OF NEWMARKET.....	3
3.4 LAKE SIMCOE REGION CONSERVATION AUTHORITY	4
3.4.1 <i>Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses</i>	4
3.4.2 <i>Natural Heritage System for the Lake Simcoe Watershed</i>	5
4.0 EXISTING CONDITIONS.....	6
4.1 LAND USE.....	6
4.1.1 <i>On-Site Land Use</i>	6
4.1.2 <i>Adjacent Land Use</i>	6
4.2 SOILS AND TOPOGRAPHY	6
4.3 GROUND WATER	7
4.4 VEGETATION.....	8
4.5 WILDLIFE.....	10
4.6 WATERCOURSES AND FISHERIES.....	11
5.0 PROPOSED PRELIMINARY DEVELOPMENT PLAN	12
6.0 IMPACT ASSESSMENT.....	13
6.1 PLANNING CONTEXT.....	13
6.1.1 <i>Provincial Planning Policy</i>	13
6.1.2 <i>Regional Municipality of York</i>	13
6.1.3 <i>Town of Newmarket</i>	13
6.1.4 <i>Lake Simcoe Region Conservation Authority</i>	14
6.2 LAND USE.....	14
6.2.1 <i>On-Site Land Use</i>	14
6.2.2 <i>Adjacent Land Use</i>	14
6.3 SOILS AND TOPOGRAPHY	15
6.4 GROUND WATER	15



6.5 VEGETATION.....	15
6.6 WILDLIFE.....	17
6.7 WATERCOURSES AND FISHERIES.....	18
7.0 MITIGATION STRATEGY.....	18
8.0 CONCLUSIONS.....	19
9.0 REFERENCES.....	21

List of Tables

- Table 1: Definition of the Ontario Ecological Land Classification Vegetation Communities
- Table 2: List of Plant Species observed on the Property
- Table 3: Fish Species Captured in Western Creek

List of Figures

- Figure 1: Site Location
- Figure 2: Environmental Features
- Figure 3: N-S Cross-section along Yonge Street
- PDA Architects SP1: Preliminary Development Plan (SP1)

List of Appendices

- Appendix A: Related Planning Information
- Appendix B: Lake Simcoe Region Conservation Authority Information
- Appendix C: Tree Plan by C.V. Bentley, Certified Arborist
- Appendix D: Ontario Breeding Bird Atlas Information



1.0 INTRODUCTION

Azimuth Environmental Consulting (Azimuth) was retained to undertake an Environmental Impact Study (EIS) for Part of Lots 2 and 3, (Registered Plan 49) in the Town of Newmarket, Regional Municipality of York. The location of the subject property is shown on topographic mapping in Figure 1. The southern portion of the property, outside the valley feature, has been proposed for mixed density residential development.

The EIS is a requirement of the Town of Newmarket and the Lake Simcoe Region Conservation Authority (LSRCA) because of the presence of a variety of designated environmental features including lands part of the Town's Natural Heritage System, a valley containing a reach of Western Creek, a tributary of the East Holland River and its associated floodplain located on the north portion of the property.

The EIS will assess and describe aspects of a natural environment within the lands proposed for development including vegetation communities, potential habitat for wildlife, aquatic resources and significant natural heritage features. General features of soils and topography will also be discussed. The study will assess impacts of the proposed development on environmental features documented to be significant and will recommend an appropriate mitigation strategy to minimize any adverse impacts.

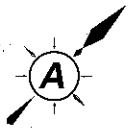
2.0 STUDY APPROACH

A combination of field investigation, interaction with involved agencies, and review of appropriate background information was used to fulfill objectives of the study. A spring site walk was undertaken by Azimuth on May 18th, 2004, following leaf-out, to assess features and functions of the property. The timing of the site visit was also appropriate to document spring bird use of the site and to assess general features of the watercourse at a peak flow period of the year.

Azimuth completed the following activities to fulfill objectives of this study:

- Conducted a background information search and review of existing relevant documents that address lands within the study area and the portion of the property proposed for residential development;
- Obtained fisheries information and floodplain mapping from the LSRCA and OMNR relating to the watercourse and valley corridor on the property;
- Investigated and assessed the existing vegetation communities and wildlife habitat within and adjacent to the lands proposed for development;

*Bird
water*



- Assessed features of the property with respect to applicable provincial planning policy;
- Mapped the identified environmental features on 2002 aerial photography of the subject property (Figure 2) to clearly show the relationship between the proposed developable area, the top of bank, and Natural Heritage System;
- Assessed the potential impacts of the preliminary development plan on sensitive or significant environmental features as described above;
- Developed an appropriate avoidance/mitigation/restoration strategy to address the potential environmental impacts; and
- Prepared one draft and one final report documenting the abovementioned activities for review and comment.

3.0 PLANNING CONTEXT

3.1 Provincial Planning Policy

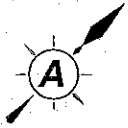
The Provincial Policy Statement (PPS) (MMAH, 2005) outlines policies related to natural heritage features (Section 2.1) and water resources (Section 2.2). The Planning Act requires that planning decisions shall be consistent with the PPS.

According to the PPS, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted in:

- Significant habitat of endangered or threatened species,
- Significant wetlands (in coastal areas or in Ecoregions 5E, 6E and 7E),
- Significant woodlands (south and east of the Canadian Shield),
- Significant valley lands (south and east of the Canadian Shield),
- Significant wildlife habitat,
- Significant Areas of Natural and Scientific Interest (ANSI), and
- In fish habitat, except in accordance with provincial and federal requirements.

Similarly, no development and site alteration will be permitted on lands adjacent to the areas defined above unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated there will be no negative impacts on the natural features and ecological functions.

There are no Provincially Significant Wetlands (PSW) or Areas of Natural and Scientific Interest (ANSI) on or adjacent (i.e. within 120m) of the property (Appendix A). Current



provincial published information sources have not identified provincially Significant Woodlands, Valley Lands or Wildlife habitat on or adjacent to the property.

No elements of occurrence (EO_ID) records for endangered or threatened species or vegetation communities were on file with the Ontario Ministry of Natural Resources (OMNR) Natural Heritage Information Centre database (NHIC, 2007) on the property or on adjacent (i.e. within 120m) lands (Appendix A).

A reach of Western Creek, tributary of the East Holland River, is located on the north half of the property. This watercourse is classified as warm water, represents direct fish habitat.

3.2 Regional Municipality of York

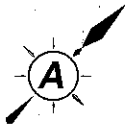
The property is located within the Town of Newmarket and is located within an identified "Urban Area" according to the Regions Official Plan (2006) (Map 5: Regional Structure). Section 5.2 of the Official Plan states that the 'majority of growth should be directed to the Urban Areas identified on Map 5' of the Plan.

3.3 Town of Newmarket

In the new official plan the property is designated as Emerging Residential, Stable Residential and Natural Heritage System on the tablelands and Parks and Open Space within the valley corridor and identified Flood Plain associated with Western Creek, a tributary of the East Holland River (Land Use-Schedule A, 2006) (Appendix A).

Emerging Residential areas are intended for residential use and permit the construction of single detached and semi-detached dwellings in addition to rowhouses and townhouses following the provisions of the Town's new Official Plan (Section 3.2.2 of the OP). Stable Residential areas permit the construction of single detached and semi-detached dwellings (Section 3.2.2 of the OP).

A part of the property, located in the southwest corner, has been included within the Town's Natural Heritage System and has been identified as a Woodlot (Schedule B: Natural Heritage System, 2006) (Appendix A). The Natural Heritage System includes meadows, woodlots, watercourses and wetlands that are considered to be locally significant features to be protected. The Town has identified that existing forest cover is relatively low with the limits of the Town, and the new OP states that it is important to retain the existing woodlots to the greatest possible degree as they provide habitat for forest-dependent plants and animals, help regulate temperature, reduce air pollutants,



reduce soil erosion, contribute to the aesthetic value and offer recreation opportunities to the residents (Section 9.3.2). Any development adjacent (i.e. within 50m) to an identified woodlot requires an Environmental Impact Study (EIS) to be completed to ensure that there are no negative impacts on the natural feature and its functions (Town of Newmarket 2006). Section 9.3 of the Town's new OP outlines specific policies for each identified natural heritage feature. The policies outlined in Section 9.3 state "Development and site alteration are not permitted in Woodlots identified on Schedule B, Natural Heritage System and that development adjacent to any Woodlot shall be carried out in a manner that encourages the protection and management of the Woodlot" (Town of Newmarket 2006). Specific provisions regarding setbacks from these features have also been described in the new OP.

Land use within the Parks and Open Space designation is intended to be comprised of uses that are compatible with the natural heritage features in the Town including public recreational uses, private outdoor recreation facilities, existing golf courses and associated uses and conservation uses (Section 8.2 of the new OP). The proponents wish to utilize the Parks and Open space for passive recreational use (i.e. trails).

The floodplain associated with Western Creek has been identified as Flood Plain on Schedule B: Natural Heritage System. The Floodplain areas provide a linked natural open space system for residents and wildlife connecting many parts of the Town. There is no development proposed within the floodplain.

3.4 Lake Simcoe Region Conservation Authority

3.4.1 Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses

The property is located within jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA) (mapping in Appendix B). The northern part of the property is identified as lands regulated under Ontario Regulation 179/06 "*Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*" by LSRCA due to the presence of a valley corridor containing a reach of Western Creek, a tributary of the Holland River and its associated floodplain (Appendix B). As such, Ontario Regulation 179/06 may apply if any of the proposed development application is located within this area.

The Authority may grant permission for development, in the form of a permit, within the regulated area if, in its opinion, the environmental feature in question not be negatively



affected by the proposed development. This permit is required prior to any site alteration or construction within any of the regulated areas.

In 2003 at a site visit attended by LSRCA staff, the top-of-bank for the south side of the valley feature was determined and represented on Figure 2. No development below the top-of-bank would be permitted.

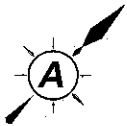
The LSRCA's Natural Heritage Report (2007) has designated urban woodlands with an area of 4 ha to 10 ha as a Level 3 Feature, recognizing their significance both socially, to the overall forest cover within the watershed and limited ecological function, while permitting flexibility in the planning process. Whether or not these features are dominated by native species is of little consequence, as their value is not being assessed strictly on an ecological basis. Level 3 Features have been determined to represent significance at the watershed level. LSRCA generally like to see these Level 3 Features retained but these features are located in urban settlement areas there is flexibility regarding preservation - "Retention preferred but replacement acceptable" (LSRCA, 2007).

The Natural Heritage Report identifies the entire property as a level 3 Feature the LSRCA considers it to be an urban woodland. The Natural Heritage Report classifies urban woodlands as wooded areas that are 4 ha to 10 ha in size within settlement areas, recognizing their significance both socially, to the overall forest cover within the watershed and limited ecological function, while permitting flexibility in the planning process. Whether or not these features are dominated by native species is of little consequence, as their value is not being assessed strictly on an ecological basis.

3.4.2 Natural Heritage System for the Lake Simcoe Watershed

The Natural Heritage System (NHS) for the Lake Simcoe Watershed was developed in order to identify significant natural heritage features on the landscape and to utilize policy to protect important natural features. The entire property has been identified as a policy Level 3 feature (Appendix B). A Level 3 feature is deemed to be significant on a watershed level. It is the intent of the conservation authority to generally retain and avoid alteration; however; there is some flexibility in the way the features are addressed when development is considered. There should be no net negative impact on the Natural Heritage System as a whole when development and/or site alteration is proposed in and adjacent to such lands (LSRCA *et al* 2007). LSRCA encourages planning authorities to adopt the NHS and incorporate appropriate suggested policies in their Official Plans to protect and enhance the system (LSRCA *et al* 2007).

where
= plan
from.



4.0 EXISTING CONDITIONS

4.1 Land Use

4.1.1 On-Site Land Use

The property (5.23ha) is located on the north side of Eagle Street, east of Yonge Street, in a heavily urbanized section of the Yonge Street corridor within the Town of Newmarket. A reach of Western Creek traverses the northern part of the property within a shallow valley corridor. The valley corridor and associated watercourse will be located outside of the proposed preliminary development plan for the property.

The southern section of the site was previously used as a residential or farm property and was vegetated by numerous horticultural and landscape plantings. There are no buildings or access roads on the property. Several areas of garbage and a pile of asphalt are located on the tablelands portion of the property.

There is no existing development within the valley corridor that contains a mixture of native and non-native vegetation and there was evidence of passive recreational use within the valley corridor. A number of discarded tires are located in proximity to the watercourse.

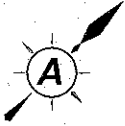
4.1.2 Adjacent Land Use

The site is surrounded by residential and commercial development in a heavily urbanized area of the Town of Newmarket. The valley corridor feature to be retained lies to the north of the proposed development envelope and is also surrounded by existing development.

Commercial land use is located to the west and east of the property. Eagle Street forms the southern boundary of the site. Urban residential development is located to the east, north and south of Eagle Street.

4.2 Soils and Topography

Based on Chapman and Putnam (1984), Newmarket is located in the Schomberg Clay Plains physiographic region of Southcentral Ontario. Newmarket is located in one of three topographic basins located on the north flank of the Oak Ridges moraine. A drumlinized till plain lies under the clay layer. The Schomberg sediments are primarily



varved clays. The Town of Newmarket is in an area of glaciolacustrine deposits comprised of silt, clay, minor sand and basin/quiet water deposits (Barnett *et al.*, 1991).

The tablelands portion of the property is essentially flat in topography. As previously indicated, the top of bank of the valley corridor was easily determined and was staked in the field by the LSRCA staff in February 2003. The side walls of the valley corridor were moderate to steeply sloped with minor erosion channels created by overland flow from the tablelands into the valley during spring freshet and periodic storm events.

The Western Creek, tributary of the East Holland River, was located in a flat floodplain of the valley. The boundaries of the floodplain (mapping provided by the LSRCA) are located entirely within the valley corridor system and do not extend beyond the staked top of bank of the valley corridor (Figure 2).

4.3 Ground Water

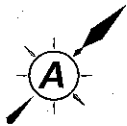
The hydrogeologic mapping within the study area has utilized existing data to delineate the hydrostratigraphic units, which include:

- Glaciolacustrine Sediments (aquitar),
- Kettleby Till (aquitar),
- Oak Ridges Moraine/Mackinaw Interstadial Deposits (aquifer),
- Newmarket Till (aquitar)), and the
- Thorncliffe Formation (aquifer).

The distribution of these units is presented in profile (Figure 4). The section of the hydrostratigraphic units was selected along Yonge Street between Davis Drive and Mulock Drive in the Town of Newmarket and has been provided by the York Region Groundwater Partnership (YPDT) (Kassenaar and Wexler, 2006).

In the vicinity of the proposed development footprint, the uppermost surficial geologic units consist of an aquitar sequence comprised of glaciolacustrine deposits and the underlying the Kettleby Till. Together, these units provide approximately 10 m of protection to the underlying Oak Ridges Aquifer Complex.

The potentiometric ground water elevation in the vicinity of the property is approximately 250 m asl, or approximately 10 m below ground level. Ground water flows northward toward Lake Simcoe, however, locally, the flow is influenced by Western Creek (East Holland River) indicating ground water discharge conditions.



The soils are clayey with low to moderate infiltration capacities resulting in a potential to have a relatively high storm water runoff component. However, this storm water runoff will be directed to municipal sewers.

The tablelands portion of the site was dry and did not contain any areas of standing water or ephemeral pools. Within the valley corridor, localized ground water discharge at toe of slope has resulted in seasonally wet areas and pockets of wet-adapted vegetation. No active seeps or springs were identified.

4.4 Vegetation

The Ecological Land Classification for Southern Ontario (ELC) (Lee *et al.*, 1998) was used as a guide to the classification of the vegetation community types. Because of the disturbed nature of several of areas on the property do not fit well into the ELC communities. Table 1 summarizes the habitat, structural and floristic features of the vegetation communities of the property. The location of the vegetation communities is shown on Figure 2. A list of plant species observed is contained in Table 2.

Sand loam soils were found throughout the property. There were areas of the property that was occupied by areas of fill and fill storage that may have not been wholly from the property. No gley layers were intercepted within the top 30cm.

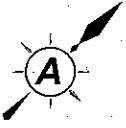


Table 1: Definition of the Ontario Ecological Land Classification Vegetation Communities

Unit	Description
SWAMP (SW)	Vegetation community dominated by hydrophytic shrub and tree species that comprise >25% cover.
Deciduous Swamp (SWD)	Community where tree cover is >25% and where deciduous tree species make up >75% of canopy cover.
SWD3-4: Manitoba Maple Mineral Deciduous Swamp type.	This community comprised the majority of the floodplain and along the south slope of the valley. Many areas occupied by this community were upland in nature (due to topography) and were likely present because of the highly disturbed nature of the site and not because of the presence of wetland conditions.
CULTURAL (CU)	Vegetation community where site conditions and substrates vary however community resulting from or maintained by cultural or anthropogenic-based disturbance.
Cultural Plantation (CUP)	Cultural or anthropogenic-based forest community where tree cover >60%.
Coniferous Plantation (CUP3)	A community with coniferous tree species comprising >75% of canopy cover.
CUP3-3: Scotch Pine Coniferous Plantation Type	There are two remnant patches of this community located along the west side and mid-centrally along the north boundary.
Cultural Meadow (CUM)	A community where tree cover <25% and shrub cover <25%.
CUM1-1 Dry-Moist Cultural Meadow Ecosite	There are two patches of this communities located on the south side of Western Creek, on either side of the cultural woodland associated with a former residence.
Cultural Woodland (CUW)	A community where tree cover is >35% but < 65% of cover.
CUW1 Mineral Cultural Woodland Ecosite	This represents the wooded area located on the property centrally fronting Eagle Street. The area is occupied by trees and shrubs that were associated with an old residence and is dominated by planted and non-native horticultural varieties of trees and shrubs.

The majority of the vegetation communities fit well under the classifications utilized by the standard ELC system due to the highly disturbed nature of the site and the large proportion of non-native planted material.

None of the vegetation observed on site are of federal conservation concern. One provincially rare species, Honey Locust, was observed on the property during the 2003 site visit. Honey Locust is an S2 species indicating that it is provincially imperiled in the province likely because of rarity due to very restricted range (NHIC 2007). This species is a southern species that is rare throughout Canada and is well outside of its native range (Farrar, 1995). However, the Honey Locust is commonly planted beyond its range due to



its tolerance to droughty and alkaline soils (Farrar, 1995). Based on the highly disturbed nature of the site and past use (i.e. residence or farm with a variety of tree and shrub plantings), it is likely that this specimen was also planted and may be a horticultural cultivar.

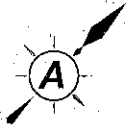
There was one plant species, Black Walnut, documented on site that is considered rare in the Lake Simcoe Region Conservation Authority watershed (LSRCA, 2003). Similarly, the Black Walnut has a range that is more southern making it an uncommon species in southcentral Ontario. However, Black Walnut is often planted for its fruit and ornamental value outside its native range (Farrar, 1995). Because of the locations of the Honey Locust and Black Walnut individuals associated with the area of a former residence on the property, it is likely these trees were planted.

A Tree Plan was conducted by Cathy V. Bentley, B.Sc.F., M.Sc.F., R.P.F., Certified Arborist on October 31, 2007 (Appendix C). Ms. Bentley's findings indicate that none of the species observed are of federal or provincial conservation concern (Table 3). One species, considered rare in the LSRCA watershed, was documented on site, Black Walnut, which is likely a result of past plantings. All of the trees above the top-of-bank (Figure 2) were inventoried and assessed for health. The majority of the trees within the tablelands were confined to the western portion of the property and within the area that has been identified as a part of the Town of Newmarket's "Natural Heritage System". None of the treed areas represent natural native forest cover. Within the Discussion and Recommendations section of the arborist report, the health of each of the trees was documented and the criteria for the preservation, protection or replacement according to the Town of Newmarket are outlined. Five trees on site meet all of the Town's criteria. The report recommends that these five trees be replaced and no others be preserved.

4.5 Wildlife

Wildlife access to and migration into the east - west valley corridor and riparian habitat is restricted because of the presence of extensive commercial development along the Yonge Street corridor and the extensive residential urban development surrounding the property and Yonge Street. High traffic volumes and high anthropogenic disturbance have already impacted migration patterns of local wildlife populations and shifted the range of wildlife to urban tolerant species that utilize resources within landscaped yards and small fragmented treed patches.

Avian use of the site was restricted to those species tolerant of an urban edge environs. There are no natural, undisturbed vegetation communities on the property. During the site visit on May 18, 2003 (Observer: J.Broadfoot, Temperature: 15°C, Precipitation: Nil,



Wind: SW, Beaufort Wind Scale: 2), American Goldfinch (*Carduelis tristis*), Northern Cardinal (*Cardinalis cardinalis*), Song Sparrow (*Melospiza melodia*), Red-winged Blackbird (*Agelaius phoeniceus*), Black-capped Chickadee (*Parus atricapillus*), Common Yellowthroat (*Geothlypis trichas*), American Grackle (*Quiscalus quiscula*) and House Sparrow (*Passer domesticus*) were observed on site. None of the species observed are considered to be area sensitive species (i.e. require large tracts of suitable habitat in order to sustain their populations) (OMNR 2000). None of the bird species observed are of federal or provincial conservation concern. None of the bird species observed are considered to be regionally rare (OBBA, 2007). There is no native forest habitat or forested interior habitat on the property for breeding and rearing activities of more secretive species of birds.

According to the Ontario Breeding Bird Atlas Database (OBBDAD) as of the 2001-2005 survey (square #17PJ27, Appendix D), one provincially rare bird species, Red-shouldered Hawk (*Buteo lineatus*), is confirmed as breeding in the square (10kmx10km) including the property. The Red-shouldered Hawk was down listed to special concern in June 2006. One regionally rare species, Ruby Crowned Kinglet (*Regulus calendula*), is also confirmed as breeding in the square (10kmx10km) including the property. The Bank and Cliff Swallow (*Riparia riparia* and *Petrochelidon pyrrhonota*) are confirmed as a colonial breeding species for the square. None of these species were observed on the property.

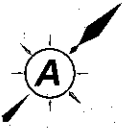
Small mammals such as mice, voles, rabbits, raccoon and skunk would utilize the property, including the disturbed tablelands areas. Raccoon (*Procyon lotor*) tracks and trails were observed within the valley corridor. No evidence of White-tailed Deer (*Odocoileus virginianus*) was documented. All of the abovementioned mammals are common throughout Southern Ontario and within naturalized areas in urban environments.

No significant wildlife habitat exists on the property outside of the limited resources provided by the valley corridor and no vulnerable, threatened or endangered fauna were observed or documented to occur on the property.

Potential amphibian breeding habitat exists within the Western Creek corridor. There is no development proposed within this area.

4.6 Watercourses and Fisheries

The reach of Western Creek in proximity to the property is gently meandering, with high flow at the time of the site visit, exhibiting undercut banks with some evidence of



erosion. The spring of 2004, (timing of the fieldwork) experienced higher than average precipitation levels and a number of heavy rainfall episodes had occurred prior to the field visit. The creek has a bankfull width of 2m with a wetted width of 1.75m. The bankfull depth is 50cm with a wetted depth of 20cm. The substrate is comprised of approximately 60% boulder, 30% sand and 10% cobble.

Background fisheries information was provided by the LSRCA from an investigation undertaken within this watercourse in 2002. The field study documented the presence of Goldfish (*Carassius auratus*) and Fathead Minnow (*Pimpephales promelas*). Additional background fisheries data was obtained from the OMNR in 2007. There are a number of historical fish sampling records for Western Creek downstream of the property sampled on August 27, 1997 at five different stations (Table 4). Based on this background data, Western Creek supports a warm water fishery.

Table 3: Fish species captured from Western Creek

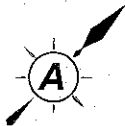
Common Name	Scientific Name	Number of Individuals Observed
White Sucker	<i>Catostomus commersoni</i>	12
Creek Chub	<i>Semotilus atromaculatus</i>	70
Goldfish	<i>Carassius auratus</i>	44
Common Shiner	<i>Luxilus cornutus</i>	2
Unknown		2

5.0 PROPOSED PRELIMINARY DEVELOPMENT PLAN

The proponent wishes to develop the site for residential use (See Figure SP1, PDA Architects, 2006). All of the proposed residential development would occur on the tablelands above the confirmed top-of-bank.

The management of storm water must be contained on-site, however specific plans regarding the design and location of storm water facilities are yet to be created. The required geotechnical investigations regarding soils characterization, slope stability, grading requirements, and ground water protection are also yet to be completed. This work will be carried out in the preparation of the detailed site plan.

The proposed preliminary development plan restricts all residential development to lands located south of the identified top of bank, outside of the valley corridor (Figures SP1). The location of the top of bank was delineated in the field with LSRCA staff (February 2003 – Figure 2), thus establishing the potentially developable limits of the property. The



preliminary development plan proposes the development of a 10-storey condominium building and 36 to 38 townhouse units.

6.0 IMPACT ASSESSMENT

6.1 Planning Context

6.1.1 Provincial Planning Policy

There are no Provincially Significant Wetlands or Areas of Natural and Scientific Interest (ANSI) on or adjacent (i.e. within 120m) to the property (Appendix A). Current provincial databases do not identify significant Woodlands, Valley Lands or Significant Wildlife Habitat on or adjacent to the property.

Western Creek (East Holland River), located on the north side of the property represents direct fish habitat. All proposed development of the site would occur on the tablelands above the confirmed top-of-bank and thus located a minimum of 25m away from the creek. The watercourse traversing the property will be maintained in its current state.

No elements of occurrence (EO_ID) records for endangered or threatened species were on file with the Ontario Ministry of Natural Resources (OMNR) Natural Heritage Information Centre database (NHIC, 2007) on the property or on adjacent (i.e. within 120m) lands (Appendix A).

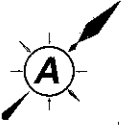
There were no federally or provincially rare flora or fauna species observed on site with the exception of one Honey Locust (S2) that was observed on the property during the 2003 site visit. This tree is well outside of its natural range and likely represents a past horticultural planting.

6.1.2 Regional Municipality of York

The property is located within the Town of Newmarket, within an identified "Urban Area" according to the Regions Official Plan (OP) (2006) (Map 5: Regional Structure). The proposed development is consisted with the Region's OP.

6.1.3 Town of Newmarket

The property is designated in the new OP as Emerging Residential, Stable Residential and Natural Heritage System on the tablelands and Parks and Open Space within the



valley corridor and identified Flood Plain associated with Western Creek, a tributary of the East Holland River (Land Use-Schedule A, 2006)(Appendix A).

There is no development proposed within the Parks and Open Space or Flood Plain regions of the property. This is consistent with the Town's new OP.

The portion of the property designated as part of the Natural Heritage System (Figure 2) was identified as a woodland. The current definition of a woodland as a "dense growth of trees comprising a minimum area of 0.2 hectares (0.5 acres)" (Town of Newmarket, 2006).

6.1.4 Lake Simcoe Region Conservation Authority

6.1.4.1 Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses

There is no proposed development within the lands regulated under Ontario Regulation 179/06 on the property (Appendix B).

6.1.4.2 Natural Heritage System for the Lake Simcoe Watershed

The removal of the highly disturbed vegetation located on the tablelands (i.e. above the top-of-bank) will result in no net negative impact on the Natural Heritage System as a whole (See Section 6.5 and 6.6 below) (Appendix B).

6.2 Land Use

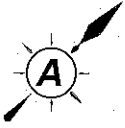
6.2.1 On-Site Land Use

The land use will change from an undeveloped old field to residential land use.

No development is proposed past the designated top-of-bank of the valley corridor, as established in the field by the LSRCA (Figure 2). The proposed development is also located outside of the Flood and Fill regulated area, based on mapping provided by the LSRCA (Figure 2).

6.2.2 Adjacent Land Use

Since adjacent land use to the east and west of the site is primarily commercial, with existing paved parking facilities, development of the subject property will have limited impact on the existing adjacent land uses.



The implementation of the proposed preliminary development plan (Figure SP1) would be expected to result in a potential increase in passive recreational use within the valley corridor, although the valley corridor in this location already shows signs of human disturbance. Use of this type of greenbelt corridor by humans and pets cannot usually be mitigated or avoided within a heavily urbanized environment.

6.3 Soils and Topography

Specific impacts of the preliminary development plan in relation to the soil stability and regrading requirements will be completed as part of the future geotechnical investigations.

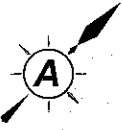
6.4 Ground Water

The development envelope of the subject property is located in a developed area within the Town of Newmarket. Based on preliminary review of available information of the localized ground water function, it has been determined that there will be no adverse impacts on the recharge or discharge functions of the ground water regime, primarily because of the low permeability of the surficial soils and that water supply is drawn from the municipal system. Thus, potential impacts are limited to the reduction in infiltration due to the creation of hard surfaces. There are mitigation opportunities to address the ground water infiltration issue, by directing rooftop runoff to grassed areas and the use of shallow infiltration galleries. A comprehensive ground water investigation will be completed as part of the future geotechnical studies.

6.5 Vegetation

The preliminary development plan proposed for the site will result in the development of approximately 2.1 ha of the property of which approximately 0.7 ha (7,342m²) is comprised of the cultural woodland that has been identified as a part of the Town's Natural Heritage System. For greater detail of the number, species, and health of the individual trees in this area please see the Tree Plan completed for the property (Bentley, 2007). The loss of this vegetation is not considered to be significant for the following reasons:

- Many of the species are non-native (exotics) and invasive (e.g. Japanese knotweed) or horticultural escapees. Many of the individuals are of poor and failing health (Bentley, 2007). No remnant non-cultural ecosystems as described by the ELC (Lee *et al.*, 1998) are present;



- Part of the eastern section of the property in proximity to Eagle Street has previously been cleared and the topsoil removed. This part of the property contains ruderal species that commonly invade road margins and disturbed sites;
- One provincially rare species, Honey Locust, was observed on the property during the 2003 site visit (OMNR NHIC, 2007) and one plant species, Black Walnut, documented on site that is considered rare in the Lake Simcoe Region Conservation Authority watershed (LSRCA, 2003);
- No native forest cover or interior forest habitat is present; and,
- Existing aesthetic functions provided by the larger landscape plantings on site can be replaced post-construction by the planting of native tree and shrub species at a greater density than now occurs.

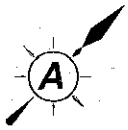
Within the East Holland Natural Heritage System for the Lake Simcoe Watershed (2007), there is approximately 23,910ha of identified natural heritage features. The Level 3 natural heritage features compose approximately 860.76ha of land within this subwatershed. The loss of 2.15ha area at the top-of bank represents a loss of approximately 0.0009% of highly disturbed, open and treed urban landscape. This is not a significant loss to the regional natural heritage features system.

Vegetation below top-of-bank within the Western Creek valley corridor is being retained and will not be disturbed or impacted by the proposed residential development, provided that best construction practices are employed. Existing functions of this vegetation, including stabilization of the walls of the valley corridor and prevention of erosion, will not be impacted. It is recommended that silt/barrier fencing be erected along the staked top of bank feature to prevent the accidental intrusion of construction equipment into the valley corridor.

There is no interior forest habitat (i.e. forest habitat at least 100m from forest edge) present on the property. There are no unique wildlife habitat conditions on site nor is located within a highly diverse landscape.

Given its location within the Town of Newmarket (i.e. urban area), it is not situated in an area amongst other larger habitat patches. The connectivity beyond the property is poor due to the extensive urban development surrounding the property. The limited opportunities for connectivity and wildlife movement across the property through the corridor associated with Western Creek will be maintained through the protection of the valley lands.

The remaining property located below the established top-of-bank will remain in its natural state. Currently, there is partial cover provided by the existing treed riparian trees



(*Acer negundo*, *Salix fragilis*) to the watercourse. The limited thermal cover for a portion of the channel will not be removed or affected by the proposed development.

Enhancement of the overall natural heritage quality of the riparian corridor can be improved with the planting of native tree and shrub species at a greater density than now occurs. Not only would the overall biodiversity of vegetation of the riparian valley increase, secondary impacts of improvements to local terrestrial wildlife habitat and fish habitat of Western Creek would result.

The arborist's report conducted by Cathy V. Bentley (2007) describes the site as having 'remnants of planted areas of trees and shrubs' and that there were no 'natural areas of native forest observed in the proposed area of development'. The report identified only five trees above the top-of-bank on whole property that were of significant size and in good condition (Appendix C). We agree with her findings.

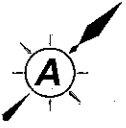
6.6 Wildlife

There will be no impacts on existing wildlife populations as a result of the proposed development because the species documented during the site visit are disturbance tolerant and widespread in urban environments. The existing vegetation to be eliminated on the tablelands portion of the property does not provide significant habitat for wildlife species. No rare fauna were documented for the site.

Use of the valley feature by existing urban wildlife as a passage corridor will not be eliminated as a result of the development. All remnant riparian vegetation (Area B) that currently provides habitat for urban wildlife species within the valley will also be retained. The species that use the valley corridor have already been impacted by urban development, especially since existing residential development extends to the edge of the culverted watercourse east of the site and the Yonge Street commercial development forms the westerly boundary.

The Red-shouldered Hawk has been confirmed as breeding within the OBBA square (10kmx10km) including the property (OBBA, 2007, Appendix D). The provincial ranking for this hawk was downgraded to Special Concern in May 2006 and is no longer at risk according to COSEWIC. The Red-shouldered Hawk prefers extensive contiguous tracts of mixed forest and deciduous swamp habitat (Cornell 2005). Suitable habitat is not present on site or in proximity and no individuals were observed during the field investigations.

The Ruby Crowned Kinglet is a regionally rare bird species that has been confirmed as breeding within the OBBA square (10kmx10km) including the property (OBBA, 2007,



Appendix D). The Ruby Crowned Kinglet inhabits forests with mixed conifers and northern hardwoods, particularly White Spruce, Black Spruce, and Paper Birch and prefers areas close to water (Ingold *et al*, 1994). There is no suitable habitat on site and no individuals were observed during the field investigations.

Two colonial breeders are confirmed to be breeding in the OBBA square (10kmx10km) including the property according to the Ontario Breeding Bird Atlas: Bank Swallow and Cliff Swallow (OBBA, 2007, Appendix D). The Bank and Cliff Swallows inhabit a variety of habitat types but are often associated with riparian habitat. This habitat type is present on the property and will be retained in its entirety. Similarly, no individuals were observed during the field investigations.

The portion of the property proposed for development is too small to support area sensitive species.

6.7 Watercourses and Fisheries

There will be no impact on the watercourse feature and associated fisheries because no development will be placed below the defined top-of-bank of the valley corridor or within 25m of Western Creek.

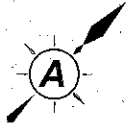
The proposed preliminary development plan do not involve any watercourse crossings or alterations. We also recommend that no storm water management facilities be located within the valley corridor (must be placed beyond the top-of-bank).

7.0 MITIGATION STRATEGY

No specimen trees exist on the lot that would warrant special consideration for retention. A specimen tree has been defined as an individual with a diameter at breast height (dbh) of 75cm (30 inches) or more, or trees having 75% or more of the diameter of the currently known largest specimen (Galvin *et al.*, 2000).

Construction activities involving the removal of vegetation should be restricted from occurring between the beginning of April to approximately mid-July in accordance with the Migratory Birds Convention Act, and the Migratory Birds Regulations, to avoid impacting migratory birds, nests, and eggs during the breeding season.

Recommendations as outlined in Cathy V. Bentley (2007) should be incorporated into the proposed development activities regarding tree replacement (Appendix C).



The watercourse traversing the property has been identified as one supporting a warm water fish community; therefore a minimum of a 15m buffer should be retained. The conceptual development plan is located a minimum of approximately 25m from Western Creek.

No development should occur below the defined top-of-bank thus preserving the existing form and function of the valley corridor. The LSRCA may require a setback from the staked top of bank to protect features and functions of the valley corridor. Since there is little existing tree cover along the top of bank, canopy drip line will not likely be involved in the decision making process to delineate the development limit with the exception of several larger trees located near the top of bank in one location that have canopies that extend past the top of bank.

Intensive silt control applications will be required and monitored for the duration of construction activities, in order to protect the watercourse from impacts associated with development. The use of properly installed and maintained silt fencing is recommended along the northern edge of the development for the following reasons:

- To prevent intrusion of construction equipment past the staked top of bank of the valley corridor feature;
- To prevent offsite migration of sediment or migration of sediment in the direction of the watercourse; and,
- To prevent the creation of erosion channels by vegetation removal past the top of bank.

Proposed mitigation strategies associated with the potential impacts of the development upon ground water function (infiltration) and the potential impacts of storm water management facilities will be presented at the time of a more detailed design of the proposed development.

8.0 CONCLUSIONS

The proposed development plan will result in the residential development of the property south of the defined top-of-bank resulting in the removal of marginal habitat for urban wildlife species and lands that no longer supports natural vegetation communities. The proposed development does not affect Provincially Significant Wetlands (PSW), Areas of Natural and Scientific Interest (ANSI), Significant Woodlands, Valley Lands, Wildlife Habitat or Fish Habitat on or adjacent (i.e. within 120m) of the property as defined by the Provincial Policy Statement (MMAH, 2005). The habitat of federally or provincially threatened or endangered species is also not affected by the proposed development plan.



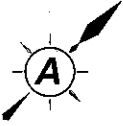
The proposed development of the property is supported from Provincial, Regional and, for the most part, Town policies. However, the designation of 0.7ha of the property as part of the Town's Natural Heritage System as a woodland, if retained, would affect the full development of the property above the top-of-bank. A detailed investigation of the treed vegetation in the area concluded that the property as having only 'remnants of planted areas of trees and shrubs' and that there were no 'natural areas of native forest observed in the proposed area of development' (Bentley, 2007). Designation of this area for protection is not appropriate from a natural heritage perspective because of the existing intensity of development of the surrounding lands, and level of disturbance of the natural environment of the developable lands and the structure and composition of the vegetation designated as part of the Natural Heritage System.

The potential environmental impacts of development will be negligible, providing all aspects of the proposed development occur outside the designated valley corridor and tree replacement as outlined by in the mitigation measures is completed post-construction.



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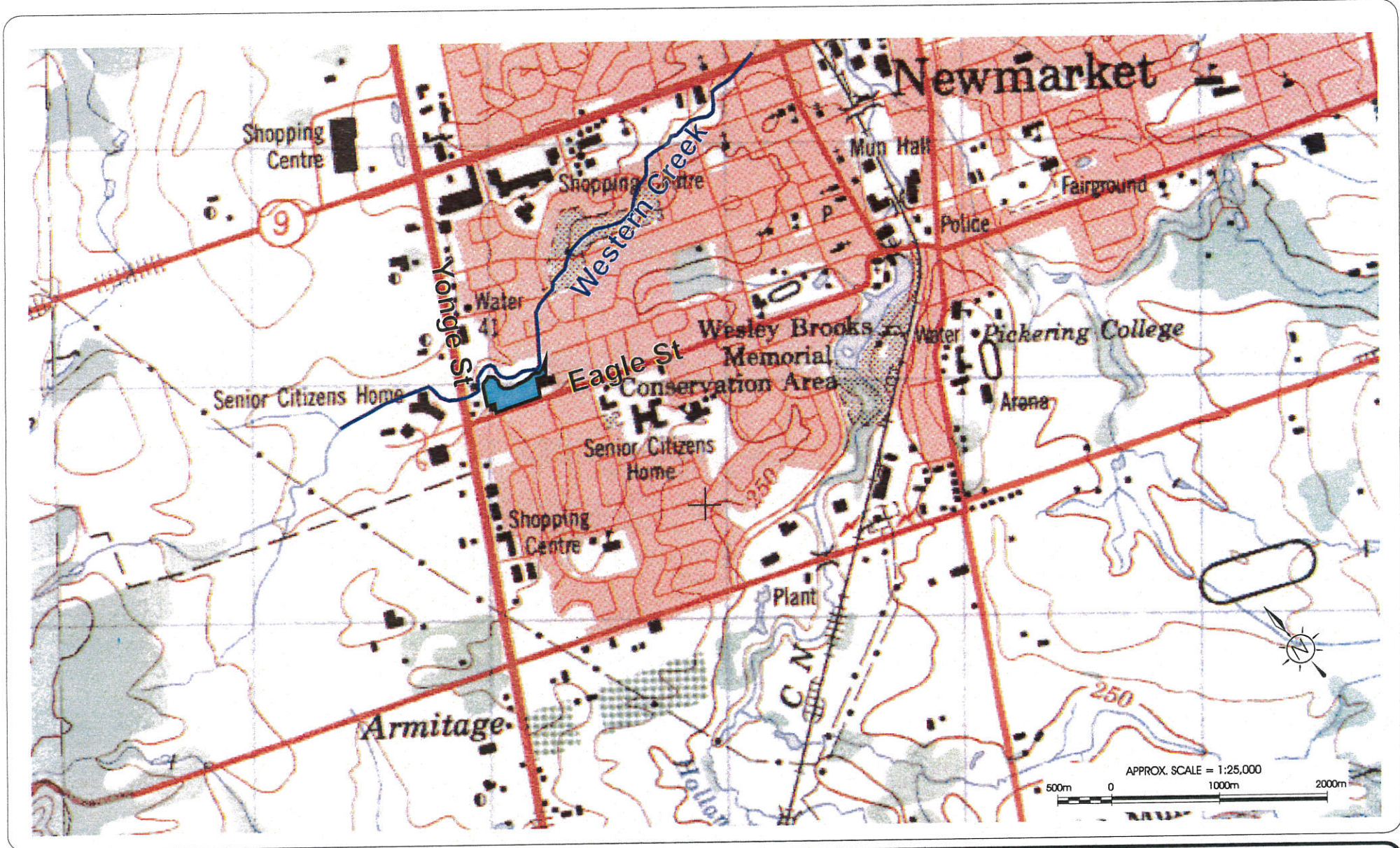
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Legend:

-  Watercourse
-  Property Location

 AZIMUTH ENVIRONMENTAL CONSULTING, INC.

SITE LOCATION

Date Issued: Dec. 2007
 Created By: BAC
 Project No. 04-060
 File Name: Fig1siteLocation.cdr

MILLFORD DEVELOPMENTS LTD.
 Pt Lots 2 & 3, Registered Plan 49
 Town of Newmarket

Figure No.

1

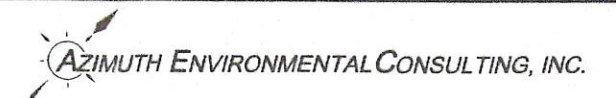


Legend:

- Property Boundary
- Watercourse
- Flood Line (as per LRSCA)
- Top of Bank (as per LRSCA)
- Fill Line (as per LRSCA)
- Natural Heritage Area

— Vegetation Communities

- CUP3-3 Scotch Pine Coniferous Plantation
- CUM1-1 Dry-Moist Old Field Meadow Type
- CUM1 Cultural Woodland
- SWD3-4 Manitoba Maple Mineral Deciduous Swamp
- MAM2-2 Reed-Canary Grass Mineral Meadow Marsh Type



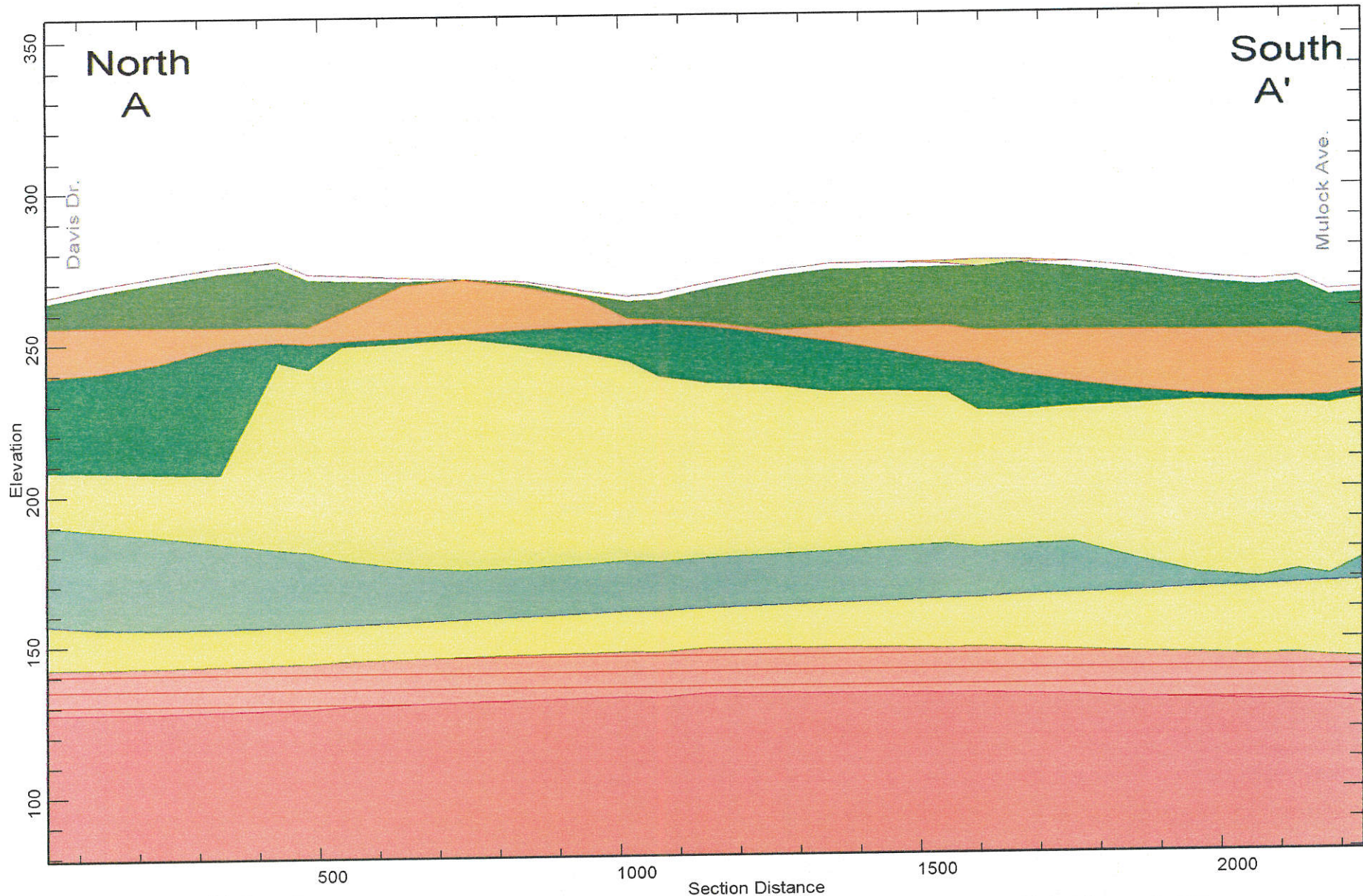
ENVIRONMENTAL FEATURES

Date Issued: February 2008
 Created By: PHD
 Project No.: 04-060
 File Name: Figure 2

MILLFORD DEVELOPMENTS LTD.
 Pt Lots 2 & 3, Registered Plan 49
 Town of Newmarket

Figure No.

2



- Data Legend:
- Recent Deposits/ Weathered Halton
 - Unweathered Halton Till
 - Oak Ridges Moraine
 - Newmarket Till
 - Thornccliffe Fm
 - Sunnybrook Diamict
 - Scarborough
 - Weathered Bedrock
 - Unweathered Bedrock





Vertical Exaggeration x 5
 Scale: 1: 10000


	Figure: 3
N-S Cross Section along Yonge Street	
	
	

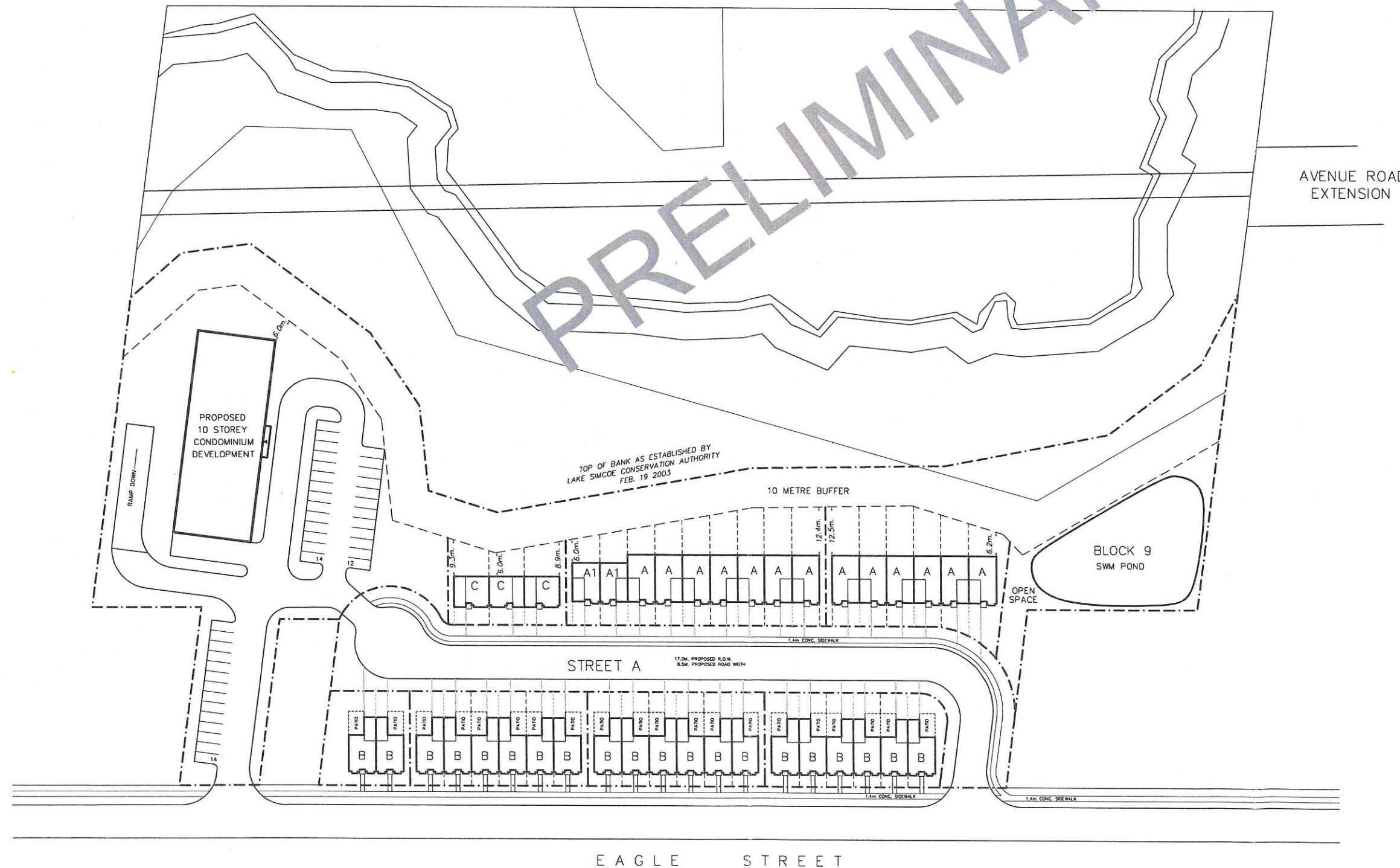


PROJECT INFORMATION:

PROPOSED TOWNHOUSES: 38
 NET LOT AREA: 7,562.40 SM (81,405 SF)
 NET TOWNHOUSE AREA: 2,886.24 SM (31,070 SF)
 PROPOSED DENSITY: 50.25 UNITS/HECTARE
 PROPOSED LOT SIZE:
 A: 7M X 24M= 168 SM
 B: 7M X 24M= 168 SM
 C: 9M X 18M (MIN)= 162SM

PROPOSED CONDOMINIUM
 NET LOT AREA: 6,221.65 SM (66,970 SF)
 GROSS FLOOR AREA PER LEVEL: 1,041.34 SM (11,210 SF)
 FLOORS: 10
 TOTAL G.F.A.: 10,413.40 SM (112,100SF)

PRELIMINARY



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 www.pda-architects.ca



NO.	REVISIONS:	ISSUED:

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CLIENT:
MILLFORD DEVELOPMENTS

PROJECT:
**PROPOSED CONDOMINIUM DEVELOPMENT
 NEWMARKET ON**

SHEET TITLE:
SITE PLAN

PROJECT NO. 2524	
SCALE: 1:500	DATE: JULY 5/06
DRAWN: RS	SHEET NO.:
CHECKED: JdeV	SP1
FILE NO. 2524	

Table 2: Plant Species Observations

04-060 Millford EIS (Newmarket)
Observers: M. Scott, B. Clayton

FAMILY	SCIENTIFIC NAME ¹	COMMON NAME	SWD3-4	CUP3-3	CUM1	CUW1	MAM2-2	Conservation Rankings ³					LSRCA Watershed Rare ⁴	
								GRANK	SRANK	COSEWIC	MNR	TRACK		
ACERACEAE	<i>Acer negundo</i>	Box Elder	X		X	X		G5	S5				N	
ACERACEAE	<i>Acer platanoides</i>	Norway Maple		X	X			G?	SE5				N	
ACERACEAE	<i>Acer saccharum</i>	Sugar Maple				X		G5	S5				N	
ANACARDIACEAE	<i>Rhus typhina</i>	Staghorn Sumac	X	X	X	X		G5	S5				N	
APIACEAE	<i>Daucus carota</i>	Wild Carrot	X		X	X		G?	SE5				N	
ASCLEPIADACEAE	<i>Asclepias syriaca</i>	Kansas Milkweed				X		G5	S5				N	
ASTERACEAE	<i>Achillea millefolium</i>	Yarrow						G5	S5				N	
ASTERACEAE	<i>Ambrosia artemisiifolia</i>	Annual Ragweed				X		G5	S5				N	
ASTERACEAE	<i>Chrysanthemum leucanthemum</i>	Oxeye Daisy			X	X		G?	SE5				N	
ASTERACEAE	<i>Cichorium intybus</i>	Chicory			X			G?	SE5				N	
ASTERACEAE	<i>Cirsium vulgare</i>	Bull Thistle			X			G5	SE5				N	
ASTERACEAE	<i>Erigeron hyssopifolius</i>	Daisy Fleabane			X			G5	S5				N	
ASTERACEAE	<i>Eupatorium maculatum</i>	Spotted Joe-pye Weed					X	G5	S5				N	
ASTERACEAE	<i>Taraxacum officinale</i>	Brown-seed Dandelion			X	X		G5	SE5				N	
ASTERACEAE	<i>Tragopogon dubius</i>	Meadow Goat's-beard			X			G?	SE5				N	
ASTERACEAE	<i>Tussilago farfara</i>	Colt's Foot	X					G?	SE5				N	
BALSAMINACEAE	<i>Impatiens capensis</i>	Spotted Jewel-weed	X				X	G5	S5				N	
BRASSICACEAE	<i>Alliaria petiolata</i>	Garlic Mustard	X	X	X	X		G?	SE5				N	
CAPRIFOLIACEAE	<i>Lonicera tatarica</i>	Tartarian Honeysuckle	X		X	X		G?	SE5				N	
CORNACEAE	<i>Cornus stolonifera</i>	Red-osier Dogwood	X			X	X	G5	S5				N	
CUPRESSACEAE	<i>Juniperus virginiana</i>	Eastern Red Cedar			X	X		G5	S5				N	
CUPRESSACEAE	<i>Thuja occidentalis</i>	Eastern White Cedar	X		X	X		G5	S5				N	
DRYOPTERIDACEAE	<i>Onoclea sensibilis</i>	Sensitive Fern	X					G5	S5				N	
EMPETRACEAE	<i>Empetrum nigrum</i>	Black Crowberry	X					G5	S5				N	
EUPHORBIACEAE	<i>Euphorbia cyparissias</i>	Cypress Spurge	X		X	X		G5	SE5				N	
FABACEAE	<i>Gleditsia triacanthos</i>	Honey Locust				X		G5	S2				Y	
FABACEAE	<i>Melilotus alba</i>	White Sweet Clover			X	X		G5	SE5				N	
FABACEAE	<i>Vicia cracca</i>	Tufted Vetch	X	X	X	X		G?	SE5				N	
GROSSULARIACEAE	<i>Ribes americanum</i>	Wild Black Currant			X	X		G5	S5				N	
JUGLANDACEAE	<i>Juglans nigra</i>	Black Walnut			X	X		G5	S4				N	X
JUNCACEAE	<i>Juncus tenuis</i> var. <i>antheratus</i>	Rush			1			G5T?	S1				Y	
OLEACEAE	<i>Syringa vulgaris</i>	Common Lilac			X	X		G?	SE5				N	
ONAGRACEAE	<i>Calylophus serrulatus</i>	Yellow Evening Primrose			X			G5	SE1				N	
ONAGRACEAE	<i>Circaea alpina</i>	Small Enchanter's Nightshade	X	X		X		G5	S5				N	
PINACEAE	<i>Picea abies</i>	Norway Spruce				X		G5	SE3				N	
PINACEAE	<i>Picea glauca</i>	White Spruce				X		G5	S5				N	
PINACEAE	<i>Picea pungens</i>	Blue Spruce				X		G5	SE1				N	
PINACEAE	<i>Pinus banksiana</i>	Jack Pine		X				G5	S5				N	
PINACEAE	<i>Pinus sylvestris</i>	Scotch Pine		X		X		G?	SE5				N	
POACEAE	<i>Phalaris arundinacea</i>	Reed Canary Grass					X	G5	S5				N	
POLYGONACEAE	<i>Polygonum cuspidatum</i>	Japanese Knotweed			X	X		G?	SE4				N	
RANUNCULACEAE	<i>Anemone canadensis</i>	Canada Anemone	X					G5	S5				N	
RANUNCULACEAE	<i>Caltha palustris</i>	Marsh Marigold	X				X	G5	S5				N	
RANUNCULACEAE	<i>Clematis virginiana</i>	Virginia Virgin-bower	X			X		G5	S5				N	
RANUNCULACEAE	<i>Ranunculus acris</i>	Tall Butter-cup			X			G5	SE5				N	
RHAMNACEAE	<i>Rhamnus cathartica</i>	Buckthorn	X	X		X		G?	SE5				N	
ROSACEAE	<i>Fragaria virginiana</i>	Virginia Strawberry			X	X		G5	S5				N	
ROSACEAE	<i>Geum canadense</i>	White Avens	X		X	X		G5	S5				N	
ROSACEAE	<i>Malus pumila</i>	Common Apple	X			X		G5	SE5				N	
ROSACEAE	<i>Potentilla recta</i>	Sulphur Cinquefoil			X			G?	SE5				N	
ROSACEAE	<i>Prunus virginiana</i>	Choke Cherry	X			X		G5	S5				N	
ROSACEAE	<i>Rubus idaeus</i>	Common Red Raspberry	X			X		G5	S5				N	
ROSACEAE	<i>Spiraea alba</i>	Narrow-leaved Meadow-sweet	X				X	G5	S5				N	
SALICACEAE	<i>Populus deltoides</i> ssp. <i>monilifera</i>			X		X		G5T4T5	S5				N	
SALICACEAE	<i>Populus tremuloides</i>	Trembling Aspen				X		G5	S5				N	
SALICACEAE	<i>Salix alba</i> var. <i>vitellina</i>	White Willow				X		G5T?	SU				N	
SALICACEAE	<i>Salix fragilis</i>	Crack Willow	X					G?	SE5				N	
SCROPHULARIACEAE	<i>Limaria vulgaris</i>	Butter-and-eggs			X	X		G?	SE5				N	
SCROPHULARIACEAE	<i>Verbascum thapsus</i>	Great Mullein			X	X		G?	SE5				N	
SOLANACEAE	<i>Solanum dulcamara</i>	Climbing Nightshade		X	X	X		G?	SE5				N	
TILIACEAE	<i>Tilia americana</i>	American Basswood				X		G5	S5				N	
TYPHACEAE	<i>Typha latifolia</i>	Broad-leaf Cattail					X	G5	S5				N	
ULMACEAE	<i>Ulmus chinensis</i>	Chinese Elm			X	X								
VITACEAE	<i>Vitis riparia</i>	Riverbank Grape	X	X		X		G5	S5				N	

¹ Nomenclature based on Ontario Ministry of Natural Resources (OMNR), Natural Heritage Information Centre (NHIC) database - <http://nhic.mnr.gov.on.ca/MNR/nhic/species.cfm>

² ELC Code - See Table 1 for community description.

³ Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (http://nhic.mnr.gov.on.ca/nhic_cfm)

⁴ Regional - Identifies species that are considered to be rare in the Lake Simcoe Watershed according to Lake Simcoe Environmental Management Strategy (LSEMS) 2003. State of the Lake Simcoe Watershed

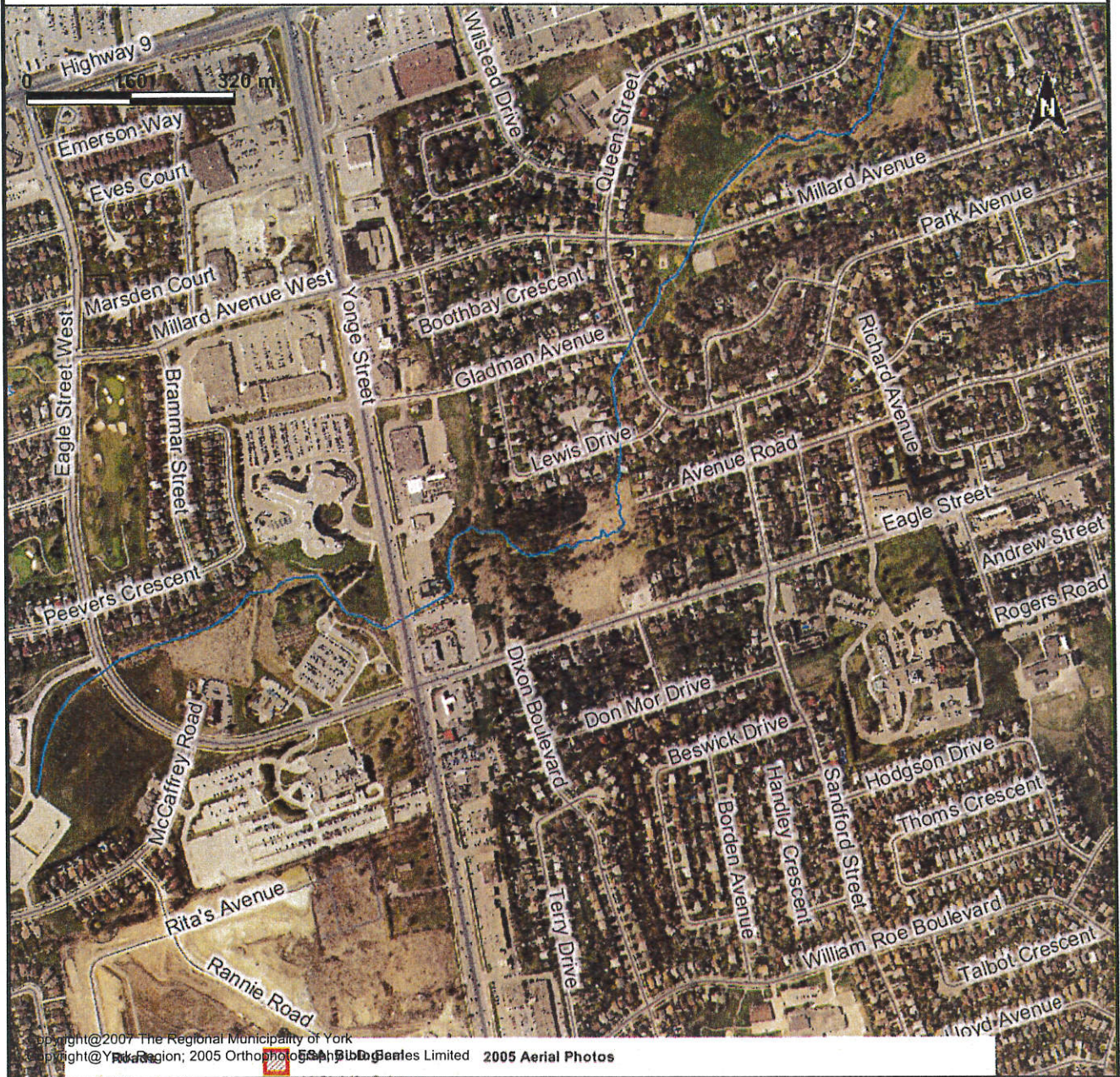


APPENDICES



Appendix A

RELATED PLANNING INFORMATION



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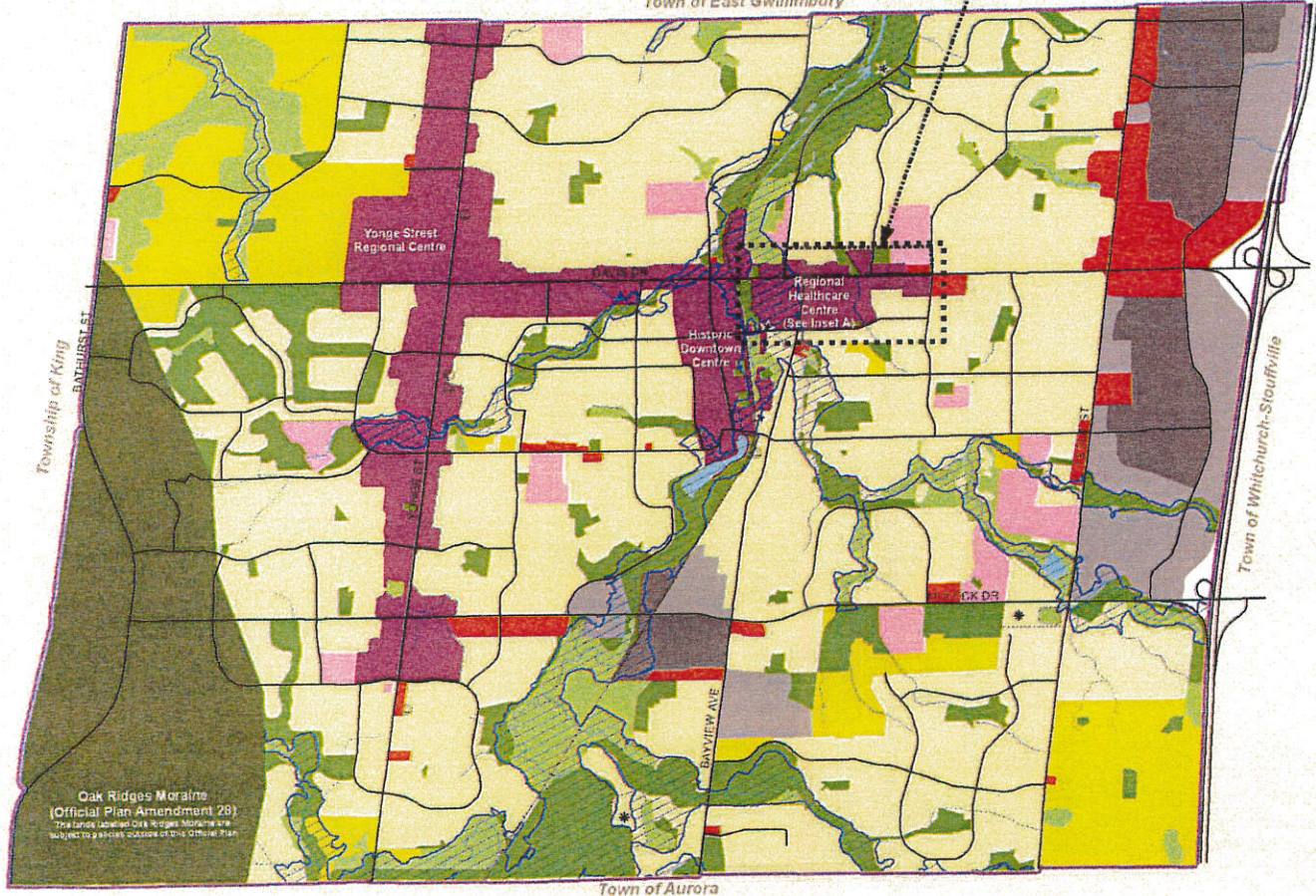
- | | | | |
|--|-------------------------|--|----------------------------|
| | Highways | | ANSI, Life Science |
| | Regional Roads | | ANSI, Earth Science |
| | Major Roads | | Wetlands |
| | Minor Roads | | Lake Ontario |
| | Proposed Unopened Roads | | Lakes |
| | ESA, Biological Aquatic | | Regional Greenlands |
| | Rivers | | Regional Greenlands System |

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 Information presented is NOT A PLAN OF SURVEY.



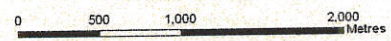
Deferred under section 17(10) of the Planning Act #1

Town of East Gwillimbury



Oak Ridges Moraine
[Official Plan Amendment 28]
The lands labelled Oak Ridges Moraine are subject to policies outside of this Official Plan

Scale 1:15 000



Schedule A Land Use Town of Newmarket

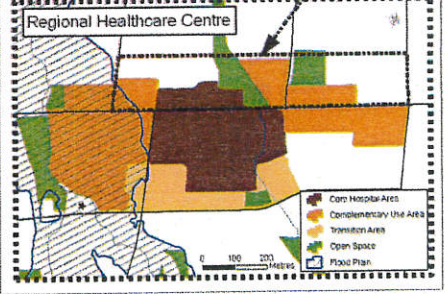
- Stable Residential
Notwithstanding the Stable Residential Area designation, only single detached dwellings are permitted
- Emerging Residential
- Major Institutional
- Business Park - General Employment
- Business Park - Mixed Employment
- Commercial
- Urban Centre
- Parks & Open Space
- Natural Heritage System
- Oak Ridges Moraine Area
The lands labelled Oak Ridges Moraine are subject to policies outside of the Official Plan
- Flood Plain
- Waterbodies
- Watercourse
- Watercourse - Intermittent
- Waste Disposal Assessment Area
- Regional Water Wells
- Municipal Boundary
- Railway
- Roads



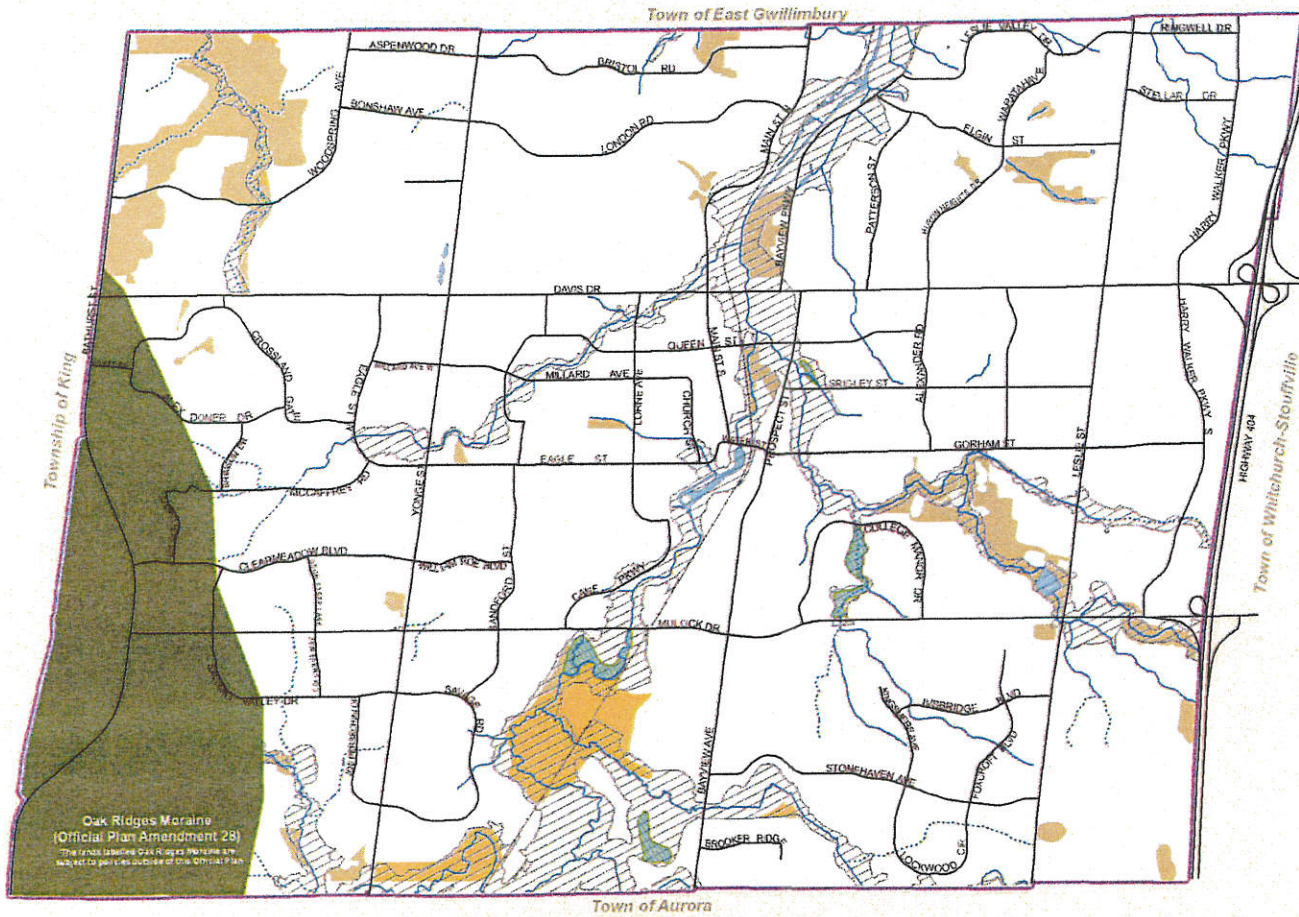
A community
well beyond the ordinary

Deferred under section 17(10) of the Planning Act #1

Inset A

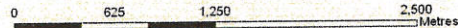


Designed & Produced by Information Technology - GIS Project, August 2005. Source: Roads, Municipal Boundary, Railway, Waterbodies - Geomatics Division, Planning and Development Services, Department of The Regional Municipality of York, 2005. Flood Plain - Lake Simcoe Region Conservation Authority. All other map layers - Town of Newmarket. This document is provided by the Town of Newmarket for your personal, non-commercial use. The information depicted on this map has been compiled from various sources. While every effort has been made to accurately depict the information, data mapping errors may exist. This map has been produced for illustrative purposes only. It is not a substitute for a legal survey. Please see Lake Simcoe Region Conservation Authority for detailed flood and RIL line mapping. This data is for screening purposes only and may not be the most up-to-date data and should not be released to a third party. Any members of the public with questions about this information should be directed to the LSRA.



Oak Ridges Moraine
(Official Plan Amendment 28)
The areas labeled Oak Ridges Moraine are subject to policies outside of this Official Plan.

Scale 1:15 000



Schedule B Natural Heritage System Town of Newmarket

- Meadow
- Wetland
- Woodlot
- Flood Plain
- Oak Ridges Moraine Area
The areas labeled Oak Ridges Moraine are subject to policies outside of this Official Plan.
- Waterbodies
- Watercourse
- Watercourse - Intermittent
- Collector Road
- Railway
- Municipal Boundary



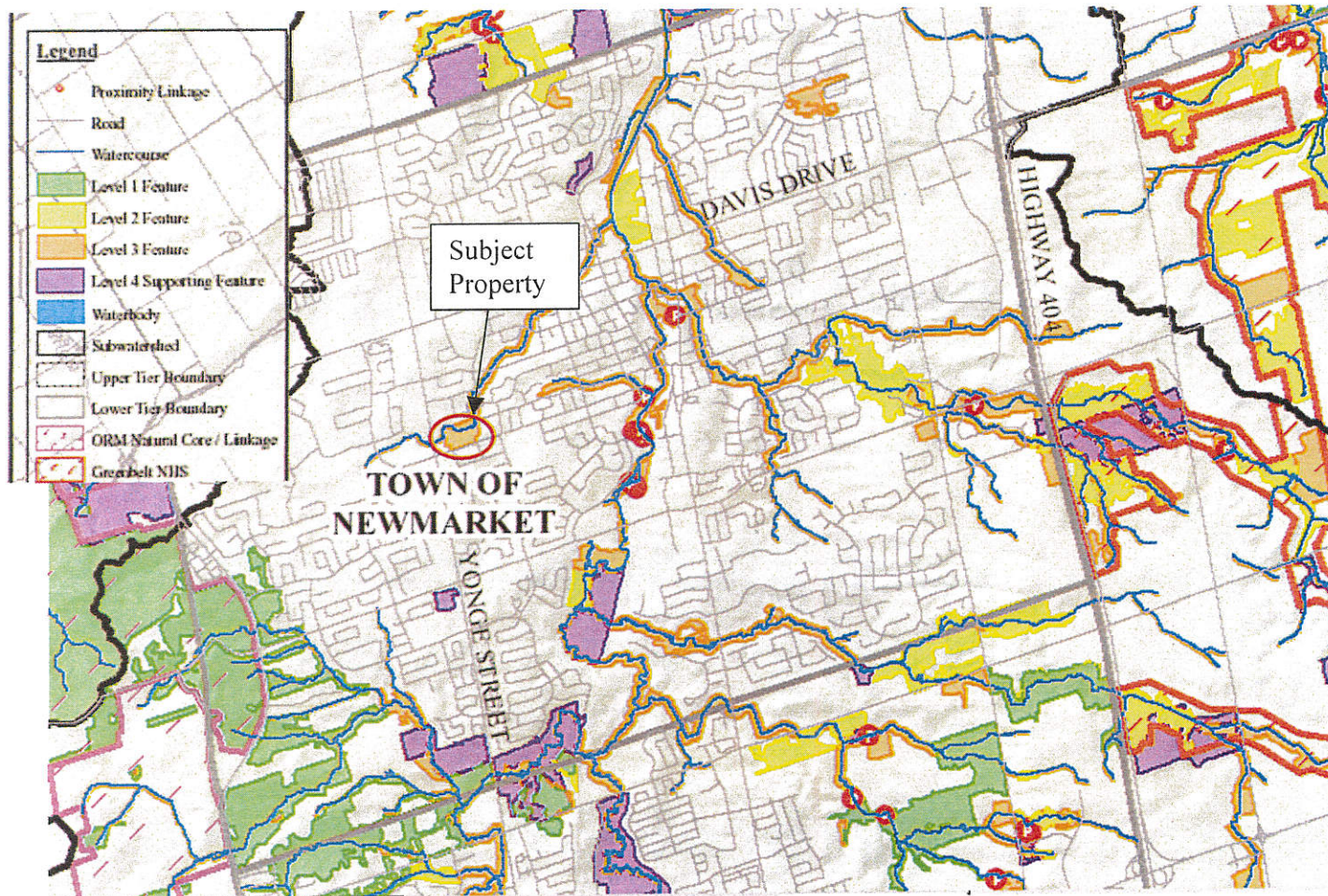
A community
well beyond the ordinary

Designed & Produced by Information Technology - GIS Project August 2006. Source: Roads: Municipal Boundary, Railway: Waterbodies: Ontario's Division, Planning and Development Services Department © The Regional Municipality of York, 2005. Flood Plain: Lake Simcoe Region Conservation Authority. All other map layers - Town of Newmarket. DISCLAIMER: This document is provided by the Town of Newmarket for your personal, non-commercial use. The information depicted on this map has been compiled from various sources. While every effort has been made to accurately depict the information, data mapping errors may exist. This map has been produced for illustrative purposes only. It is not a substitute for a legal survey. Please see Lake Simcoe Region Conservation Authority for detailed flood and fill line mapping, this data is for screening purposes only and may not be the most up-to-date data and should not be released to a third party. Any members of the public with questions about this information should be directed to the LSRCA.



Appendix B

LAKE SIMCOE REGION CONSERVATION AUTHORITY INFORMATION

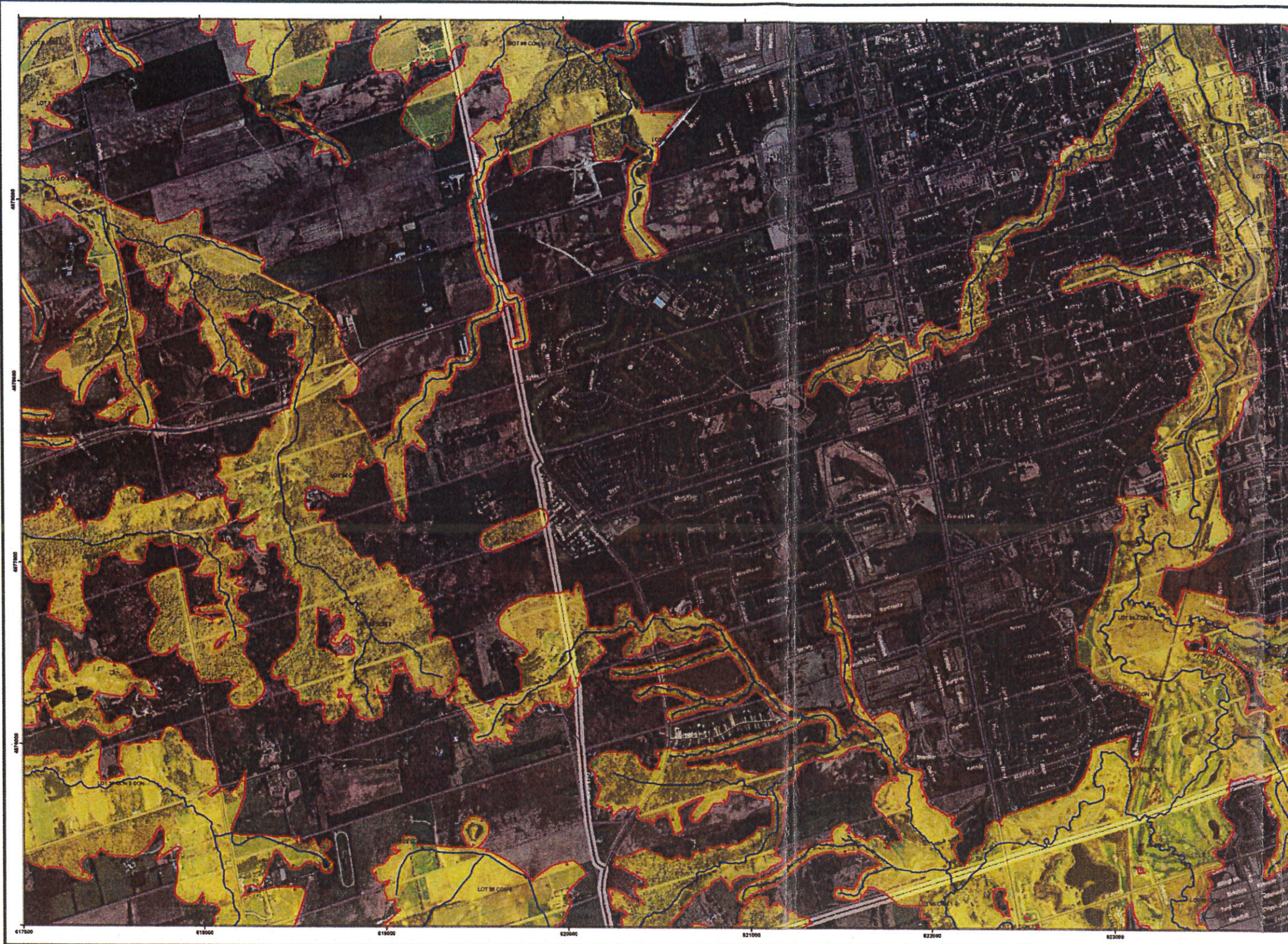
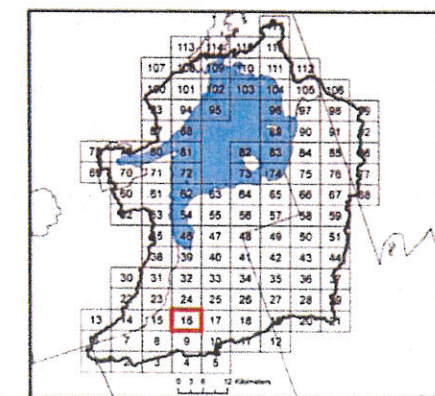


Appendix B: Lake Simcoe Region Conservation Authority's Natural Heritage Features (Data obtained from LSRCA's website www.lsrca.on.ca)

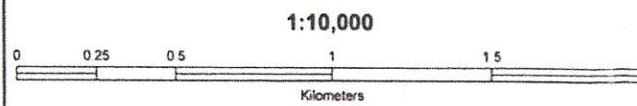


Legend

-  WATERCOURSE
-  ROAD
-  REGULATION AREA
-  LOT_CONCESSION
-  LSRCA JURISDICTION
-  MUNICIPAL BOUNDARY
-  LAKE SIMCOE



THE REGULATION AREA IS A COMPILATION OF VARIOUS INFORMATION SOURCES. 2002 ORTHOPHOTOS WERE CAPTURED BY FIRST BASE SOLUTIONS. RIVERINE HAZARDS WERE BASED ON EXISTING FLOOD PLAN MAPPING. FLOOD PLAN LIMITS WHERE ENGINEERING PRODUCTS DID NOT EXIST WERE DETERMINED BY LSRCA STAFF. RIVERINE EROSION HAZARDS WERE DETERMINED BY LSRCA STAFF. A 15-METER SETBACK WAS APPLIED FROM THE LIMITS OF ALL RIVERINE HAZARDS. SHORELINE FLOOD HAZARDS WERE DETERMINED BY LSRCA STAFF BY APPLYING THE EQUATIONS PREVIOUSLY DEVELOPED THROUGH AN ENGINEERING STUDY. SHORELINE EROSION HAZARDS WERE DETERMINED BY LSRCA STAFF. WETLANDS WERE DELINEATED BY LSRCA STAFF USING THE ECOLOGICAL LAND CLASSIFICATION (ELC) SYSTEM AND BY THE MINISTRY OF NATURAL RESOURCES. SETBACKS OF 120M FROM PROVINCIALY SIGNIFICANT WETLANDS (PSW) AND 30 M FROM ALL OTHER WETLANDS WERE APPLIED. MEANDERBELT WIDTHS WERE CALCULATED AS 20 TIMES THE BANKFULL WIDTHS ESTIMATED FROM THE CORRESPONDING DRAINAGE AREAS. PLEASE REFER TO 'REFERENCE MANUAL FOR DETERMINATION OF REGULATION LIMITS' (LSRCA, 2006) OR CONTACT LSRCA (905-895-1291) FOR MORE INFORMATION.



0	ONTARIO REGULATION 179/06 APPROVED	MAY 8, 2006	CHECKED - NATURAL HERITAGE	KB
1	Revised provisions to the regulations that have been captured as information in the document "Regulation Limit Change, May 2007"	SEPTEMBER 29, 2007	CHECKED - REGULATIONS	JP
			CHECKED - ENGINEERING	JP
			APPROVED	TH
			DATE	JANUARY 2006
NO.	REVISIONS	DATE	DRAWN BY	JB

(ONTARIO REGULATION 97/04)		SHEET NO
REGULATION OF DEVELOPMENT, INTERFERENCE WITH WETLANDS AND ALTERATIONS TO SHORELINES AND WATERCOURSES.		16
ONTARIO REGULATION 179/06		
PLOT DATE: SEPTEMBER 2007	FILE LOCATION	OF 117



Appendix C

TREE PLAN BY C.V. BENTLEY, CERTIFIED ARBORIST

CATHY V. BENTLEY
B.Sc.F., M.Sc.F., R.P.F., Certified Arborist

Forestry Consultant, Since 1980

R.R.1, 868 Allan St., Churchill, Ont. L0L 1K0

705-456-2862; Fax -1535; cvbentley@hotmail.com

December 7, 2007

Angela Orsi
Millford Development Ltd.
PO Box 215
Newmarket, ON L3Y 4X1

Attn: Angela and Tony Orsi

RE: TREE PLAN - Millford Development Ltd. Property, Eagle St., Newmarket, Ontario

I have followed up on your request to inspect and evaluate the existing trees in order to prepare a Tree Plan, on the above property (Part Lots 2 and 3, Registered Plan 49), on the north side of Eagle Street, in the Town of Newmarket.

I reviewed the site on October 11, 2007 with Peter Allen (Peter E. Allen & Associates Planning Consultants). I inspected the above property on October 25th, 29th and 30th, 2007. The area proposed for residential development (owned by Millford Development Ltd.) is bordered by Eagle St. on the south side, previously developed commercial lands on the west, and previous residential development on the north and east sides. The property boundaries, environmental features of the property and approximate areas of tree locations are indicated on the 'Environmental Features and Tree Locations' page (adapted from Azimuth Environmental Consulting Inc., 2007).

The following are my findings and recommendations, based on data and photos that I collected on site, as well as the information provided by yourself, Peter Allen, and Azimuth Environmental Consulting Inc..

BACKGROUND

Remnants of planted areas of trees and shrubs suggest that the property was a residence or farm previously. Open areas, indicating old fields or other disturbed areas, are being colonized naturally by invasive or early successional species. There were no natural areas of native forest observed in the proposed area of development.

Western Creek, a tributary of the East Holland River, flows through the north part of this property. It is my understanding that the 'Top of Bank' line for the Western Creek corridor (referred to as TOB in this document) was determined and staked by Lake Simcoe Region Conservation Authority (LSRCA), in 2003. In fact, I found that TOB was quite distinctive on site, with relatively flat tableland to the south of TOB. Any vegetation growing on and below TOB will remain undisturbed by the proposed development, as required by Town of Newmarket and agreed to by Millford Development Ltd..

TREE INVENTORY AND STATUS (dbh refers to diameter at breast height, 4.5' above ground)

The following information was collected regarding vegetation growing in the proposed area of development, generally tallied from east to west. Data was recorded for all trees and mature shrubs, located south of the approximate TOB. Any vegetation growing on and below TOB will remain undisturbed by the proposed development.

The data is summarized into 4 sections:

- Tree Inventory**
- Other Vegetation**
- TOB Area , and**
- Natural Heritage Area**

The locations of the trees included in this inventory, and all other information that was collected, are generally indicated on the attached 'Environmental Features and Tree Locations' (Areas 1-42).

There are no trees in the southeast area of this property (Area 1; Figure 1).

Tree Inventory

A summary of the tree data is provided in the Table below.

Tree	Species	Tree Size	Health Rating, Condition & Notes
1	<u>NW corner of Green & Ross (Area 2)</u> Manitoba Maple (<i>Acer negundo</i>)	25cm dbh; max.	Fair; multi-stem, widespreading crown; 10 of 14 stems living; some deadwood; surrounded by asphalt on E.side, gravel on N.side; Figure 2
2	<u>SE Corner (Area 4)</u> Black Walnut (<i>Juglans nigra</i>)	28cm dbh	Poor; poor structure; dead branch attached; deadwood; 1 main branch removed; Figure 4
3	Chinese Elm (<i>Ulmus chinensis</i>)	97cm dbh	Poor; over mature; deadwood; E. side dead; loose bark; Figure 4
4	Manitoba Maple	15cm dbh	Fair; crowded by Tree #3; healthy crown; Figure 4
5	Manitoba Maple	21cm dbh	Fair; forked at base; some deadwood; Figure 4
6-10	<u>E. of Property (Area 5)</u> Manitoba Maple	>30cm dbh	Fair; overgrown; forked; deadwood in crowns; < 4.5 m from property line; Figures 5-6
11	<u>Open Field (Area 6)</u> Apple/Crabapple (<i>Malus sp.</i>)	25cm dbh	Dying; over mature; ½ removed; wounds; Fig.7
12	Apple/Crabapple	17cm dbh; max.	Poor; over mature; multi-stem (7); Figure 7
13	<u>Mound near TOB (Area 10)</u> Manitoba Maple	-	Dying; Figure 11
14	Manitoba Maple	22cm dbh	Fair; low branched; Figure 11
15	Basswood (<i>Tilia americana</i>)	14,15cm dbh; main stems	Fair; forked at base; Figure 11
16	<u>Planted Evergreens (Area 12)</u> Colorado Blue Spruce (<i>Picea pungens</i>)	40cm dbh	Good; healthy foliage; Figure 13

Tree	Species	Tree Size	Health Rating, Condition & Notes
17	White Spruce (<i>Picea glauca</i>)	27cm dbh	Dying; sparse foliage; Figure 13
18	Colorado Blue Spruce	54cm dbh	Good; healthy foliage; Figure 13
19	White Spruce	19cm dbh; main stem	Fair; forked; Figure 13
	<u>Natural Heritage (Area 13)</u>		
20	White Spruce	22cm dbh	Fair; crown on E. side only; overcrowded; Figure 14
21	Eastern White Cedar (<i>Thuja occidentalis</i>)	23cm dbh; main stem	Fair; forked; healthy foliage; Figure 14
22	White Spruce	29cm dbh	Fair; forked; healthy foliage; Figure 14
	<u>Natural Heritage (Area 14)</u>		
23	Manitoba Maple	76cm dbh	Dying; new suckers alive; Figures 15,16
24	Manitoba Maple	-	Dying; only new suckers alive; Figure 17
	<u>Near West TOB (Area 17)</u>		
25	Chinese Elm	17cm dbh	Fair; forked; crowded by Manitoba Maples; Fig. 22
	<u>Natural Heritage (Area 20)</u>		
26	Eastern White Cedar	47cm dbh	Poor; dead top; Figures 25-26
	<u>Natural Heritage (Area 21)</u>		
27	Basswood	34cm dbh; max.	Fair; multi-stem; over mature; 20 of 24 stems alive; Figure 27
	<u>Natural Heritage (Area 22)</u>		
28	Manitoba Maple	48cm dbh	Poor; fungi; forked; leaning; some deadwood; Fig.28
	<u>Natural Heritage (Area 24)</u>		
29	Eastern White Cedar	42cm >bh	Fair; forked @bh; healthy foliage; Figure 30
	<u>Natural Heritage (Area 26)</u>		
30	Black Walnut	41cm dbh	Fair; forked 4 m up; some deadwood; Figures 33-34
	<u>Natural Heritage (Area 27)</u>		
31	Black Walnut	36cm>bh; max.	Fair; some deadwood; forked @ 1m ht.; Figure 35
	<u>Natural Heritage (Area 28)</u>		
32	Black Walnut	62cm dbh	Good; healthy branches & structure; Figure 36
	<u>Natural Heritage (Area 29)</u>		
33	Manitoba Maple	59cm dbh	Poor; dead main branches; Figure 37
	<u>Natural Heritage (Area 31)</u>		
34	Black Walnut	38cm dbh	Fair; weak crotch; forked @ 2 m; deadwood; Fig. 39
	<u>Natural Heritage (Area 32)</u>		
35	Black Walnut	48cm dbh	Fair; weak crotch; forked @ 2m; deadwood; overgrown by vines; upper crown healthy; Figure 39
	<u>Natural Heritage (Area 34)</u>		
36	Eastern White Cedar	29cm dbh	Good; crowded by #37; Figure 41
37	Eastern White Cedar	22cm dbh	Good; crowded by #36; Figure 41
	<u>West Side (Area 36)</u>		
38	Eastern Cottonwood (<i>Populus deltoides</i>)	48cm dbh	Poor; top dead; Figure 44
39	Eastern Cottonwood	70cm dbh	Poor; branch ends dead; Figure 44
	<u>West Side (Area 38)</u>		
40	Manitoba Maple	30cm dbh; max.	Poor; forked @ 1 m; growing into chain link fence; Figure 46 (left front)
41	Eastern Cottonwood	39cm dbh	Fair; lower crown dead; Figure 46 (centre)

Tree	Species	Tree Size	Health Rating, Condition & Notes
42	Eastern Cottonwood	29cm dbh	Fair; lower crown dead; Figure 46 (right)
43	<u>West Side (Area 39)</u> Eastern Cottonwood	44cm dbh	Fair; lower crown dead; Figure 46 (left)
44	Scots Pine (<i>Pinus sylvestris</i>)	32cm dbh	Fair; forked @ 4 m; healthy foliage; Figure 47
45	Scots Pine	34cm dbh	Good; healthy crown; Figure 47
46	<u>West Side (TOB,Area 41)</u> Scots Pine	35cm dbh	Good; healthy crown; within 4.5m of P/L; Figure 49

Other Vegetation :

There are shrubs including **Common Lilac** (*Syringa vulgaris*), overgrown and covered by vines, along the south side of the property towards the east end, north of the Green & Ross property (Area 3; Figure 3).

A variety of naturally occurring trees, including **Manitoba Maple** and **Elm**, and shrubs, including **European Buckthorn** (*Rhamnus cathartica*), are growing in Area 8 (Figure 9), located just north of the open field (Area 1), and south of TOB (Area 11, Figure 12). Note that the large trees, Eastern Cottonwood, visible in Figure 12, are below TOB (north of Area 11).

There is a row of evergreens, possibly planted originally near a laneway for an old homestead (Area 12; Figure 13). A dead hardwood tree, overgrown **Eastern White Cedars**, and **Lilac** shrubs are located within this row of planted evergreens.

A cleared area, possibly for a driveway or laneway, is located on the property (Area 19, Figure 24), extending from Eagle St. northwards – towards the west side, between the Orthodontist Office property (west side) and the new home property (east side).

Along the southwest part of the property, east of the Orthodontist Office property, there are hardwood trees left standing, as well as **Trembling Aspen** and **Norway Maple** (*Acer platanoides*) saplings colonizing the open space (Area 35, Figure 42).

North of the Orthodontist Office property, there is a copse of **Scots Pine**, including 19 trees < 30 cm dbh, in Area 37 (Figure 45), and 2 **Manitoba Maples**, < 30 cm dbh, and a **European Buckthorn** shrub (Area 38, Figure 46).

Along the west side of the property, **Lilac** shrubs, **Scots Pine**, and 1 **White Spruce**, < 30 cm dbh, are growing (Areas 39-41, Figures 47-49).

Top of Bank (TOB) Area : East Side of Property

At the east side of the property, the TOB curves northward, following the watercourse (Western Creek). This point is located approximately halfway along the eastern property line (Area 7). The vegetation in this area is located below (north/northwest of) the TOB (Figure 8) and will be undisturbed by the proposed development.

Other vegetation is growing below the TOB and will be undisturbed by the proposed development (Area 9, Figure 10).

Top of Bank (TOB) Area : West Side of Property

Manitoba Maple clumps are growing naturally, near the TOB, towards the west side of the property (Areas 17-18; Figures 21, 23-right).

Scots Pine trees are growing naturally, along the TOB at the west side of the property (Area 42, Figure 50). **Staghorn Sumac** shrubs (*Rhus typhina*) are naturally colonizing the open space east of the Scots Pine (Area 42, Figure 50).

Natural Heritage Area :

Along Eagle Street, the south side of the property, there is overgrown vegetation covering approximately 50 m in length, including **Eastern White Cedar**, **Manitoba Maple**, and **Lilac** shrubs (Areas 15-16; Figures 18-20, 31). **Trembling Aspen** (*Populus tremuloides*) saplings have naturally colonized the available space, in Area 16 (Figure 20).

In the central part of the Natural Heritage Area, there are assorted hardwood trees growing naturally, < 30 cm dbh (Area 23, Figure 29).

Towards the west side of the Natural Heritage Area and east of the existing house property, **Trembling Aspen** saplings have naturally colonized the open space (Area 25; Figure 32). A **Black Walnut** tree (<30 cm dbh), **Eastern White Cedars** (<30 cm dbh), and **Lilac** shrubs are growing towards the west side of this area, near the NE corner of the existing house property (Areas 29-30; Figures 37-38).

In the northwest part of the Natural Heritage Area, there is an over mature, dead **Manitoba Maple**, lying on the ground (Area 33, Figure 40).

DISCUSSION AND RECOMMENDATIONS

I have inspected the property and the following are my recommendations.

Tree Inventory

In total, there are 32 healthy trees (7 in Good and 25 in Fair Condition) that may be affected by the proposed development :

- 9 **Manitoba Maple**, all in Fair Condition, including 5 within 4.5 m of eastern property line
- 2 **Basswood** (Fair)
- 1 **Chinese Elm** (Fair)
- 4 **Black Walnut** (Fair)
- 3 **Eastern Cottonwood** (Fair)
- 3 **White Spruce** (Fair)
- 4 **Eastern White Cedar** (2 Good - < 30 cm dbh, 2 Fair)
- 1 **Scots Pine** (Fair)

- and 5 trees of Significant Size (>30 cm dbh) and in Good Condition :
 - 2 **Colorado Blue Spruce** (Trees #16 – 40 cm dbh; #18 – 54 cm dbh)
 - 1 **Black Walnut** (Tree #32 - 62 cm dbh)
 - 2 **Scots Pine** (Trees #45 - 34 cm dbh; #46 – 35 cm dbh).

The remaining 14 trees that were included in the **Tree Inventory** are in Poor or Dying Condition :

- 1 **Black Walnut**
- 1 **Chinese Elm**
- 2 **Apple**
- 6 **Manitoba Maple**
- 2 **Eastern Cottonwood**
- 1 **White Spruce**
- 1 **Eastern White Cedar**

According to the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (10pp.), all trees are to be preserved, protected or replaced if they meet **ALL** of the following criteria (p. 2 of Policy) :

- ✓ Significant (>30 cm dbh)
- ✓ In Good Condition
- ✓ Located within 4.5 m of existing property line
- ✓ Native, non-exotic, AND non-invasive species; or identified on the Town's most current Recommended Plant List.

Only 5 trees listed above, of Significant Size and in Good Condition, meet these criteria. Since development of the property is proposed, I recommend replacing the 5 trees, following the 'Aggregate Inch Replacement' method. The total requirement is 255 cm of diameter (sum of diameters of the 5 trees to be removed = 40+54+62+34+35 cm dbh). The tree replacement will total 255 cm diameter, for example 30 trees of 8 cm dbh + 2 trees of 7.5 cm dbh, or other combinations of caliper to compensate for the total diameter removed. This meets the requirements of the Town of Newmarket, following the Tree Preservation, Protection, Replacement and Enhancement Policy.

In my opinion, Tree #46 (Scots Pine), near TOB in Area 41, will remain undisturbed by the proposed residential development because it will be protected by the buffer extending beyond the TOB line. Therefore, recommendation of this tree for replacement exceeds the requirements of the Town of Newmarket by 35 cm diameter.

Although 5 Manitoba Maples are located within 4.5 m of the eastern property line, these trees are in Fair Condition only.

Other Vegetation :

No trees or shrubs of Significant Size were recorded in this section of my report. This vegetation is colonizing open areas (saplings), naturally occurring, invasive, or overgrown.

Top of Bank (TOB) Area :

Vegetation at the TOB line and below it will be undisturbed by the proposed development. Close to the TOB line, trees and shrubs are naturally colonizing the available space. Even these areas will be undisturbed, once the buffer width beyond the TOB line has been identified.

Prior to construction, I recommend the installation of fencing at the edge of the buffer, to protect the trees and vegetation near the TOB line and on the tablelands, thereby protecting the designated valley corridor.

Natural Heritage Area :

The 17 trees located in this area were included in the **Tree Inventory** section :

1 - Good Condition & Significant Size - Black Walnut, Tree #32; 62 cm dbh

2 - Good Condition & <30 cm dbh – Eastern White Cedar, Trees #36 & 37; 29 & 22 cm dbh

9 - Fair Condition –

- 1 Basswood, Tree #27; 34 cm dbh max
- 4 Black Walnut, Trees #30, 31, 34, 35; 41, 36 (>bh), 38, 48 cm dbh
- 2 Eastern White Cedar, Trees # 21, 29; 23, 42 (>bh) cm dbh
- 2 White Spruce, Trees #20, 22; 22, 29 cm dbh

5 - Poor/Dying Condition –

- 4 Manitoba Maple, Trees # 23, 24, 28, 33
- 1 Eastern White Cedar, Tree #26

Although designated Natural Heritage Area, only 1 of the 17 trees tallied is in Good Condition and Significant Size - Tree #32 (Black Walnut). This is insignificant and hardly justifies this designation in the new Official Plan. Furthermore, the remaining vegetation in the Natural Heritage Area is naturally colonizing the open spaces, over mature, or overgrown and unmaintained since the property has been vacant. No natural areas of native forest were observed.

SUMMARY

In conclusion, I recommend the replacement of the 5 trees of Significant Size, following the 'Aggregate Inch Replacement' method. This requirement is 255 cm of diameter of new tree planting, such as 30 trees @ 8 cm dbh and 2 trees @ 7.5 cm dbh, or another combination of sizes to attain the total of 255 cm of diameter. I suggest that the species list for the tree replacements be prepared in coordination with the Site Plan. This will provide the opportunity to enhance the site with suitable species/sizes of trees.

Recommendation of replacement of Tree #46 (Scots Pine), located near TOB, exceeds the Town of Newmarket requirement. I suggest that this indicates your willingness to enhance the site through development.

There are no other trees or vegetation, of Significant Size and in Good Condition, that may be affected by the proposed residential development, as summarized by sections above – Tree Inventory, Other Vegetation, TOB, and Natural Heritage Area.

In the area designated Natural Heritage System, no trees of a natural native forest were observed. Instead, the existing trees are planted and unmaintained, over mature, over grown, or successional species naturally colonizing open spaces (possibly old fields or other disturbed areas). Following the definition of 'woodlot', in the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (2006), the existing vegetation in the Natural Heritage Area does not meet the guidelines for this designation. A 'woodlot' is "a dense growth of trees comprising a minimum area of 0.2 hectares (0.5 acres)." (Town of Newmarket, 2006). Only 1 planted tree, Black Walnut – Tree #32, meets the criteria of the Town of Newmarket for replacement, within the Natural Heritage Area. It was included above in the Tree Inventory Table (p.3) and also in the 'Aggregate Inch Replacement' method (p.6, 7).

Please let me know if I can be of further assistance on this project.

Sincerely,

Cathy V. Bentley, B.Sc.F., M.Sc.F., R.P.F.
I.S.A. Certified Arborist #ON-0184

REFERENCES USED

Azimuth Environmental Consulting, Inc. 2007. Environmental Impact Study for the Proposed Residential Development of Part of Lots 2 and 3, Registered Plan 49, Town of Newmarket, Regional Municipality of York. 23 pp. + Figures + Appendices. DRAFT.

Town of Newmarket. 2006. Tree Preservation, Protection, Replacement and Enhancement Policy.

Farrar, J.L. 1995. Trees in Canada. Fitzhenry & Whiteside Limited, Markham, Ontario. 502 pp.

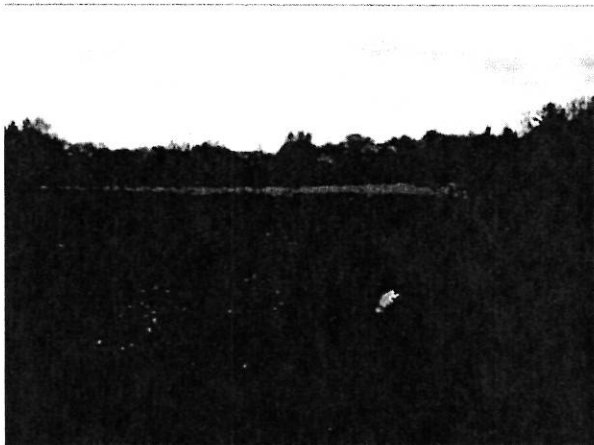


Figure 1. No trees along SE area of property, facing NE (Oct. 25/07)



Figure 2. Tree #1, Manitoba Maple, growing naturally on E. side of property, facing NE (Oct. 25/07)

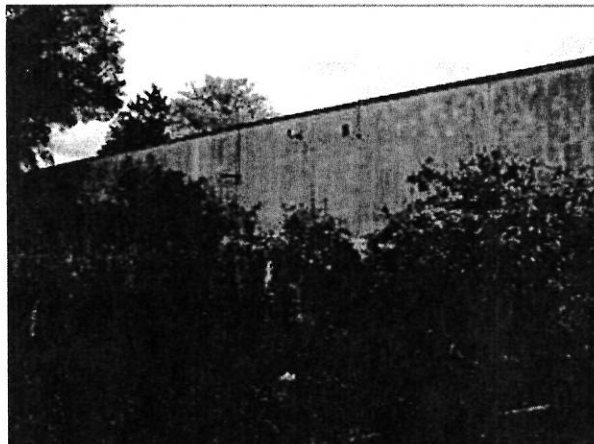


Figure 3. Overgrown shrubs, along S. edge at E. end of property, facing SE (Oct. 25/07)

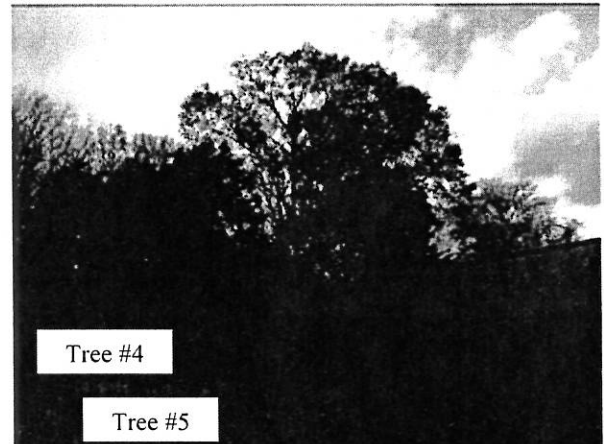


Figure 4. SE corner - Black Walnut (#2), Siberian Elm (#3), Manitoba Maple (#4,5), facing SE (Oct. 25/07)



Figure 5. Manitoba Maples (Trees #6,7), E. of property line, facing E (Oct. 25/07)



Figure 6. Manitoba Maples (Trees #8,9,10), E. of property line, facing E (Oct. 25/07)



Figure 7. Apple trees #11 & 12 , E. side of property, facing S from TOB (Oct. 25/07)



Figure 8. Vegetation growing naturally below TOB, facing NW (Oct. 25/07)



Figure 9. Young trees growing naturally near TOB, facing W (Oct. 25/07)



Figure 10. Vegetation growing naturally below TOB, facing N (Oct. 25/07)



Figure 11. Manitoba Maples (#13 & 14), & Basswood (#15–right), facing N (Oct. 25/07)



Figure 12. Natural vegetation (foreground) near TOB, facing NW (Oct. 25/07)

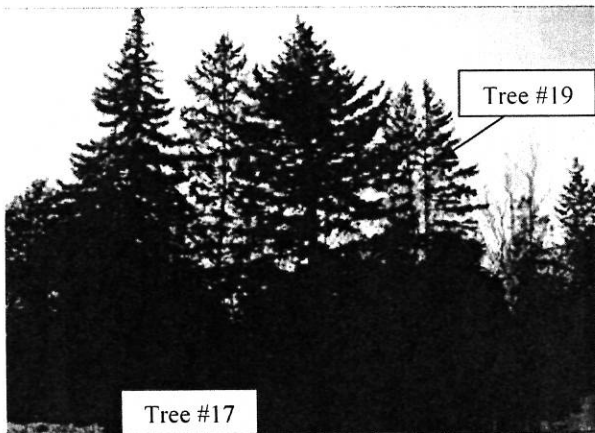


Figure 13. Spruce-Colorado Blue (#16 & 18), White (17-left,19-right), facing W (Oct.25/07)

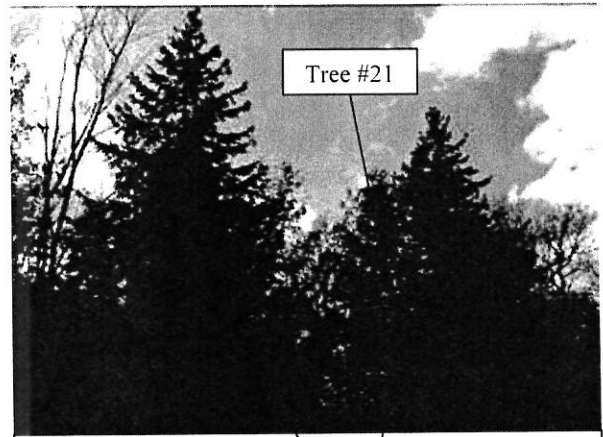


Figure 14. White Spruce (#20 & 22), & White Cedar (#21-right), facing NW (Oct.25/07)



Figure 15. Dying Manitoba Maple (Tree #23), growing naturally, facing W (Oct. 25/07)



Figure 16. Close up of crown of Manitoba Maple (Tree #23), growing naturally, facing N (Oct.25/07)



Figure 17. Tree #24 (centre), dying Manitoba Maple, growing naturally, facing W (Oct. 25/07)



Figure 18. Overgrown Lilacs, Manitoba Maple (centre), White Cedar (right), facing NW (Oct.25/07)

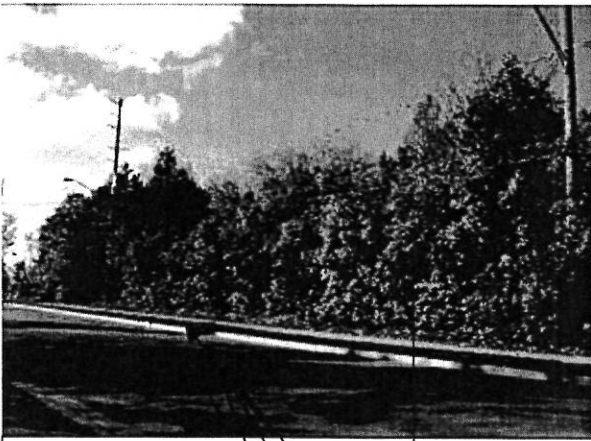


Figure 19. Overgrown vegetation (Lilacs) along Eagle St., on S. side of property, facing NW (Oct. 25/07)

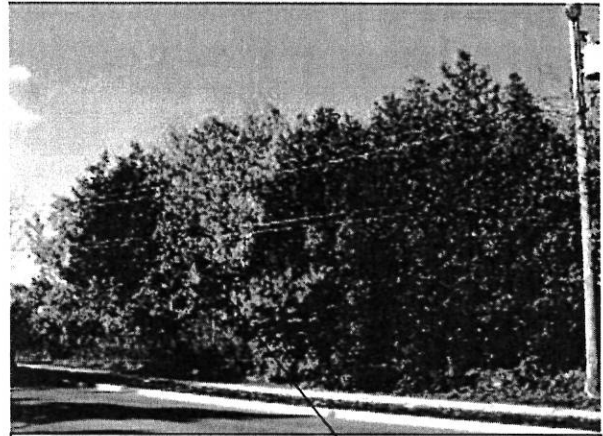


Figure 20. Trembling Aspen saplings & overgrown Cedars-right, facing NW (Oct. 25/07)



Figure 21. Clumps of Manitoba Maple, growing naturally near TOB (Area 17), facing N (Oct. 29/07)



Figure 22. Tree #25, Chinese Elm, growing naturally on E. side, facing NW (Oct. 29/07)

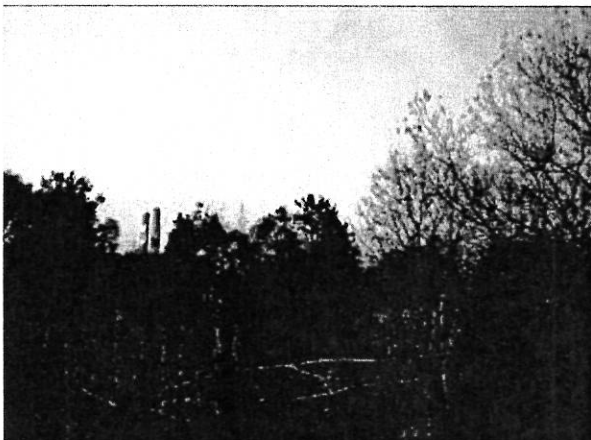


Figure 23. View of natural vegetation near TOB, towards west side of property, facing NW (Oct. 29/07)



Figure 24. Open area (Area 19) & natural vegetation towards west side of property, facing S (Oct. 29/07)



Figure 25. Eastern White Cedar (#26), growing naturally in Natural Heritage Area, facing SE (Oct.29/07)



Figure 26. Top of dying Eastern White Cedar (Tree #26-centre), facing SE (Oct. 29/07)



Figure 27. Tree #27, Basswood Clump, growing naturally, facing S (Oct. 29/07)



Figure 28. Tree #28, Manitoba Maple, growing naturally, facing S (Oct. 29/07)



Figure 29. Hardwoods, < 30cm dbh, growing naturally (Area 23), facing N (Oct. 29/07)



Figure 30. Tree #29, Eastern White Cedar, growing naturally in Area 24, facing E (Oct. 29/07)

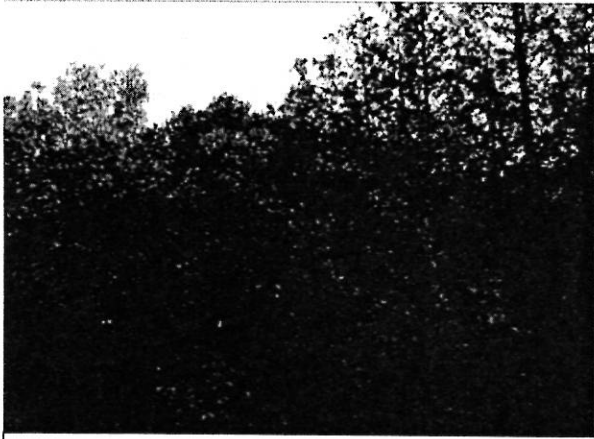


Figure 31. Overgrown Lilac shrubs & Eastern White Cedars, near Eagle St. (Area 15), facing S (Oct.29/07)



Figure 32. Trembling Aspen saplings (Area 25), E. of existing new house property, facing W (Oct. 29/07)



Figure 33. Tree #30, Black Walnut, facing NW (Oct. 29/07)



Figure 34. Crown of Tree #30, Black Walnut, facing NW (Oct. 29/07)



Figure 35. Tree #31, Black Walnut, growing E. of house property, facing W (Oct. 29/07)



Figure 36. Tree #32, healthy Black Walnut, facing NW (Oct. 29/07)



Figure 37. Natural vegetation near W. side of Natural Heritage Area, facing NE (Oct. 29/07)



Figure 38. White Cedars, growing near NE corner of existing house property, facing W (Oct.29/07)



Figure 39. Black Walnuts (#34 & #35), Natural Heritage Area, facing N (Oct. 29/07)



Figure 40. Dead Manitoba Maple (Area 33), laying on ground, facing N (Oct. 29/07)



Figure 41. Eastern White Cedars (#36 & #37), growing on W. side (Area 34), facing W (Oct. 29/07)



Figure 42. SW corner: natural vegetation, facing NW (Oct. 29/07)

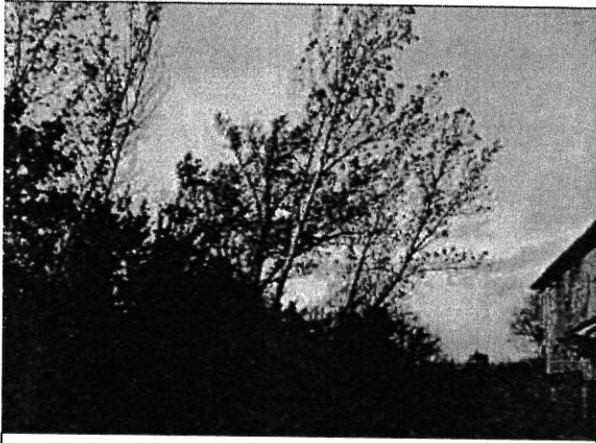


Figure 43. Natural vegetation on W. side, facing NW (Oct. 29/07)



Figure 44. Eastern Cottonwood (#38 & #39), on W. side, facing NW (Oct. 29/07)

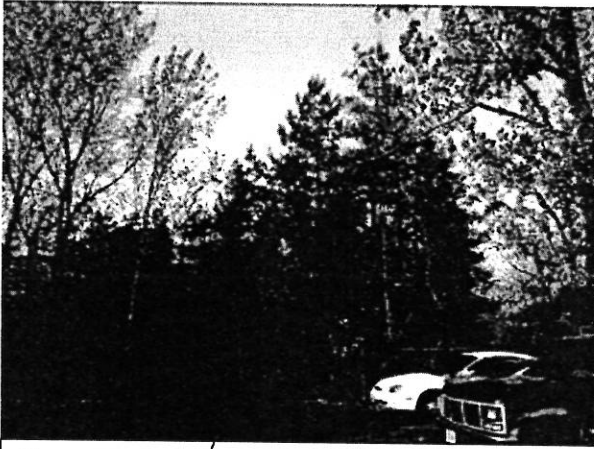


Figure 45. Copse of Scots Pine (Area 37), N. of Orthodontist Office property, facing N (Oct.29/07)

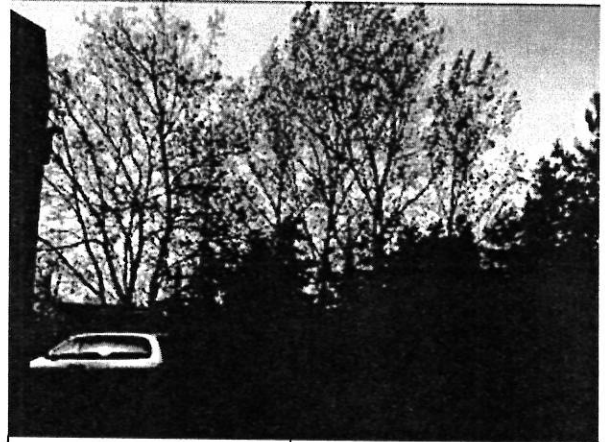


Figure 46. Natural vegetation, including Manitoba Maples & Eastern Cottonwood, facing N (Oct.29/07)

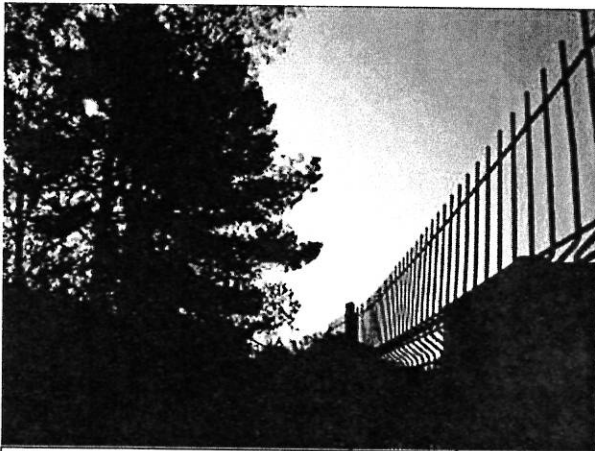


Figure 47. West side: Scots Pine (#44 & #45), growing on W. side, facing S (Oct. 30/07)



Figure 48. Scots Pine, 1 White Spruce & Lilacs, on W. side (Area 40), facing SE (Oct. 30/07)



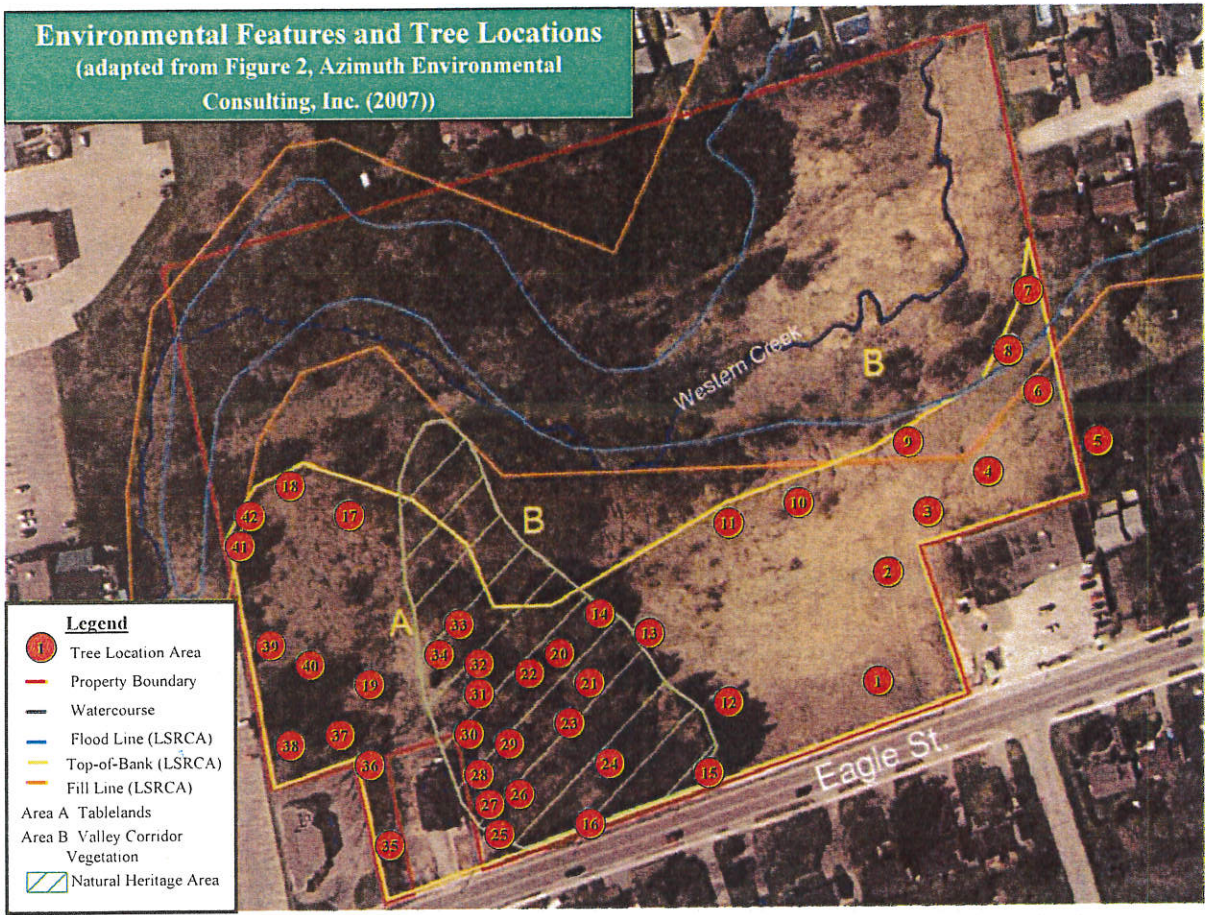
Figure 49. Copse of Scots Pine & Tree #46, at W end of TOB, growing naturally, facing NW (Oct. 30/07)



Figure 50. Natural Scots Pine (TOB) & Sumac, in Area 42, facing NW (Oct.30/07)

Environmental Features and Tree Locations

(adapted from Figure 2, Azimuth Environmental Consulting, Inc. (2007))



- Legend**
- Tree Location Area
 - Property Boundary
 - Watercourse
 - Flood Line (LSRCA)
 - Top-of-Bank (LSRCA)
 - Fill Line (LSRCA)
 - Area A Tablelands
 - Area B Valley Corridor
 - Vegetation
 - Natural Heritage Area



Appendix D

ONTARIO BREEDING BIRD ATLAS INFORMATION



Square Summary (17PJ27)

#species (1st atlas)				#species (2nd atlas)				#hours		#pc done	
poss	prob	conf	total	poss	prob	conf	total	1st	2nd	road	offrd
14	15	62	91	3	44	56	103	120	261	28	3

Region summary (#45: York)

#squares	#sq with data		#species		#pc done	target #pc
	1st	2nd	1st	2nd		
19	19	19	165	173	755	475

Target number of point counts in this square: 22 road side, 3 off road (1 in deciduous forest, 1 in mixed forest, 1 in pasture/grassland). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.

SPECIES	BE 2nd	BE 1st	% 2nd	% 1st	SPECIES	BE 2nd	BE 1st	% 2nd	% 1st	SPECIES	BE 2nd	BE 1st	% 2nd	% 1st
Pied-billed Grebe	FY		52	31	Red-should Hawk ?	FY	S	63	52	Eastern Screech-Owl	T	FY	100	73
Double-crest Cormorant ? §			5	5	Broad-winged Hawk	FY		68	26	Great Horned Owl	FY	FY	78	89
American Bittern		S	52	47	Red-tailed Hawk	NY	NY	94	94	Barred Owl			52	26
Least Bittern ?			5	15	American Kestrel	CF	NY	94	100	Long-eared Owl			21	21
Great Blue Heron §			42	84	Gray Partridge ?		S	0	5	Short-eared Owl ?			5	15
Great Egret ?			5	0	Ring-necked Pheasant		S	31	52	North Saw-whet Owl			10	21
Green Heron §	P	NU	89	89	Ruffed Grouse	H	FY	89	100	Common Nighthawk		NE	31	57
Black-crown N.-Heron ? §			0	0	Wild Turkey	FY		73	0	Whip-poor-will			5	42
Turkey Vulture	P		100	57	Virginia Rail	T	T	73	52	Chimney Swift	T	AE	68	94
Canada Goose	NY	NE	100	89	Sora	T	A	78	57	Ruby-thr Hummingbird	NE	AE	94	89
Mute Swan ?			21	0	Common Moorhen	FY	NY	15	21	Belted Kingfisher	T	CF	89	100
Trumpeter Swan ?	T		5	0	American Coot	FY	S	36	26	Red-head Woodpecker ?	S		26	73
Wood Duck	DD	FY	94	84	Coot/Moorhen			0	0	Red-bell Woodpecker ?			5	5
Gadwall			26	15	Killdeer	NY	NE	100	100	Yellow-bellied Sapsucker	T	H	78	57
American Wigeon ?			5	10	Spotted Sandpiper	AE	FY	94	89	Downy Woodpecker	P	CF	100	100
American Black Duck	T		36	42	Upland Sandpiper		H	26	63	Hairy Woodpecker	NY	AE	100	100
Mallard	NY	NE	100	94	Common Snipe		S	68	47	Northern Flicker	CF	NY	100	100
Blue-winged Teal	T	FY	57	89	American Woodcock	D	T	100	100	Pileated Woodpecker	N	AE	100	94
Northern Shoveler			26	10	Ring-billed Gull ? §			5	5	Olive-sided Flycatcher ?			0	10
Northern Pintail ?			0	15	Herring Gull §			5	15	Eastern Wood-Pewee	T	T	100	100
Green-winged Teal			26	0	Caspian Tern ?			5	5	Alder Flycatcher	T		84	78
Hooded Merganser			57	5	Common Tern ? §			5	5	Willow Flycatcher	T		84	73
Common Merganser			21	15	Forster's Tern ? §			0	5	Least Flycatcher	T		94	78
Ruddy Duck ?			15	5	Black Tern ? §			5	21	Eastern Phoebe	NY	NE	100	100
Osprey	AE		68	21	Rock Dove	AE	NY	100	100	Gr Crested Flycatcher	T	A	100	100
Northern Harrier	T	CF	100	73	Mourning Dove	NY	NY	100	100	Eastern Kingbird	NY	NY	100	100
Sharp-shinned Hawk	CF	S	94	52	Black-billed Cuckoo	CF	P	100	78	Loggerhead Shrike ?			0	10
Cooper's Hawk	P		84	15	Yellow-billed Cuckoo		H	36	63	Yellow-throated Vireo			36	31
Northern Goshawk			31	15	Black/Yell-billed Cuckoo			26	0	Blue-headed Vireo			31	5

next page >>

Ontario Breeding Bird Atlas - Summary Sheet for Square 17PJ27 (page 2 of 3)

SPECIES	BE 2nd	BE 1st	% 2nd	% 1st	SPECIES	BE 2nd	BE 1st	% 2nd	% 1st	SPECIES	BE 2nd	BE 1st	% 2nd	% 1st
Warbling Vireo	A	CF	100	100	Gray Catbird	NE	NE	100	100	Eastern Towhee			84	52
Red-eyed Vireo	T	NE	100	100	Northern Mockingbird	A		52	10	Chipping Sparrow	NY	NY	100	100
Blue Jay	NE	NE	100	100	Brown Thrasher	T	V	100	100	Clay-colored Sparrow			31	10
American Crow	NE	NE	100	100	European Starling	NY	NY	100	100	Field Sparrow	A	FY	100	84
Common Raven			36	0	Cedar Waxwing	NE	NE	100	100	Vesper Sparrow		S	84	84
Horned Lark	T	FY	89	84	Blue-winged Warbler			31	15	Savannah Sparrow	CF	CF	100	100
Purple Martin			47	63	Golden-winged Warbler			10	47	Grasshopper Sparrow	T	CF	47	31
Tree Swallow	NY	NE	100	100	Blue/Gold-wing Warbler			15	0	Song Sparrow	CF	NY	100	100
North Rgh-wing Swallow	FY	AE	89	94	Nashville Warbler			78	63	Swamp Sparrow	CF	NE	94	94
Bank Swallow §	AE	NE	84	89	Northern Parula ?			0	5	White-throat Sparrow	D	T	84	84
Cliff Swallow §	AE	NY	89	78	Yellow Warbler	FY	A	100	100	Dark-eyed Junco ?			5	5
Barn Swallow	FY	NY	100	100	Chestn-sided Warbler	T		84	73	Northern Cardinal	NE	NE	100	94
Black-capp Chickadee	NY	CF	100	100	Magnolia Warbler	V		63	21	Rose-breast Grosbeak	NE	FY	100	100
Red-breast Nuthatch	V	S	89	68	Black-thr Blue Warbler			52	15	Indigo Bunting	P	T	100	100
White-breast Nuthatch	A	T	100	100	Yellow-rumped Warbler			68	31	Bobolink	FY	CF	100	100
Brown Creeper		H	73	63	Black-thr Green Warbler			78	21	Red-wing Blackbird	NY	NE	100	100
Carolina Wren ?			10	0	Blackburnian Warbler			52	31	Eastern Meadowlark	A	NY	100	100
House Wren	T	NY	100	100	Pine Warbler			89	31	Western Meadowlark ?			0	10
Winter Wren			89	68	Prairie Warbler ?			0	5	Common Grackle	NY	NY	100	100
Sedge Wren	NY		47	15	Cerulean Warbler ?			10	5	Brown-head Cowbird	NY	NY	100	100
Marsh Wren	FY		52	21	Black-white Warbler	D		100	57	Orchard Oriole	NE		31	5
Golden-crown Kinglet			63	36	American Redstart			94	73	Baltimore Oriole	AE	NY	100	100
Ruby-crown Kinglet ?	NB		5	10	Ovenbird	T	NE	100	89	Purple Finch	T	FY	68	42
Blue-gr Gnatcatcher	S		47	15	North Waterthrush	T		94	89	House Finch	CF		100	26
Eastern Bluebird	NE	H	84	47	Mourning Warbler		T	89	89	Red Crossbill			5	26
Veery		T	94	94	Common Yellowthroat	A	CF	100	100	White-winged Crossbill ?			5	5
Hermit Thrush			52	10	Hooded Warbler ?			10	5	Pine Siskin		P	21	47
Wood Thrush	T	AE	94	94	Canada Warbler			52	52	American Goldfinch	NE	NY	100	100
American Robin	NY	NY	100	100	Scarlet Tanager	T	A	84	68	Evening Grosbeak	A		10	15

<< previous page

next page >>

Ontario Breeding Bird Atlas - Summary Sheet for Square 17PJ27 (page 3 of 3)

SPECIES	BE	BE	%	%
	2nd	1st	2nd	1st
House Sparrow	CF	NY	100	100

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #45 (York). Underlined species are those that you should try to add to this square. They have not yet been reported during the 2nd atlas, but were found during the 1st atlas in this square or have been reported in more than 50% of the squares in this region during the 2nd atlas so far. In the species table, "BE 2nd" and "BE 1st" are the codes for the highest breeding evidence for that species in square 17PJ27 during the 2nd and 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd and 1st atlas (this gives an idea of the expected chance of finding that species in region #45). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ? (regionally rare), or ? (provincially rare). Current as of 13/12/2007. An up-to-date version of this sheet is available from <http://www.birdsontario.org/atlas/summaryform.jsp?squareID=17PJ27>

[<< previous page](#)



Environmental Assessments & Approvals

December 19, 2008

AEC 04-060

Millford Development Limited
P.O. Box 215
Newmarket, Ontario
L3Y 4X1

Attention: Mrs. Orsi

**RE: Additional 2008 Environmental Field Data
Proposed Residential Development of Part of Lots 2 and 3, Registered Plan
49, Town of Newmarket, Regional Municipality of York**

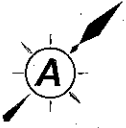
Dear Mrs. Orsi:

Enclosed, are the results of the additional natural heritage field investigations undertaken during the spring, summer and fall of 2008 for the property described above. The purpose of the additional work is to augment and update the natural heritage information collected during 2004 to meet the current informational standards of the Lake Simcoe Region Conservation Authority (LSRCA) and Town of Newmarket environmental standards.

The following information is attached

- Results of the spring, summer and fall surveys of vascular plants on the property during 2008. The attached list replaces the 2008 SPRING plant list provided in July 2008 with the results of the breeding bird and amphibian surveys.

These field survey results represent more current information for the property, additional to that presented in the Environmental Impact Assessment (Azimuth, February, 2008). The results of the additional field investigations do not change the basic conclusions of the Environmental Impact Assessment (Azimuth, February, 2008) for the property.



The additional plant surveys undertaken during the spring, summer and fall of 2008 did not find any additional rare plant species to those indicated in our 2007 Environmental Impact Assessment report.

If you have any questions or require further information, please do not hesitate to call.

Yours truly,

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Bonnie Clayton, B.Sc.
Senior Biologist

c.c. Peter Allen, Peter E. Allen and Associates
Jason Unger, Town of Newmarket
Leslie Roach, Lake Simcoe Region Conservation Authority

BAC:
Encl:

Table 1: Updated Plant Survey Results (Spring Summer and Fall, 2008)

AEC 04-060 Orsi Newmarket
 Observers: M. Scott, B. Clayton, L.Moran

FAMILY	SCIENTIFIC NAME ¹	COMMON NAME	SWD3-4	CUP3-3	CUM1-1	CUW1	MAM2-2	Conservation Rankings ³					LSRCA Watershed Rare ⁴
								GRANK	SRANK	COSEWIC	MNR	TRACK	
ACERACEAE	<i>Acer negundo</i>	Box Elder	X	X	X	X	X	G5	S5			N	
ACERACEAE	<i>Acer platanoides</i>	Norway Maple		X	X			G?	SE5			N	
ACERACEAE	<i>Acer saccharum</i>	Sugar Maple	X	X		X		G5	S5			N	
ANACARDIACEAE	<i>Rhus typhina</i>	Staghorn Sumac	X	X	X	X		G5	S5			N	
APIACEAE	<i>Daucus carota</i>	Wild Carrot	X		X	X	X	G?	SE5			N	
ASCLEPIADACEAE	<i>Asclepias syriaca</i>	Kansas Milkweed			X	X	X	G5	S5			N	
ASTERACEAE	<i>Achillea millefolium</i>	Seaside Yarrow					X	G5T5	S5			N	
ASTERACEAE	<i>Ambrosia artemisiifolia</i>	Annual Ragweed			X	X		G5	S5			N	
ASTERACEAE	<i>Arctium minus</i>	Common Burdock	X	X	X	X	X	G?T?	SE5			N	
ASTERACEAE	<i>Bidens frondosa</i>	Devil's Beggar-ticks	X		X			G5	S5			N	
ASTERACEAE	<i>Chrysanthemum leucanthemum</i>	Oxeye Daisy			X	X	X	G?	SE5			N	
ASTERACEAE	<i>Cichorium intybus</i>	Chicory			X	X		G?	SE5			N	
ASTERACEAE	<i>Cirsium arvense</i>	Creeping Thistle			X		X	G?	SE5			N	
ASTERACEAE	<i>Cirsium vulgare</i>	Bull Thistle		X	X		X	G5	SE5			N	
ASTERACEAE	<i>Conyza canadensis</i>	Fleabane	X		X			G5	S5			N	
ASTERACEAE	<i>Erigeron hyssopifolius</i>	Daisy Fleabane			X			G5	S5			N	
ASTERACEAE	<i>Erigeron philadelphicus</i>	Philadelphia Fleabane			X	X		G5	S5			N	
ASTERACEAE	<i>Eupatorium maculatum</i>	Spotted Joe-pye Weed	X	X			X	G5	S5			N	
ASTERACEAE	<i>Eupatorium perfoliatum</i>	Common Boneset					X	G5	S5			N	
ASTERACEAE	<i>Euthamia graminifolia</i>	Flat-top Fragrant-golden-rod	X		X	X	X	G5	S5			N	
ASTERACEAE	<i>Hieracium pilosella</i>	Mouseear			X			G?	SE5			N	
ASTERACEAE	<i>Hieracium piloselloides</i>	Tall Hawkweed			X	X		G?	SE5			N	
ASTERACEAE	<i>Inula helenium</i>	Elecampane Flower					X	G?	SE5			N	
ASTERACEAE	<i>Solidago canadensis</i>	Canada Goldenrod	X		X	X	X	G5	S5			N	
ASTERACEAE	<i>Solidago juncea</i>	Early Goldenrod		X	X			G5	S5			N	
ASTERACEAE	<i>Solidago rugosa</i>	Rough-leaf Goldenrod	X	X	X	X		G5	S5			N	
ASTERACEAE	<i>Symphotrichum lanceolatum</i>	Panicled Aster	X		X		X	G5	S5			N	
ASTERACEAE	<i>Symphotrichum lateriflorum</i>	Starved Aster			X	X	X	G5	S5			N	
ASTERACEAE	<i>Symphotrichum novae-angliae</i>	New England Aster	X		X	X	X	G5	S5			N	
ASTERACEAE	<i>Tanacetum vulgare</i>	Common Tansy			X	X	X	G?	SE5			N	
ASTERACEAE	<i>Taraxacum officinale</i>	Brown-seed Dandelion	X		X	X		G5	SE5			N	
ASTERACEAE	<i>Tragopogon dubius</i>	Meadow Goat's-beard			X			G?	SE5			N	
ASTERACEAE	<i>Tussilago farfara</i>	Colt's Foot	X		X	X	X	G?	SE5			N	
BALSAMINACEAE	<i>Impatiens capensis</i>	Spotted Jewel-weed	X				X	G5	S5			N	
BETULACEAE	<i>Betula papyrifera</i>	Paper Birch		X				G5	S5			N	
BORAGINACEAE	<i>Myosotis scorpioides</i>	True Forget-me-not	X	X	X	X		G5	SE5			N	
BORAGINACEAE	<i>Myosotis verna</i>	Spring Forget-me-not			X	X		G5	S4?			N	
BRASSICACEAE	<i>Alliaria petiolata</i>	Garlic Mustard	X	X	X	X		G?	SE5			N	
BRASSICACEAE	<i>Barbarea vulgaris</i>	Yellow Rocket			X	X		G?	SE5			N	
CAMPANULACEAE	<i>Campanula rapunculoides</i>	Creeping Bellflower			X	X		G?	SE5			N	
CAPRIFOLIACEAE	<i>Lonicera canadensis</i>	American Fly-honeysuckle	X	X				G5	S5			N	
CAPRIFOLIACEAE	<i>Lonicera tatarica</i>	Tartarian Honeysuckle	X	X	X	X		G?	SE5			N	
CAPRIFOLIACEAE	<i>Viburnum trilobum</i>	Highbush Cranberry	X				X	G5T5	S5			N	
CLUSIACEAE	<i>Hypericum punctatum</i>	Common St. John's-wort			X	X		G5	S5			N	
CORNACEAE	<i>Cornus stolonifera</i>	Red-osier Dogwood	X		X	X	X	G5	S5			N	
CUPRESSACEAE	<i>Juniperus virginiana</i>	Eastern Red Cedar			X	X		G5	S5			N	
CUPRESSACEAE	<i>Thuja occidentalis</i>	Eastern White Cedar	X		X	X		G5	S5			N	
CYPERACEAE	<i>Schoenoplectus acutus</i>	Hard-stem Club-rush					X	G5	S5			N	
DRYOPTERIDACEAE	<i>Onoclea sensibilis</i>	Sensitive Fern	X					G5	S5			N	
ELAEAGNACEAE	<i>Elaeagnus angustifolia</i>	Russian Olive	X		X			G?	SE3			N	
EMPETRACEAE	<i>Empetrum nigrum</i>	Black Crowberry	X					G5	S5			N	
EQUISETACEAE	<i>Equisetum arvense</i>	Field Horsetail	X	X	X			G5	S5			N	
EQUISETACEAE	<i>Equisetum palustre</i>	Marsh Horsetail	X				X	G5	S5			N	

Table 1: Updated Plant Survey Results (Spring Summer and Fall, 2008)

AEC 04-060 Orsi Newmarket
Observers: M. Scott, B. Clayton, L.Moran

FAMILY	SCIENTIFIC NAME ¹	COMMON NAME	SWD3-4	CUP3-3	CUM1-1	CUWI	MAM2-2	Conservation Rankings ³					LSRCA Watershed Rare ⁴
								GRANK	SRANK	COSEWIC	MNR	TRACK	
EUPHORBIACEAE	<i>Euphorbia cyparissias</i>	Cypress Spurge	X		X	X		G5	SE5			N	
FABACEAE	<i>Amphicarpaea bracteata</i>	American Hog-peanut	X					G5	S5			N	
FABACEAE	<i>Coronilla varia</i>	Common Crown-vetch			X			G?	SE5			N	
FABACEAE	<i>Desmodium canadense</i>	Showy Tick-trefoil			X			G5	S4			N	
FABACEAE	<i>Gleditsia triacanthos</i>	Honey Locust				X		G5	S2			Y	
FABACEAE	<i>Lotus corniculatus</i>	Birds-foot Trefoil			X	X		G?	SE5			N	
FABACEAE	<i>Melilotus alba</i>	White Sweet Clover			X	X		G5	SE5			N	
FABACEAE	<i>Trifolium pratense</i>	Red Clover			X			G?	SE5			N	
FABACEAE	<i>Trifolium repens</i>	White Clover			X	X		G?	SE5			N	
FABACEAE	<i>Vicia cracca</i>	Tufted Vetch	X	X	X	X		G?	SE5			N	
FABACEAE	<i>Vicia sativa</i>	Spring Vetch			X	X		G?	SE5			N	
GERANIACEAE	<i>Geranium robertianum</i>	Herb-robert	X			X		G5	SE5			N	
GROSSULARIACEAE	<i>Ribes americanum</i>	Wild Black Currant			X	X		G5	S5			N	
JUGLANDACEAE	<i>Juglans nigra</i>	Black Walnut	X		X	X		G5	S4			N	X
JUNCACEAE	<i>Juncus sp.</i>	Rush			X								
LAMIACEAE	<i>Glechoma hederacea</i>	Ground Ivy	X	X	X	X		G?	SE5			N	
LAMIACEAE	<i>Lamium amplexicaule</i>	Common Deadnettle		X				G?	SE3			N	
LAMIACEAE	<i>Mentha arvensis</i>	Corn Mint					X	G5	S5			N	
LAMIACEAE	<i>Mentha spicata</i>	Spearmint	X		X		X	G?	SE4			N	
LAMIACEAE	<i>Prunella vulgaris</i>	Self-heal	X	X	X			G5T5	S5			N	
LYTHRACEAE	<i>Lythrum salicaria</i>	Purple Loosestrife					X	G5	SE5			N	
OLEACEAE	<i>Fraxinus americana</i>	White Ash	X					G5	S5			N	
OLEACEAE	<i>Fraxinus pennsylvanica</i>	Green Ash	X					G5	S5			N	
OLEACEAE	<i>Syringa vulgaris</i>	Common Lilac	X		X	X		G?	SE5			N	
ONAGRACEAE	<i>Circaea alpina</i>	Small Enchanter's Nightshade	X	X		X		G5	S5			N	
ONAGRACEAE	<i>Epilobium ciliatum</i>	Hairy Willow-herb	X				X	G5	S5			N	
ONAGRACEAE	<i>Oenothera biennis</i>	Common Evening-primrose	X		X			G5	S5			N	
OXALIDACEAE	<i>Oxalis stricta</i>	Upright Yellow Wood-sorrel	X		X	X		G5	S5			N	
PAPAVERACEAE	<i>Sanguinaria canadensis</i>	Bloodroot	X	X				G5	S5			N	
PINACEAE	<i>Picea abies</i>	Norway Spruce				X		G5	SE3			N	
PINACEAE	<i>Picea glauca</i>	White Spruce	X	X	X	X		G5	S5			N	
PINACEAE	<i>Picea pungens</i>	Blue Spruce		X		X		G5	SE1			N	
PINACEAE	<i>Pinus banksiana</i>	Jack Pine		X				G5	S5			N	
PINACEAE	<i>Pinus sylvestris</i>	Scotch Pine	X	X	X	X		G?	SE5			N	
PLANTAGINACEAE	<i>Plantago lanceolata</i>	English Plantain			X	X		G5	SE5			N	
POACEAE	<i>Bromus inermis</i>	Awnless Brome	X		X	X		G5	S5			N	
POACEAE	<i>Digitaria sanguinalis</i>	Hairy Crabgrass			X			G5	SE5			N	
POACEAE	<i>Elymus virginicus</i>	Virginia Wild Rye			X			G5T5	S5			N	
POACEAE	<i>Glyceria striata</i>						X	G5T5	S4S5			N	
POACEAE	<i>Phalaris arundinacea</i>	Reed Canary Grass	X				X	G5	S5			N	
POACEAE	<i>Phleum pratense</i>	Meadow Timothy	X		X	X	X	G?	SE5			N	
POACEAE	<i>Poa pratensis</i>	Kentucky Bluegrass			X	X		G5	S5			N	
POLYGONACEAE	<i>Polygonum cuspidatum</i>	Japanese Knotweed	X		X	X		G?	SE4			N	
PRIMULACEAE	<i>Lysimachia nummularia</i>	Creeping Jennie	X		X		X	G?	SE5			N	
RANUNCULACEAE	<i>Anemone canadensis</i>	Canada Anemone	X				X	G5	S5			N	
RANUNCULACEAE	<i>Caltha palustris</i>	Marsh Marigold	X				X	G5	S5			N	
RANUNCULACEAE	<i>Clematis virginiana</i>	Virginia Virgin-bower	X		X	X		G5	S5			N	
RANUNCULACEAE	<i>Ranunculus acris</i>	Tall Butter-cup	X		X		X	G5	SE5			N	
RHAMNACEAE	<i>Rhamnus cathartica</i>	Buckthorn	X	X	X	X		G?	SE5			N	
ROSACEAE	<i>Amelanchier arborea</i>	Downy Serviceberry		X				G5	S5			N	
ROSACEAE	<i>Fragaria virginiana</i>	Virginia Strawberry	X	X	X	X		G5	S5			N	
ROSACEAE	<i>Geum aleppicum</i>	Yellow Avens		X		X		G5	S5			N	
ROSACEAE	<i>Geum canadense</i>	White Avens	X	X	X	X		G5	S5			N	

Table 1: Updated Plant Survey Results (Spring Summer and Fall, 2008)

AEC 04-060 Orsi Newmarket
 Observers: M. Scott, B. Clayton, L.Moran

FAMILY	SCIENTIFIC NAME ¹	COMMON NAME	SWD3-4	CUP3-3	CUM1-1	CUW1	MAM2-2	Conservation Rankings ³					LSRCA Watershed Rare ⁴
								GRANK	SRANK	COSEWIC	MNR	TRACK	
ROSACEAE	<i>Malus pumila</i>	Common Apple	X		X	X		G5	SE5			N	
ROSACEAE	<i>Potentilla recta</i>	Sulphur Cinquefoil			X			G?	SE5			N	
ROSACEAE	<i>Prunus pumila</i>	Sand Cherry			X			G5T4	S4?			N	
ROSACEAE	<i>Prunus serotina</i>	Wild Black Cherry	X	X	X	X		G5	S5			N	
ROSACEAE	<i>Prunus virginiana</i>	Choke Cherry	X			X		G5	S5			N	
ROSACEAE	<i>Rosa multiflora</i>	Rambler Rose	X			X		G?	SE4			N	
ROSACEAE	<i>Rubus idaeus</i>	Common Red Raspberry	X	X	X	X		G5	S5			N	
ROSACEAE	<i>Rubus occidentalis</i>	Black Raspberry	X		X	X		G5	S5			N	
ROSACEAE	<i>Sorbus aucuparia</i>	European Mountain-ash	X	X	X	X		G5	SE4			N	
ROSACEAE	<i>Spiraea alba</i>	Narrow-leaved Meadow-sweet	X				X	G5	S5			N	
SALICACEAE	<i>Populus balsamifera</i>	Balsam Poplar	X	X	X	X	X	G5	S5			N	
SALICACEAE	<i>Populus deltoides</i>		X	X	X	X	X	G5T4T5	S5			N	
SALICACEAE	<i>Populus tremuloides</i>	Trembling Aspen			X	X		G5	S5			N	
SALICACEAE	<i>Salix alba</i>	White Willow				X	X	G5T?	SU			N	
SALICACEAE	<i>Salix discolor</i>	Pussy Willow					X	G5	S5			N	
SALICACEAE	<i>Salix fragilis</i>	Crack Willow	X			X	X	G?	SE5			N	
SCROPHULARIACEAE	<i>Linaria vulgaris</i>	Butter-and-eggs			X	X		G?	SE5			N	
SCROPHULARIACEAE	<i>Verbascum thapsus</i>	Great Mullein			X	X		G?	SE5			N	
SOLANACEAE	<i>Solanum dulcamara</i>	Climbing Nightshade	X	X	X	X		G?	SE5			N	
TILIACEAE	<i>Tilia americana</i>	American Basswood				X		G5	S5			N	
TYPHACEAE	<i>Typha latifolia</i>	Broad-leaf Cattail					X	G5	S5			N	
ULMACEAE	<i>Ulmus americana</i>	American Elm	X			X		G5?	S5			N	
ULMACEAE	<i>Ulmus chinensis</i>	Chinese Elm			X	X							
VERBENACEAE	<i>Verbena hastata</i>	Blue Vervain			X		X	G5	S5			N	
VIOLACEAE	<i>Viola sororia</i>	Woolly Blue Violet	X	X				G5	S5			N	
VITACEAE	<i>Parthenocissus vitacea</i>	Virginia Creeper	X	X	X			G5	S5			N	
VITACEAE	<i>Vitis riparia</i>	Riverbank Grape	X	X	X	X	X	G5	S5			N	

¹ Nomenclature based on Ontario Ministry of Natural Resources (OMNR), Natural Heritage Information Centre (NHIC) database - <http://nhic.mnr.gov.on.ca/MNR/nhic/species.cfm>

² ELC Code - See Table 1 for community description.

³ Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (http://nhic.mnr.gov.on.ca/nhic_.cfm)

⁴ Regional - Identifies species that are considered to be rare in the Lake Simcoe Watershed according to Lake Simcoe Environmental Management Strategy (LSEMS) 2003. State of the Lake Simcoe Watershed

Table 2: Results of Breeding Bird Survey, 2008

AEC 04-060 ORSI Newmarket
 Observer: L. Moran

FAMILY ¹	Scientific Name	Common Name	June 9, 2008 ³	July 8, 2008 ⁴	Conservation Rankings ²				
					GRANK	SRANK	COSEWIC	MNR	TRACK
ANATIDAE	<i>Anas platyrhynchos</i>	Mallard	FO ⁵		G5	S5B,SZN			N
CARDINALIDAE	<i>Cardinalis cardinalis</i>	Northern Cardinal	S	S	G5	S5			N
CARDINALIDAE	<i>Passerina cyanea</i>	Indigo Bunting	S		G5	S5B,SZN			N
COLUMBIDAE	<i>Zenaida macroura</i>	Mourning Dove	FO		G5	S5B,SZN			N
CORVIDAE	<i>Corvus brachyrhynchos</i>	American Crow	H, S		G5	S5B,SZN			N
CORVIDAE	<i>Cyanocitta cristata</i>	Blue Jay		S	G5	S5			N
EMBERIZIDAE	<i>Melospiza melodia</i>	Song Sparrow	H, S	H, S	G5	S5B,SZN			N
FRINGILLIDAE	<i>Carduelis tristis</i>	American Goldfinch	S	S	G5	S5B,SZN			N
ICTERIDAE	<i>Molothrus ater</i>	Brown-headed Cowbird	S		G5	S5B,SZN			N
ICTERIDAE	<i>Quiscalus quiscula</i>	Common Grackle	S	H, S	G5	S5B,SZN			N
MIMIDAE	<i>Dumetella carolinensis</i>	Gray Catbird	S		G5	S5B,SZN			N
PARIDAE	<i>Poecile atricapillus</i>	Black-capped Chickadee	S	S	G5	S5			N
SITTIDAE	<i>Sitta canadensis</i>	Red-breasted Nuthatch	S		G5	S5B,SZN			N
TURDIDAE	<i>Turdus migratorius</i>	American Robin	S	H, S	G5	S5B,SZN			N

¹ Nomenclature based on Ontario Ministry of Natural Resources (OMNR), Natural Heritage Information Centre (NHIC) database - <http://nhic.mnr.gov.on.ca/MNR/nhic/species.cfm>

² Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (http://nhic.mnr.gov.on.ca/nhic_.cfm)

³ Temperature: 20°C, Sky Code: 1 (scattered cloud), Wind Speed: 1-2, Wind Direction: SE, Start Time: 06:10 End Time: 07:00

⁴ Temperature: 23°C, Sky Code: 3 (100% cloudy), Wind Speed: 3, Start Time: 06:00 End Time: 07:15

⁵ Breeding Bird Evidence Codes: FO - Flyover (Observed), S - Singing male (Possible Breeding), H - Species observed in breeding season in suitable nesting habitat (Possible Breeding)

Table 3: Results of 2008 Spring Anuran Amphibian Breeding Surveys

04-060 ORSI Newmarket
 Observers: B.Clayton, L.Moran

Date	Sampling Station ¹	Start Time	Species										
			Wood Frog	Spring Peeper	Chorus Frog	Leopard Frog	American Toad	Green Frog	Gray Treefrog	Pickerel frog	Mink Frog	American Bullfrog	Nothing Heard
April 25, 2008	1	21:41											X
May 24, 2008	1	21:58											X
June 27, 2008	1	00:10											X

Weather Conditions

Date	Air Temperature (°C)	Wind (Beaufort/ Direction)	Cloud Cover	Precipitation	Moon	Background Noise
April 25, 2008	12	2, N	15%	Nil	Not Visable	1 (Slightly affecting sampling)
May 24, 2008	12	3, NE	<5%	Nil	Not Visable	3 (Seriously affecting sampling)
June 27, 2008	18	Nil	100%	Nil (foggy)	Not Visable	3 (Seriously affecting sampling)

¹ Anuran amphibian sampling station located at the eastern side of the property at the west end of Avenue Road (dead end).

CATHY V. BENTLEY
B.Sc.F., M.Sc.F., R.P.F., Certified Arborist

Forestry Consultant, Since 1980

R.R.1, 868 Allan St., Churchill, Ont. L0L 1K0

705-456-2862; Fax -1535; cvbentley@hotmail.com

December 7, 2007

Angela Orsi
Millford Development Ltd.
PO Box 215
Newmarket, ON L3Y 4X1

Attn: Angela and Tony Orsi

RE: TREE PLAN - Millford Development Ltd. Property, Eagle St., Newmarket, Ontario

I have followed up on your request to inspect and evaluate the existing trees in order to prepare a Tree Plan, on the above property (Part Lots 2 and 3, Registered Plan 49), on the north side of Eagle Street, in the Town of Newmarket.

I reviewed the site on October 11, 2007 with Peter Allen (Peter E. Allen & Associates Planning Consultants). I inspected the above property on October 25th, 29th and 30th, 2007. The area proposed for residential development (owned by Millford Development Ltd.) is bordered by Eagle St. on the south side, previously developed commercial lands on the west, and previous residential development on the north and east sides. The property boundaries, environmental features of the property and approximate areas of tree locations are indicated on the 'Environmental Features and Tree Locations' page (adapted from Azimuth Environmental Consulting Inc., 2007).

The following are my findings and recommendations, based on data and photos that I collected on site, as well as the information provided by yourself, Peter Allen, and Azimuth Environmental Consulting Inc..

BACKGROUND

Remnants of planted areas of trees and shrubs suggest that the property was a residence or farm previously. Open areas, indicating old fields or other disturbed areas, are being colonized naturally by invasive or early successional species. There were no natural areas of native forest observed in the proposed area of development.

Western Creek, a tributary of the East Holland River, flows through the north part of this property. It is my understanding that the 'Top of Bank' line for the Western Creek corridor (referred to as TOB in this document) was determined and staked by Lake Simcoe Region Conservation Authority (LSRCA), in 2003. In fact, I found that TOB was quite distinctive on site, with relatively flat tableland to the south of TOB. Any vegetation growing on and below TOB will remain undisturbed by the proposed development, as required by Town of Newmarket and agreed to by Millford Development Ltd..

TREE INVENTORY AND STATUS (dbh refers to diameter at breast height, 4.5’ above ground)

The following information was collected regarding vegetation growing in the proposed area of development, generally tallied from east to west. Data was recorded for all trees and mature shrubs, located south of the approximate TOB. Any vegetation growing on and below TOB will remain undisturbed by the proposed development.

The data is summarized into 4 sections:

- Tree Inventory**
- Other Vegetation**
- TOB Area , and**
- Natural Heritage Area**

The locations of the trees included in this inventory, and all other information that was collected, are generally indicated on the attached ‘Environmental Features and Tree Locations’ (Areas 1-42).

There are no trees in the southeast area of this property (Area 1; Figure 1).

Tree Inventory

A summary of the tree data is provided in the Table below.

Tree	Species	Tree Size	Health Rating, Condition & Notes
1	<u>NW corner of Green & Ross (Area 2)</u> Manitoba Maple (<i>Acer negundo</i>)	25cm dbh; max.	Fair; multi-stem, widespreading crown; 10 of 14 stems living; some deadwood; surrounded by asphalt on E.side, gravel on N.side; Figure 2
2	<u>SE Corner (Area 4)</u> Black Walnut (<i>Juglans nigra</i>)	28cm dbh	Poor; poor structure; dead branch attached; deadwood; 1 main branch removed; Figure 4
3	Chinese Elm (<i>Ulmus chinensis</i>)	97cm dbh	Poor; over mature; deadwood; E. side dead; loose bark; Figure 4
4	Manitoba Maple	15cm dbh	Fair; crowded by Tree #3; healthy crown; Figure 4
5	Manitoba Maple	21cm dbh	Fair; forked at base; some deadwood; Figure 4
6-10	<u>E. of Property (Area 5)</u> Manitoba Maple	>30cm dbh	Fair; overgrown; forked; deadwood in crowns; < 4.5 m from property line; Figures 5-6
11	<u>Open Field (Area 6)</u> Apple/Crabapple (<i>Malus sp.</i>)	25cm dbh	Dying; over mature; ½ removed; wounds; Fig.7
12	Apple/Crabapple	17cm dbh; max.	Poor; over mature; multi-stem (7); Figure 7
13	<u>Mound near TOB (Area 10)</u> Manitoba Maple	-	Dying; Figure 11
14	Manitoba Maple	22cm dbh	Fair; low branched; Figure 11
15	Basswood (<i>Tilia americana</i>)	14,15cm dbh; main stems	Fair; forked at base; Figure 11
16	<u>Planted Evergreens (Area 12)</u> Colorado Blue Spruce (<i>Picea pungens</i>)	40cm dbh	Good; healthy foliage; Figure 13

Tree	Species	Tree Size	Health Rating, Condition & Notes
17	White Spruce (<i>Picea glauca</i>)	27cm dbh	Dying; sparse foliage; Figure 13
18	Colorado Blue Spruce	54cm dbh	Good; healthy foliage; Figure 13
19	White Spruce	19cm dbh; main stem	Fair; forked; Figure 13
20	<u>Natural Heritage (Area 13)</u> White Spruce	22cm dbh	Fair; crown on E. side only; overcrowded; Figure 14
21	Eastern White Cedar (<i>Thuja occidentalis</i>)	23cm dbh; main stem	Fair; forked; healthy foliage; Figure 14
22	White Spruce	29cm dbh	Fair; forked; healthy foliage; Figure 14
23	<u>Natural Heritage (Area 14)</u> Manitoba Maple	76cm dbh	Dying; new suckers alive; Figures 15,16
24	Manitoba Maple	-	Dying; only new suckers alive; Figure 17
25	<u>Near West TOB (Area 17)</u> Chinese Elm	17cm dbh	Fair; forked; crowded by Manitoba Maples; Fig. 22
26	<u>Natural Heritage (Area 20)</u> Eastern White Cedar	47cm dbh	Poor; dead top; Figures 25-26
27	<u>Natural Heritage (Area 21)</u> Basswood	34cm dbh; max.	Fair; multi-stem; over mature; 20 of 24 stems alive; Figure 27
28	<u>Natural Heritage (Area 22)</u> Manitoba Maple	48cm dbh	Poor; fungi; forked; leaning; some deadwood; Fig.28
29	<u>Natural Heritage (Area 24)</u> Eastern White Cedar	42cm >bh	Fair; forked @bh; healthy foliage; Figure 30
30	<u>Natural Heritage (Area 26)</u> Black Walnut	41cm dbh	Fair; forked 4 m up; some deadwood; Figures 33-34
31	<u>Natural Heritage (Area 27)</u> Black Walnut	36cm>bh; max.	Fair; some deadwood; forked @ 1m ht.; Figure 35
32	<u>Natural Heritage (Area 28)</u> Black Walnut	62cm dbh	Good; healthy branches & structure; Figure 36
33	<u>Natural Heritage (Area 29)</u> Manitoba Maple	59cm dbh	Poor; dead main branches; Figure 37
34	<u>Natural Heritage (Area 31)</u> Black Walnut	38cm dbh	Fair; weak crotch; forked @ 2 m; deadwood; Fig. 39
35	<u>Natural Heritage (Area 32)</u> Black Walnut	48cm dbh	Fair; weak crotch; forked @ 2m; deadwood; overgrown by vines; upper crown healthy; Figure 39
36	<u>Natural Heritage (Area 34)</u> Eastern White Cedar	29cm dbh	Good; crowded by #37; Figure 41
37	Eastern White Cedar	22cm dbh	Good; crowded by #36; Figure 41
38	<u>West Side (Area 36)</u> Eastern Cottonwood (<i>Populus deltoides</i>)	48cm dbh	Poor; top dead; Figure 44
39	Eastern Cottonwood	70cm dbh	Poor; branch ends dead; Figure 44
40	<u>West Side (Area 38)</u> Manitoba Maple	30cm dbh; max.	Poor; forked @ 1 m; growing into chain link fence; Figure 46 (left front)
41	Eastern Cottonwood	39cm dbh	Fair; lower crown dead; Figure 46 (centre)

Tree	Species	Tree Size	Health Rating, Condition & Notes
42	Eastern Cottonwood	29cm dbh	Fair; lower crown dead; Figure 46 (right)
43	<u>West Side (Area 39)</u> Eastern Cottonwood	44cm dbh	Fair; lower crown dead; Figure 46 (left)
44	Scots Pine (<i>Pinus sylvestris</i>)	32cm dbh	Fair; forked @ 4 m; healthy foliage; Figure 47
45	Scots Pine	34cm dbh	Good; healthy crown; Figure 47
46	<u>West Side (TOB, Area 41)</u> Scots Pine	35cm dbh	Good; healthy crown; within 4.5m of P/L; Figure 49

Other Vegetation :

There are shrubs including **Common Lilac** (*Syringa vulgaris*), overgrown and covered by vines, along the south side of the property towards the east end, north of the Green & Ross property (Area 3; Figure 3).

A variety of naturally occurring trees, including **Manitoba Maple** and **Elm**, and shrubs, including **European Buckthorn** (*Rhamnus cathartica*), are growing in Area 8 (Figure 9), located just north of the open field (Area 1), and south of TOB (Area 11, Figure 12). Note that the large trees, Eastern Cottonwood, visible in Figure 12, are below TOB (north of Area 11).

There is a row of evergreens, possibly planted originally near a laneway for an old homestead (Area 12; Figure 13). A dead hardwood tree, overgrown **Eastern White Cedars**, and **Lilac** shrubs are located within this row of planted evergreens.

A cleared area, possibly for a driveway or laneway, is located on the property (Area 19, Figure 24), extending from Eagle St. northwards – towards the west side, between the Orthodontist Office property (west side) and the new home property (east side).

Along the southwest part of the property, east of the Orthodontist Office property, there are hardwood trees left standing, as well as **Trembling Aspen** and **Norway Maple** (*Acer platanoides*) saplings colonizing the open space (Area 35, Figure 42).

North of the Orthodontist Office property, there is a copse of **Scots Pine**, including 19 trees < 30 cm dbh, in Area 37 (Figure 45), and 2 **Manitoba Maples**, < 30 cm dbh, and a **European Buckthorn** shrub (Area 38, Figure 46).

Along the west side of the property, **Lilac** shrubs, **Scots Pine**, and 1 **White Spruce**, < 30 cm dbh, are growing (Areas 39-41, Figures 47-49).

Top of Bank (TOB) Area : East Side of Property

At the east side of the property, the TOB curves northward, following the watercourse (Western Creek). This point is located approximately halfway along the eastern property line (Area 7). The vegetation in this area is located below (north/northwest of) the TOB (Figure 8) and will be undisturbed by the proposed development.

Other vegetation is growing below the TOB and will be undisturbed by the proposed development (Area 9, Figure 10).

Top of Bank (TOB) Area : West Side of Property

Manitoba Maple clumps are growing naturally, near the TOB, towards the west side of the property (Areas 17-18; Figures 21, 23-right).

Scots Pine trees are growing naturally, along the TOB at the west side of the property (Area 42, Figure 50). **Staghorn Sumac** shrubs (*Rhus typhina*) are naturally colonizing the open space east of the Scots Pine (Area 42, Figure 50).

Natural Heritage Area :

Along Eagle Street, the south side of the property, there is overgrown vegetation covering approximately 50 m in length, including **Eastern White Cedar**, **Manitoba Maple**, and **Lilac** shrubs (Areas 15-16; Figures 18-20, 31). **Trembling Aspen** (*Populus tremuloides*) saplings have naturally colonized the available space, in Area 16 (Figure 20).

In the central part of the Natural Heritage Area, there are assorted hardwood trees growing naturally, < 30 cm dbh (Area 23, Figure 29).

Towards the west side of the Natural Heritage Area and east of the existing house property, **Trembling Aspen** saplings have naturally colonized the open space (Area 25; Figure 32). A **Black Walnut** tree (<30 cm dbh), **Eastern White Cedars** (<30 cm dbh), and **Lilac** shrubs are growing towards the west side of this area, near the NE corner of the existing house property (Areas 29-30; Figures 37-38).

In the northwest part of the Natural Heritage Area, there is an over mature, dead **Manitoba Maple**, lying on the ground (Area 33, Figure 40).

DISCUSSION AND RECOMMENDATIONS

I have inspected the property and the following are my recommendations.

Tree Inventory

In total, there are 32 healthy trees (7 in Good and 25 in Fair Condition) that may be affected by the proposed development :

- 9 **Manitoba Maple**, all in Fair Condition, including 5 within 4.5 m of eastern property line
- 2 **Basswood** (Fair)
- 1 **Chinese Elm** (Fair)
- 4 **Black Walnut** (Fair)
- 3 **Eastern Cottonwood** (Fair)
- 3 **White Spruce** (Fair)
- 4 **Eastern White Cedar** (2 Good - < 30 cm dbh, 2 Fair)
- 1 **Scots Pine** (Fair)

- and 5 trees of Significant Size (>30 cm dbh) and in Good Condition :
 - 2 **Colorado Blue Spruce** (Trees #16 – 40 cm dbh; #18 – 54 cm dbh)
 - 1 **Black Walnut** (Tree #32 - 62 cm dbh)
 - 2 **Scots Pine** (Trees #45 - 34 cm dbh; #46 – 35 cm dbh).

The remaining 14 trees that were included in the **Tree Inventory** are in Poor or Dying Condition :

- 1 **Black Walnut**
- 1 **Chinese Elm**
- 2 **Apple**
- 6 **Manitoba Maple**
- 2 **Eastern Cottonwood**
- 1 **White Spruce**
- 1 **Eastern White Cedar**

According to the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (10pp.), all trees are to be preserved, protected or replaced if they meet **ALL** of the following criteria (p. 2 of Policy) :

- ✓ Significant (>30 cm dbh)
- ✓ In Good Condition
- ✓ Located within 4.5 m of existing property line
- ✓ Native, non-exotic, AND non-invasive species; or identified on the Town's most current Recommended Plant List.

Only 5 trees listed above, of Significant Size and in Good Condition, meet these criteria. Since development of the property is proposed, I recommend replacing the 5 trees, following the 'Aggregate Inch Replacement' method. The total requirement is 255 cm of diameter (sum of diameters of the 5 trees to be removed = 40+54+62+34+35 cm dbh). The tree replacement will total 255 cm diameter, for example 30 trees of 8 cm dbh + 2 trees of 7.5 cm dbh, or other combinations of caliper to compensate for the total diameter removed. This meets the requirements of the Town of Newmarket, following the Tree Preservation, Protection, Replacement and Enhancement Policy.

In my opinion, Tree #46 (Scots Pine), near TOB in Area 41, will remain undisturbed by the proposed residential development because it will be protected by the buffer extending beyond the TOB line. Therefore, recommendation of this tree for replacement exceeds the requirements of the Town of Newmarket by 35 cm diameter.

Although 5 Manitoba Maples are located within 4.5 m of the eastern property line, these trees are in Fair Condition only.

Other Vegetation :

No trees or shrubs of Significant Size were recorded in this section of my report. This vegetation is colonizing open areas (saplings), naturally occurring, invasive, or overgrown.

Top of Bank (TOB) Area :

Vegetation at the TOB line and below it will be undisturbed by the proposed development. Close to the TOB line, trees and shrubs are naturally colonizing the available space. Even these areas will be undisturbed, once the buffer width beyond the TOB line has been identified.

Prior to construction, I recommend the installation of fencing at the edge of the buffer, to protect the trees and vegetation near the TOB line and on the tablelands, thereby protecting the designated valley corridor.

Natural Heritage Area :

The 17 trees located in this area were included in the **Tree Inventory** section :

1 - Good Condition & Significant Size - Black Walnut, Tree #32; 62 cm dbh

2 - Good Condition & <30 cm dbh – Eastern White Cedar, Trees #36 & 37; 29 & 22 cm dbh

9 - Fair Condition –

- 1 Basswood, Tree #27; 34 cm dbh max
- 4 Black Walnut, Trees #30, 31, 34, 35; 41, 36 (>bh), 38, 48 cm dbh
- 2 Eastern White Cedar, Trees # 21, 29; 23, 42 (>bh) cm dbh
- 2 White Spruce, Trees #20, 22; 22, 29 cm dbh

5 - Poor/Dying Condition –

- 4 Manitoba Maple, Trees # 23, 24, 28, 33
- 1 Eastern White Cedar, Tree #26

Although designated Natural Heritage Area, only 1 of the 17 trees tallied is in Good Condition and Significant Size - Tree #32 (Black Walnut). This is insignificant and hardly justifies this designation in the new Official Plan. Furthermore, the remaining vegetation in the Natural Heritage Area is naturally colonizing the open spaces, over mature, or overgrown and unmaintained since the property has been vacant. No natural areas of native forest were observed.

SUMMARY

In conclusion, I recommend the replacement of the 5 trees of Significant Size, following the 'Aggregate Inch Replacement' method. This requirement is 255 cm of diameter of new tree planting, such as 30 trees @ 8 cm dbh and 2 trees @ 7.5 cm dbh, or another combination of sizes to attain the total of 255 cm of diameter. I suggest that the species list for the tree replacements be prepared in coordination with the Site Plan. This will provide the opportunity to enhance the site with suitable species/sizes of trees.

Recommendation of replacement of Tree #46 (Scots Pine), located near TOB, exceeds the Town of Newmarket requirement. I suggest that this indicates your willingness to enhance the site through development.

There are no other trees or vegetation, of Significant Size and in Good Condition, that may be affected by the proposed residential development, as summarized by sections above – Tree Inventory, Other Vegetation, TOB, and Natural Heritage Area.

In the area designated Natural Heritage System, no trees of a natural native forest were observed. Instead, the existing trees are planted and unmaintained, over mature, over grown, or successional species naturally colonizing open spaces (possibly old fields or other disturbed areas). Following the definition of 'woodlot', in the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (2006), the existing vegetation in the Natural Heritage Area does not meet the guidelines for this designation. A 'woodlot' is "a dense growth of trees comprising a minimum area of 0.2 hectares (0.5 acres)." (Town of Newmarket, 2006). Only 1 planted tree, Black Walnut – Tree #32, meets the criteria of the Town of Newmarket for replacement, within the Natural Heritage Area. It was included above in the Tree Inventory Table (p.3) and also in the 'Aggregate Inch Replacement' method (p.6, 7).

Please let me know if I can be of further assistance on this project.

Sincerely,

Cathy V. Bentley, B.Sc.F., M.Sc.F., R.P.F.
I.S.A. Certified Arborist #ON-0184

REFERENCES USED

Azimuth Environmental Consulting, Inc. 2007. Environmental Impact Study for the Proposed Residential Development of Part of Lots 2 and 3, Registered Plan 49, Town of Newmarket, Regional Municipality of York. 23 pp. + Figures + Appendices. DRAFT.

Town of Newmarket. 2006. Tree Preservation, Protection, Replacement and Enhancement Policy.

Farrar, J.L. 1995. Trees in Canada. Fitzhenry & Whiteside Limited, Markham, Ontario. 502 pp.



Figure 1. No trees along SE area of property, facing NE (Oct. 25/07)



Figure 2. Tree #1, Manitoba Maple, growing naturally on E. side of property, facing NE (Oct. 25/07)



Figure 3. Overgrown shrubs, along S. edge at E. end of property, facing SE (Oct. 25/07)

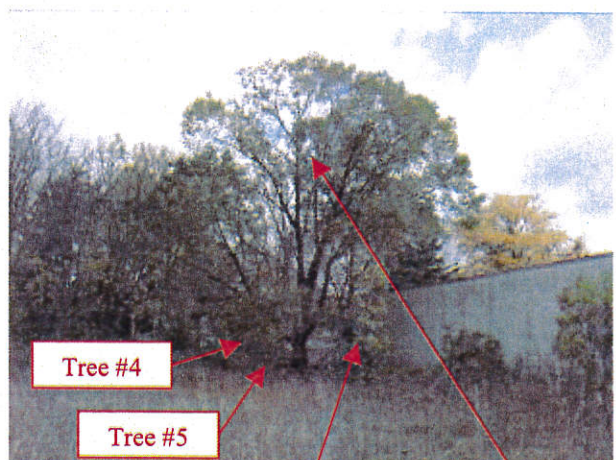


Figure 4. SE corner - Black Walnut (#2), Siberian Elm (#3), Manitoba Maple (#4,5), facing SE (Oct. 25/07)



Figure 5. Manitoba Maples (Trees #6,7), E. of property line, facing E (Oct. 25/07)



Figure 6. Manitoba Maples (Trees #8, 9, 10), E. of property line, facing E (Oct. 25/07)



Figure 7. Apple trees #11 & 12 , E. side of property, facing S from TOB (Oct. 25/07)



Figure 8. Vegetation growing naturally below TOB, facing NW (Oct. 25/07)



Figure 9. Young trees growing naturally near TOB, facing W (Oct. 25/07)



Figure 10. Vegetation growing naturally below TOB, facing N (Oct. 25/07)



Figure 11. Manitoba Maples (#13 & 14), & Basswood (#15-right), facing N (Oct. 25/07)



Figure 12. Natural vegetation (foreground) near TOB, facing NW (Oct. 25/07)

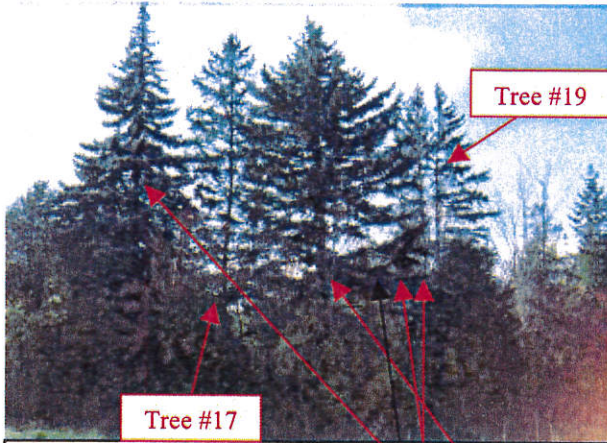


Figure 13. Spruce-Colorado Blue (#16 & 18), White (17-left,19-right), facing W (Oct.25/07)

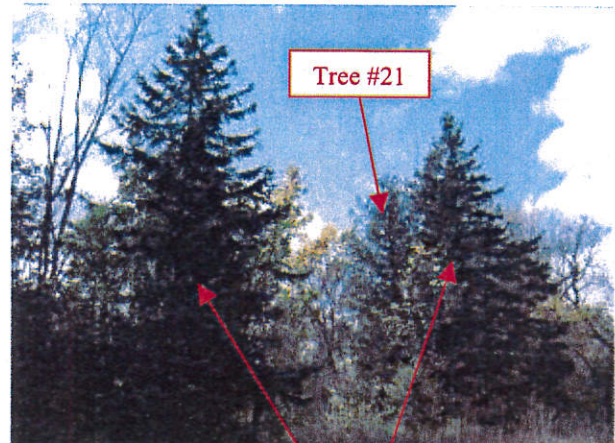


Figure 14. White Spruce (#20 & 22), & White Cedar (#21-right), facing NW (Oct.25/07)



Figure 15. Dying Manitoba Maple (Tree #23), growing naturally, facing W (Oct. 25/07)



Figure 16. Close up of crown of Manitoba Maple (Tree #23), growing naturally, facing N (Oct.25/07)



Figure 17. Tree #24 (centre), dying Manitoba Maple, growing naturally, facing W (Oct. 25/07)



Figure 18. Overgrown Lilacs, Manitoba Maple (centre), White Cedar (right), facing NW (Oct.25/07)

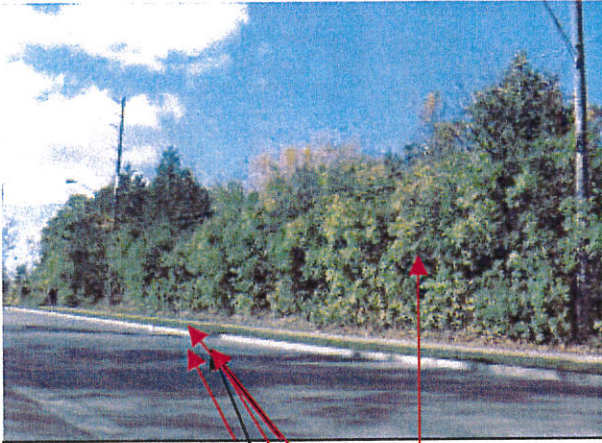


Figure 19. Overgrown vegetation (Lilacs) along Eagle St., on S. side of property, facing NW (Oct. 25/07)

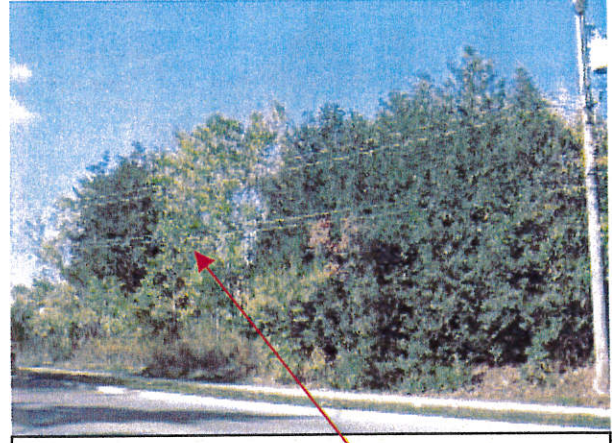


Figure 20. Trembling Aspen saplings & overgrown Cedars-right, facing NW (Oct. 25/07)



Figure 21. Clumps of Manitoba Maple, growing naturally near TOB (Area 17), facing N (Oct. 29/07)



Figure 22. Tree #25, Chinese Elm, growing naturally on E. side, facing NW (Oct. 29/07)



Figure 23. View of natural vegetation near TOB, towards west side of property, facing NW (Oct. 29/07)



Figure 24. Open area (Area 19) & natural vegetation towards west side of property, facing S (Oct. 29/07)



Figure 25. Eastern White Cedar (#26), growing naturally in Natural Heritage Area, facing SE (Oct. 29/07)



Figure 26. Top of dying Eastern White Cedar (Tree #26-centre), facing SE (Oct. 29/07)



Figure 27. Tree #27, Basswood Clump, growing naturally, facing S (Oct. 29/07)



Figure 28. Tree #28, Manitoba Maple, growing naturally, facing S (Oct. 29/07)



Figure 29. Hardwoods, < 30cm dbh, growing naturally (Area 23), facing N (Oct. 29/07)



Figure 30. Tree #29, Eastern White Cedar, growing naturally in Area 24, facing E (Oct. 29/07)

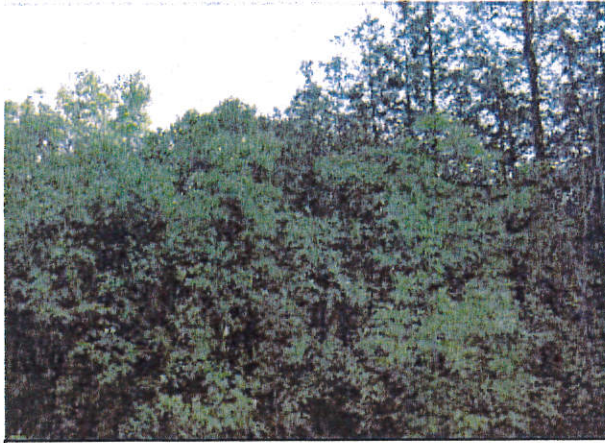


Figure 31. Overgrown Lilac shrubs & Eastern White Cedars, near Eagle St. (Area 15), facing S (Oct.29/07)



Figure 32. Trembling Aspen saplings (Area 25), E. of existing new house property, facing W (Oct. 29/07)



Figure 33. Tree #30, Black Walnut, facing NW (Oct. 29/07)



Figure 34. Crown of Tree #30, Black Walnut, facing NW (Oct. 29/07)



Figure 35. Tree #31, Black Walnut, growing E. of house property, facing W (Oct. 29/07)



Figure 36. Tree #32, healthy Black Walnut, facing NW (Oct. 29/07)



Figure 37. Natural vegetation near W. side of Natural Heritage Area, facing NE (Oct. 29/07)



Figure 38. White Cedars, growing near NE corner of existing house property, facing W (Oct.29/07)



Figure 39. Black Walnuts (#34 & #35), Natural Heritage Area, facing N (Oct. 29/07)



Figure 40. Dead Manitoba Maple (Area 33), laying on ground, facing N (Oct. 29/07)



Figure 41. Eastern White Cedars (#36 & #37), growing on W. side (Area 34), facing W (Oct. 29/07)



Figure 42. SW corner: natural vegetation, facing NW (Oct. 29/07)



Figure 43. Natural vegetation on W. side, facing NW (Oct. 29/07)



Figure 44. Eastern Cottonwood (#38 & #39), on W. side, facing NW (Oct. 29/07)



Figure 45. Copse of Scots Pine (Area 37), N. of Orthodontist Office property, facing N (Oct.29/07)



Figure 46. Natural vegetation, including Manitoba Maples & Eastern Cottonwood, facing N (Oct.29/07)

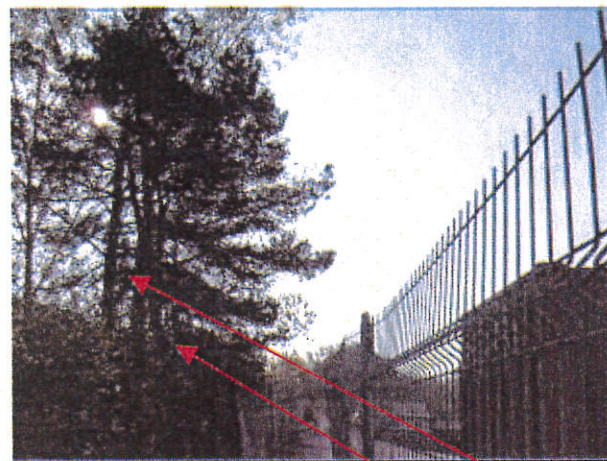


Figure 47. West side: Scots Pine (#44 & #45), growing on W. side, facing S (Oct. 30/07)



Figure 48. Scots Pine, 1 White Spruce & Lilacs, on W. side (Area 40), facing SE (Oct. 30/07)

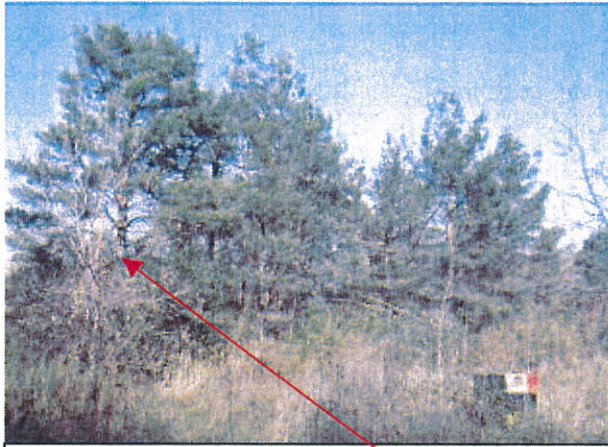


Figure 49. Copse of Scots Pine & Tree #46, at W end of TOB, growing naturally, facing NW (Oct. 30/07)



Figure 50. Natural Scots Pine (TOB) & Sumac, in Area 42, facing NW (Oct.30/07)

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February 7, 2011

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ATTN: Enza and Angela Orsi

**ADDENDUM TO: TREE PLAN
MILLFORD DEVELOPMENT LTD., PROPERTY ON EAGLE ST., NEWMARKET
(December 7, 2007)**

This document is a follow up to my original Tree Plan (December 7, 2007), regarding compensation for trees that may be affected by proposed development, on the Millford Development Ltd. Property on Eagle Street in Newmarket. These are my recommendations and suggestions to resolve the tree compensation issue.

First of all, I was retained by Millford Development Ltd., to prepare a Tree Plan for the above property, which was completed and dated December 7, 2007. In summary (Tree Plan, p.7), following field work and tree inventory on the potentially developable area of the property (above Top-of-Bank), I concluded that only 5 trees met the criteria to be preserved, protected or replaced (Tree Plan, p.6), according to the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (2006), which states that a tree must meet **ALL** of the following criteria to be considered:

- ✓ Significant (>30 cm dbh)
- ✓ In Good Condition*
- ✓ Located within 4.5 m of existing property line
- ✓ Native, non-exotic, AND non-invasive species; or identified on the Town's most current Recommended Plant List.

* Note that tree health rating in the Tree Plan is based on a visual assessment of a tree's general health, condition for long-term survival, growth habit and form.

In my Tree Plan, I recommended "replacement of the 5 trees of Significant Size, following the 'Aggregate Inch Replacement' method. The purpose of this Addendum is to address this issue. Based on the proposed Site Plan, the Top-of-Bank delineation and buffer, only 4 trees of Significant Size may be affected by the proposed development. One of the original 5 trees, a Scots Pine (Tree #46 near Top-of-Bank; 35 cm dbh), will not be affected by the proposed development and will be preserved by the buffer area.

The remaining 4 trees (1 Black Walnut, 2 Colorado Blue Spruce and 1 Scots Pine) should be replaced following the 'Aggregate Inch Replacement' method, according to the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (2006). This requirement is 190 cm (62

cm + 40 cm + 54 cm + 34 cm, respectively) of diameter of new tree planting, such as 32 trees @ 6 cm dbh, or another combination of sizes to attain the total of 190 cm of diameter. I suggest that the species list for the tree replacements be prepared in coordination with the Site Plan. This will provide the opportunity to enhance the site with suitable species/sizes of trees.” (Tree Plan, p.7)

Note that only 1 of these 4 trees, a Black Walnut, is located within the Natural Heritage System (NHS) designation above Top-of-Bank.

New trees could be planted on the slope of the Top-of-Bank or within the Top-of-Bank buffer area or a combination of both. For this application, potential survival rate, and also logistics of planting, I suggest small sized trees are more appropriate than large diameter trees. Many native trees would be suitable for the site, from the ‘Recommended Plant List’ (Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy, 2006; p. 8), including Linden, Sugar Maple, Red Maple, Weeping Willow, Black Willow, Larch, White Spruce, and Eastern White Cedar, as well as smaller trees such as Crabapple, Hawthorn, and Serviceberry.

I propose to coordinate both the planning and planting of the replacement trees, since I have 14 years of experience in the nursery/tree farm business to offer. This continuity should enhance our project and ensure proper maintenance for the replacement trees in both the short and long term.

Summary

I recommend replacing the 4 trees of Significant Size and in Good Condition, that may be affected by the proposed development, although 3 of the 4 are NOT native species (2 Colorado Blue Spruce and 1 Scots Pine), by the ‘Aggregate Inch Replacement’ method. The total diameter requirement is 190 cm: **32 trees @ 6 cm dbh** (or another combination of sizes to attain total of 190). This follows the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (2006).

In total, I recommend that we plant **32 new trees** as tree compensation for this project, within the replacement area for Natural Heritage System, on the subject property.

Sincerely,



Cathy V. Bentley, B.Sc.F., M.Sc.F., R.P.F.
Certified Arborist ON-0184



Tel: 905-895-1281
1-800-465-0437
Fax: 905-853-5881
E-Mail: info@lsrca.on.ca
Web: www.lsrca.on.ca

120 Bayview Parkway
Box 282
Newmarket, Ontario
L3Y 4X1

Sent by Facsimile 1-705-721-8926

May 26, 2009

File No.: Pending Zoning - 2009
IMS No.:PZOA22C4

Ms. Bonnie Clayton, B.Sc.
Senior Biologist
Azimuth Environmental Consulting Inc.
229 Mapleview Drive East, Unit 1
Barrie ON L4N 0W5

Dear Ms. Clayton:

**Re: Environmental Impact Study for Millford Developments Limited
Proposed Residential Development - Orsi Lands
55 Eagle Street, Part of Lots 2 and 3, Registered Plan 49
Town of Newmarket, Regional Municipality of York**

The Lake Simcoe Region Conservation Authority (LSRCA) has reviewed the Environmental Impact Study (EIS) for the Millford property, dated February 22, 2008. The EIS was prepared in support of a mixed density residential subdivision (condominium and townhouses) at the subject location. The property contains a Level 3 Feature (woodland) in the Natural Heritage System for the Lake Simcoe Watershed - July 2007 (NHS). We provide the following comments on the EIS.

1. The breeding bird survey must be conducted in accordance with the Ontario Breeding Bird Atlas Protocol (2001). Although 2 surveys were conducted, because they were done 1 day apart, rather than 15 days apart as per the protocol, the results in essence are comparable to a one-day survey. Ontario Breeding Bird Atlas Protocol calls for a minimum of 2 visits to the site, at least 15 days apart. Additionally, although many dead or dying trees were identified, there was no mention of cavity trees or stick nests in the EIS. This should be addressed in your next submission.
2. The Ecological Land Classification (ELC) conducted for the property does not reflect existing conditions, nor does it reflect the vegetation types on the most current 2007 orthophotos (e.g. the western CUM1-1 is clearly now thicket if not woodland). The mapping should be amended to reflect the most current circumstance.
3. Given this succession, the treed area covers >4ha and is therefore considered an urban woodland with social significance (LSRCA NHS). To meet the Town of Newmarket's need to at least retain its existing, relatively low, forest cover as well as have regard for LSRCA's recognition of an urban woodland regardless of native ecological makeup, the EIS should compensate for the loss of at least 32 of the healthy trees that may be affected by the proposed development. The ratio of replacement can follow the 'Aggregate Inch Replacement' of replacing diameter, or the LSRCA's general policy of at least 2:1 (minimum 60m caliper), or another reasonable method to compensate for the loss of the tree's function. A tree compensation plan will be required that will add to the health, size, critical function zone of the amphibian wintering habitat and social function of the retained area.

A

Watershed

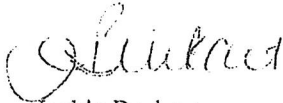
for Life

May 26, 2009
File No.: Pending Zoning - 2009
IMS No.:PZOA22C4
Ms. Bonnie Clayton, B.Sc.
Azimuth Environmental Consulting Inc
Page 2 of 2

4. Please include a description of the MAM2-2 as it has not been included in Table 1 (pg 9).

If you have any questions regarding the above, please contact Christine Deschamps at 905-895-1281, ext. 239. Please reference the above file numbers in future correspondence.

Yours truly,



Jackie Burkart
Senior Planner

JB/ph

c. Peter Allen, Peter E. Allen and Associates, 905-830-1148 - Fax



Environmental Assessments & Approvals

August 10, 2009

AEC 04-060

Lake Simcoe Region Conservation Authority
120 Bayview Parkway, Box 282
Newmarket, Ontario
L3Y 4X1

Attention: Jackie Burkhart, Environmental Planner

**Re: Response to Lake Simcoe Region Conservation Authority Comments
Environmental Impact Study for Millford Development Limited
Proposed Residential Development
55 Eagle Street Part of Lots 2 and 3, Registered Plan 49, Town of
Newmarket, Regional Municipality of York
LSRCA File No.: Pending Zoning - 2009
LSRCA IMS No.: PZOA22C4**

Dear Ms. Burkhart:

We offer the following information to address the comments provided by Lake Simcoe Region Conservation Authority (LSRCA) staff in a letter from you, dated May 26, 2009, regarding permit applications for the construction of a proposed residential development for the above noted property. The following information and comments were compiled and provided by Cathy Bentley, Forester, Peter Allen, Planner, and me.

Comment 1:

The breeding bird studies were done one month apart not one day apart. Please re-review Table 2 in our 2008 Addendum Report (dated December 2009) for this property.

During our long involvement with this property, Azimuth staff have not observed any cavity or stick nests on the site.



Comment 2:

In our EIS report and Addendum report, all mapped forested and woodland areas make up approximately 2.76ha of the property. At your request, we obtained the 2007 aerial photography and adjusted our mapping to reflect the site specific conditions and newer aerial photography (please see attached Figure). By our calculations and site specific knowledge of the site, the forested and woodland habitats of the property equal approximately 2.88ha, taking into account the minor amount of succession that has occurred in the last 5 years.

Although Trembling Aspen (*Populus tremuloides*) is colonizing the site along the south side, no poplar species are listed on the Town of Newmarket's Plant List of acceptable tree species. Similarly, Manitoba Maple (*Acer negundo*) is colonizing the open areas of the site and is considered a "Prohibited Plant Species" on the Town's Plant List. Exotic and invasive species included in the Tree Inventory, of Significant Size (>30cm dbh), are 9 Manitoba Maple, 1 Chinese Elm, 2 Colorado Blue Spruce, and 3 Scots Pine (15 trees in total).

Comment 3:

By our calculations and site specific knowledge of the site, the forested and woodland habitats of the property equal approximately 2.88ha, taking into account the minor amount of succession that has occurred in the last 5 years. Understanding the woodland/forested habitat continues to the west of the property on other lands not owned by the applicant, that is approximately 0.6ha in size, our calculations conclude that the forested/woodland habitat cover an area of approximately 3.48ha (see attached Figure). Therefore, we do not agree that the forested/woodland habitat within the property and on adjacent lands meets the criteria of being "an urban woodland of social significance".

The 32 'healthy' trees mentioned in your letter, dated May 26/09, includes trees in the Tree Inventory that were in Good and Fair Condition, based on a visual assessment. According to the Town of Newmarket Tree Preservation, Protection, Replacement and Enhancement Policy (2006), all trees are to be preserved, protected or replaced if they meet **ALL** of the following criteria :

- Significant (>30cm dbh)
- In Good Condition
- Located within 4.5 m of existing property line
- Native, non-exotic, AND non-invasive species, or identified on the Town's most current Recommended Plant List.

Above the Top of Bank area, there are only 4 trees of Significant Size (>30 cm dbh) and in Good Condition: 2 Colorado Blue Spruce, 1 Black Walnut, and 1 Scots Pine. Although only the 1 Black Walnut truly meets the species criteria, we recommend



replacing the 4 trees, following the ‘Aggregate Inch Replacement’ method. The total requirement, based on the Town’s Tree Preservation, Protection, Replacement and Enhancement Policy, is 190 cm of diameter (sum of diameters of the 4 trees to be removed = 40+54+62+34 cm dbh). The tree replacement will total 190 cm of diameter, for example 23 trees of 8 cm diameter + 1 tree of 6 cm diameter, or other combinations of caliper to compensate for the total diameter removed. This meets (exceeds) the requirements of the Town of Newmarket, following the Tree Preservation, Protection, Replacement and Enhancement Policy. Another Scots Pine (Tree #46; Area 41) was included in original Tree Inventory and is located BELOW Top of Bank, and, therefore, excluded from this discussion since in our opinion it will remain undisturbed). We suggest that the species list for the tree replacements be prepared in coordination with the Site Plan. This will provide the opportunity to enhance the site with suitable species and sizes of trees. New trees could be planted on the slope of the Top-of-Bank or within Top-of-Bank buffer area on the open tablelands, or in a combination of areas. For this application, potential survival rate, and also logistics of planting, we suggest that small sized trees are more appropriate than large diameter trees. Many native trees would be suitable for the site, from the ‘Recommended Plant List’, including species both large and small at maturity.

In our opinion, existing trees below and/or near the Top-of-Bank, and on adjacent properties, will remain undisturbed by the proposed development of this property. Additional buffering for protection of root zones is not required.

Comment 4:

Table 1: Definition of the Ontario Ecological Land Classification Vegetation Communities (revised)

Unit	Description
SWAMP (SW)	Vegetation community dominated by hydrophytic shrub and tree species that comprise >25% cover.
Deciduous Swamp (SWD)	Community where tree cover is >25% and where deciduous tree species make up >75% of canopy cover.
SWD3-4: Manitoba Maple Mineral Deciduous Swamp type.	This community comprised the majority of the floodplain and along the south slope of the valley. Many areas occupied by this community were upland in nature (due to topography) and were likely present because of the highly disturbed nature of the site and not because of the presence of wetland conditions.
Marsh (MA)	
MAM2-2: Reed-Canary Grass Mineral Meadow Marsh Type	This community is located in the northeastern portion of the property, associated with floodplain of the western creek tributary. It is dominated by Reed-Canary Grass associated with several Willow shrubs and trees located sporadically throughout. There is a minor forb component supporting a mixture of native and non-native invasive species. The



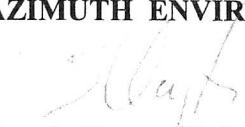
	community does not contain any areas of standing water and does not function as amphibian breeding habitat (please refer to Table 3).
CULTURAL (CU)	Vegetation community where site conditions and substrates vary; however, community resulting from or maintained by cultural or anthropogenic-based disturbance.
Cultural Plantation (CUP)	Cultural or anthropogenic-based forest community where tree cover >60%.
Coniferous Plantation (CUP3)	A community with coniferous tree species comprising >75% of canopy cover.
CUP3-3: Scotch Pine Coniferous Plantation Type	There are two remnant patches of this community located along the west side and mid-centrally along the north boundary.
Cultural Meadow (CUM)	A community where tree cover <25% and shrub cover <25%.
CUM1-1 Dry-Moist Cultural Meadow Ecosite	There are two patches of this communities located on the south side of Western Creek, on either side of the cultural woodland associated with a former residence.
Cultural Woodland (CUW)	A community where tree cover is >35% but < 65% of cover.
CUW1 Mineral Cultural Woodland Ecosite	This represents the wooded area located on the property centrally fronting Eagle Street. The area is occupied by trees and shrubs that were associated with an old residence and is dominated by planted and non-native horticultural varieties of trees and shrubs.

We trust the information provided addresses the comments provided by LSRCA staff, letter dated May 26, 2009, concerning the proposed residential development of 55 Eagle Street, Town of Newmarket, Regional Municipality of York.

Should you require further information or have any questions regarding the natural history of the property, please contact the undersigned.

Yours truly,

AZIMUTH ENVIRONMENTAL CONSULTING INC.



Bonnie Clayton, B.Sc.

Senior Biologist

BAC:

c.c. Angela Orsi, Millford Development, Ltd.
Peter Allen, Peter Allen & Associates
Cathy Bentley, Forestry Consultant Arborist
Ron Webb LLP, Barristers & Solicitors



 MAZUR ENVIRONMENTAL CONSULTING INC.		ENVIRONMENTAL FEATURES	
Date Issued: June 2009 Prepared By: R.M. Project No: M250 File Name: Figure 2	Client: MULLFORD DEVELOPMENTS LTD. Project: PLOTS 2 & 3, Registered Plan 49 Location: TOWN OF NEWMARKET	Scale: 1:1000 Date: 2009	Page No: 2

- Legend:**
- Property Boundary
 - Watercourse
 - Top of Bank (as per LRSCA)
- Vegetation Communities:**
- CUP3-3 Scotch Pine Coniferous Plantation 58ha
 - CUM1-1 Dry-Moist Old Field Meadow Type 1.37 ha, 0.17ha of which is cleared
 - CUM1 Cultural Woodland 67ha
 - SWD3-4 Manitoba Maple Mineral Deciduous Swamp 1.65ha
 - MAW2-2 Reed-Canary Grass Mineral Meadow Marsh Type 74ha

1. All measurements are approximate. 2. All measurements are approximate.

August 10, 2009

AEC 04-060

Lake Simcoe Region Conservation Authority
120 Bayview Parkway, Box 282
Newmarket, Ontario
L3Y 4X1

Attention: Jackie Burkhart, Environmental Planner

**Re: Response to Lake Simcoe Region Conservation Authority Comments
Environmental Impact Study for Millford Development Limited
Proposed Residential Development
55 Eagle Street Part of Lots 2 and 3, Registered Plan 49, Town of
Newmarket, Regional Municipality of York
LSRCA File No.: Pending Zoning - 2009
LSRCA IMS No.: PZOA22C4**

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AZIMUTH ENVIRONMENTAL CONSULTING INC.

Bonnie Clayton, B.Sc.

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