 MMM Group Limited

Class Environmental Assessment
North-South Collector Road in the Community of Sharon

COMMUNITIES
TRANSPORTATION
BUILDINGS
INFRASTRUCTURE

MMM GROUP
August 2010
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1.0 Introduction

MMM Group was retained by the Town of East Gwillimbury to undertake a Schedule ‘C’ Municipal Class Environmental Assessment (Class EA) to identify a preferred route and conceptual design for Phase 1 of the proposed North-South Collector Road in the community of Sharon. The Town of East Gwillimbury has planned for the proposed North-South Collector Road to be built in two phases. The first phase extends from Green Lane to Mount Albert Road and is scheduled for construction from 2011-2013. The second phase continues from Mount Albert Road to Doane Road, and is scheduled for construction from 2014 to 2016. This study addresses Phase 1 – Green Lane to Mount Albert Road only. Phase 2 of the proposed road will be addressed in a future environmental assessment and community plan. The Study Area is presented on Figure 1-1.

Phase 1 of the North-South Collector Road will be constructed on land that currently has multiple owners. The northern portion of the North-South Collector Road is to be built on land owned by the Sharon West Landowners Group. This portion is known as the Sharon West community. The road alignment on this part of the study area has already been studied in detail through the Sharon Master Environmental and Servicing Plan (MESP) study. The southern portion of the North-South Collector Road is to be built on land currently divided in two parcels under different ownership – the Sharon Farm Co-Tenancy and South Sharon Developments Inc. This portion is known as South Sharon. South Sharon had not previously been studied to the same level of detail as Sharon West. This Class Environmental Assessment will seek to confirm the road alignment findings of the MESP study and undertake a route selection study for the southern portion of the proposed road.

Section 1 of this Class EA Environmental Study Report provides an introduction to the undertaking, background information and an overview of the Municipal Class EA process. Section 2 of this report describes the public and agency consultation process undertaken to comply with Class EA requirements. Section 3 provides background information regarding policy adherence, and provides a needs assessment and justification of the project. Section 4 describes the existing natural, socio-economic, archaeological and geophysical environment. Section 5 identifies alternative solutions to the project and provides an evaluation of those alternatives. Section 6 is an analysis of the preferred solution for the routing of the proposed North-South Collector Road. Sections 7 and 8 provide a summary of required approvals and property acquisition in order for the proposed undertaking to proceed through a Detailed Design. Section 9 is a list of references used in the preparation of this Class EA Environmental Study Report.

Appendices to this report provide detail regarding public, agency and First Nations consultation, as well as archaeological conditions and considerations.
Figure 1-1: Study Area
1.1 Background

The Town of East Gwillimbury is located in the Regional Municipality of York encompassing an area of 238 square kilometres north of the Oak Ridges Moraine and within the designated lands of the Provincial Greenbelt Plan. The Town was formed by the amalgamation of the Township of East Gwillimbury with all the previously incorporated villages and hamlets within the Township. The Town consists of a number of growing urban areas and villages including Holland Landing, Queensville, Mount Albert, River Drive Park, and Sharon.

In 2005, the Province of Ontario passed legislation under the Greenbelt Protection Act (Bill 135) that established a Greenbelt Plan for the Greater Toronto Area and Golden Horseshoe. The Greenbelt Plan incorporates the Oak Ridges Moraine and Niagara Escarpment Plan areas, plus an additional 1.8 million acres as an area of countryside, which will be protected from urban development. Within East Gwillimbury, the Greenbelt area generally covers the entire rural area east of Woodbine Avenue and north of Queensville and Holland Landing. Areas protected by the Greenbelt Plan are referred to as Greenbelt lands. Lands within the Greenbelt boundary not protected by the Greenbelt Plan are typically identified as Settlement Areas or ‘Whitebelt’ lands.

This portion of the Town of East Gwillimbury is identified as a ‘Settlement Area’ within the ‘Protected Countryside’ which is governed by policies protecting areas of natural heritage, hydrologic and/or landform features. The communities of Queensville, Sharon and Holland Landing are surrounded by the provincially designated Greenbelt Plan area. As a result, the Town of East Gwillimbury is projected to experience significant population and employment growth over the next 30 years.

A number of community development plans have been prepared to accommodate anticipated growth in East Gwillimbury. Sharon West is the community to be developed just west of Leslie Street, south of Mount Albert Road. Sharon Secondary Plan Official Plan Amendment (OPA) 122 was approved, designating Sharon West for development. The primary road in the Sharon West community is the proposed North-South Collector Road. The property owners in South Sharon are preparing plans for the urbanization of their lands as well.

1.2 Municipal Class Environmental Assessment Process

The Class EA planning process requires the integration of sound engineering judgment, prudent long-term planning and protection of all aspects of the environment (natural, social, economic and technical). This process includes consultation with the public and government review agencies to obtain comments and input, to ensure regulatory compliance and ultimately, to achieve acceptance for the preferred alternative.

The Class EA process is a method of dealing with municipal infrastructure projects (including roads, water and wastewater projects) which display the following important characteristics:

- Recurring;
- Similar in nature;
Class Environmental Assessment
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- Generally limited in scale;
- Predictable range of environmental effects;
- Responsive to mitigation measures.

The Class EA process in Ontario, shown on Figure 1-2 follows a logical decision-making process and incorporates all aspects of:

- The identification of the problem or need for the project (Phase 1);
- A thorough evaluation of the planning options or alternative solutions to the problem (Phase 2 – last phase for Schedule ‘B’);
- An assessment of design alternatives (pre-design for “Schedule B” or Phase 3 for a Schedule ‘C’);
- The completion of documentation for the public record (Phase 4, Environmental Study Report for Schedule ‘C’); and
- The implementation of the project including design, with appropriate monitoring during construction (Phase 5).
Figure 1-2 – The Class EA Process
The Class EA document applies to a group of projects which are approved under the Ontario Environmental Assessment Act (EA Act), provided they are planned according to the requirements of the Class EA. The specific requirements of the document depend on the type of project, its complexity and the significance of potential environmental impacts. Three types of projects are identified in the document:

- **Schedule ‘A’** projects are limited in scale and have minimal adverse impacts.
- **Schedule ‘B’** projects have the potential for some adverse environmental impacts and are approved provided they are ‘screened’ by the public and government review agencies. This type of project requires the completion of Phases 1 and 2 of the planning process.
- **Schedule ‘C’** projects are more complex and have the potential for significant environmental impacts. This type of project is subject to the full Class EA process.

As a Schedule ‘C’ project, this study addresses Phases 1 through 5 of the Class EA. In Phase 1, it demonstrates the mandatory ‘need’ for the study, identifies and evaluates alternative solutions in Phase 2, and identifies a preferred solution and alternative implementation methods in Phase 3. This Schedule ‘C’ Class EA concludes with the Notice of Completion and filing of the Class EA Environmental Study Report (ESR) (Phase 4). Construction and operation, as well as monitoring will be addressed in Phase 5.

**Transportation Master Plans**

This study is being undertaken to comply with the York Region Transportation Master Plan Update (2009), and the East Gwillimbury Transportation Master Plan (2009) which both established long term transportation networks and roadway improvements. The East Gwillimbury Transportation Master Plan (TMP) recommended a series of roadways – including new roads and improvements to existing roads – to meet the future needs of the Town. One of the recommended roadways is the North-South Collector Road. The East Gwillimbury TMP addresses Phases 1 and 2 of the EA process, and a separate Class EA is required for each individual recommended roadway. This study builds on the recommendation from the TMP for the North-South Collector Road, and completes the requirements for a Schedule ‘C’ project as described in the Municipal Engineers Association’s Municipal Class Environmental Assessment (2000, as amended in 2007).

The roadways recommended in the TMP, including the North-South Collector Road, are identified in Figure 1-3.
Figure 1-3: Recommended Road Improvements

Legend
- Proposed Road Network
  - North South Collector
  - East-West Collector
  - Harry Walker Parkway
  - Sharon East Employment Collector
  - Thompson Drive Extension
  - North Queensville Ring Road
- Highway 400-404 Link
- Special Study Area

Existing and Draft Approved Roads
- GO Station
- East Gwillimbury Boundary
- Central Growth Area
Filing of the Environmental Study Report

All parties having expressed an interest in the project will be notified by letter regarding the completion of the project and filing of the Environmental Study Report (ESR). In addition, a Notice of Completion will be placed in local newspapers. This report documents all phases of the Class EA, and will be available for the mandatory 30-day public review period by the public and agencies that have an interest in this project.

If an affected agency or the public has a concern that cannot be resolved by discussion or negotiation with the Town of East Gwillimbury, a request can be made to the Minister of the Environment for the issuance of a Part II Order for the elevation of this project to an Individual Environmental Assessment.

Subject to comments received and receipt of necessary approvals, East Gwillimbury intends to proceed to the detail design phase with this project.
2.0 Public and Agency Consultation

An essential component of the Class EA process is public consultation. This includes regulatory agency contact, as well as contact with local stakeholders and First Nations. Input received from this consultation is important in determining the preferred alternative. The main components of consultation which took place for this project included:

- Notice of Project Initiation;
- Review Agency Contact;
- Stakeholder Advisory Committee meetings;
- Public Information Centres (2); and
- Notice of Project Completion.

2.1 Initial Notification

The Notice of Study Commencement was published in the ERA Banner in November, 2008. The Notice identified the study area, described the purpose of the undertaking, and identified the primary contacts representing the Town and MMM Group. Letters were mailed to regulatory agencies and stakeholders advising of the project initiation. Interested parties were invited to provide comments on the Class EA to MMM Group or East Gwillimbury. The Notice of Study Commencement and the list of regulatory agencies are both included in Appendix A.

2.2 Public Information Centre

The first Public Information Centre (PIC) was held on April 15, 2009 from 6:00 to 9:00pm at the Town of East Gwillimbury Civic Centre. The Notice of the Public Information Centre was published in the ERA Banner on March 31 and April 7, 2009.

The first PIC presented the rationale for undertaking the project and described the road alignment alternatives being considered. Members of the public were invited to complete and submit comment forms to express concern/issue related to the information presented. Twenty (20) members of the public and one elected official were present at the PIC.

The following East Gwillimbury and MMM Group staff were present to answer questions and explain the project information:

Don Allan  Manager of Development Engineering
Wayne Hunt  General Manager, Community Programs and Infrastructure Development
Chris Kalimootoo  Director of Engineering and Environmental Services
Carolyn Kellington  Manager of Community Planning and Development
Bob Burdett  Senior Project Manager, Planning and Environmental Design, MMM Group
Adolfo Emer  Manager, Municipal Design Group, MMM Group
Pam Foster  Project Planner, Planning and Environmental Design, MMM Group
A summary of the PIC and copy of the display boards are included in Appendix A.

The second PIC was held on June 23, 2009 from 5:00 to 7:00 p.m. at the Town of East Gwillimbury Civic Centre. The Notice of the Public Consultation Centre was published in the *ERA Banner* on June 9 and 16, 2009.

The second PIC presented the recommended road alignment alternative. Members of the public were invited to complete and submit comment forms to express concern/issues related to the information presented. Twenty-five (25) members of the public were present at the PIC.

The following East Gwillimbury and MMM Group staff were present to answer questions and explain the information presented:

- Don Allan  Manager of Development Engineering
- Wayne Hunt  General Manager, Community Programs and Infrastructure Development
- Chris Kalimuthoo  Director of Engineering and Environmental Services
- Bob Burdett  Senior Project Manager, Planning and Environmental Design, MMM Group
- Pam Foster  Project Planner, Planning and Environmental Design, MMM Group

### 2.3 Agency Consultation

The list of agencies and stakeholders contacted is included in Appendix A. Each agency/stakeholder was sent a copy of the Notice of Commencement and Notice of the second Public Information Centre. Responses received on the above activities are presented in Appendix A.

#### 2.3.1 Stakeholder Advisory Committee

To facilitate agency consultation, a Stakeholder Advisory Committee was established. Three meetings were held over the course of the study. In March 2009, an introductory meeting was held, followed by two more meetings in advance of each of the Public Information Centres. Summary notes from each meeting are included in Appendix A. Members of the Stakeholder Advisory Committee included representatives from:

- York Region
- York District School Board
- York Catholic District School Board
- Ministry of the Environment
- Ministry of Natural Resources
- Sharon Farm Co-Tenancy
- South Sharon Developments Inc.
- Delta Urban Inc., on behalf of Sharon West Landowners Group

Unaccepted invitations to join the Stakeholder Advisory Committee were also sent to:
2.4 First Nations Consultation

Indian and Northern Affairs Canada (Specific Land Claims Branch and Comprehensive Claims Branch), the Ontario Ministry of Aboriginal Affairs and the Ontario Native Affairs Secretariat were included on the project agency list from the initiation of the study. Correspondence with Indian and Northern Affairs Canada is located in Appendix B.

The Notice of Study Commencement was also sent to the following First Nations:

- Alderville First Nation
- Beausoleil First Nation (Christian Island)
- Chippewas of Georgina Island
- Chippewas of Mnjikaning (Rama)
- Curve Lake First Nation
- Hiawatha First Nation
- Wendake Meeting Ground of Nations
- Kawartha Nishnawbe First Nation
- Mississaugas of the New Credit First Nation
- Six Nations of the Grand River Territory
- United Anishnabaaq Councils
- Union of Ontario Indians – Nipissing First Nation
- Association of Iroquois and Allied Indians

A confirmation of receipt was issued by the Chippewas of Mnjikaning. No concerns with the proposed North-South Collector Road were raised. No responses were received from other First Nations stakeholders.
3.0 Supporting Policies and Project Justification

This section outlines municipal, regional and provincial policies and plans that provide context and support for the North-South Collector Road Class EA. It concludes with a needs assessment and justification for the proposed North-South Collector Road.

3.1 Municipal Policies

3.1.1 East Gwillimbury Official Plan

The East Gwillimbury Official Plan is being updated to guide the Town’s future growth in a way that will be managed responsibly and in a sustainable manner. The purpose of the Official Plan Review is to provide a set of clear goals, policies and implementation mechanisms to manage growth and guide land use planning within the Town to the year 2031. The Official Plan Review will emphasize sustainable development, environmental design, and employment land allocation, all of which must conform to the Greenbelt Plan and the Provincial Places to Grow Plan. The Official Plan recognizes growth in Sharon West.

The North-South Collector Road is necessary to support the growth projected for the Sharon West community.

3.1.2 East Gwillimbury Transportation Master Plan

The Town is projected to experience significant population and employment growth over the next 30 years. In response, the safe, efficient and reliable movement of people and goods will become increasingly important and challenging. As a result, East Gwillimbury adopted its first Transportation Master Plan in 2010.

By adopting the Transportation Master Plan (TMP), East Gwillimbury is committed to managing growth in a responsible manner, by engaging in sustainable transportation policies and initiatives that are compatible with those developed by York Region and the Province of Ontario. While an important element of this Master Plan is to design a local road system that complements the new growth, this plan has also been developed to:

- Ensure appropriate infrastructure and policies are in place to support additional transit service, cycling and pedestrian opportunities and other more efficient modes of travel, as well as to leverage provincial investments for these enhancements;
- Maintain and improve the health and safety of area residents; and
- Preserve and expand the Town’s vibrant economy.

The Transportation Master Plan was completed under a Class Environmental Assessment (EA) Master Plan process. The TMP addressed Phase 1 (Problem Identification) and Phase 2 (Alternative Solutions) of the Municipal Class EA Process for all recommended roadways, including the proposed North-South Collector Road.
Road. This Environmental Assessment completes the requirements for a Schedule C EA by building on the information provided in the TMP to assess in detail the North-South Collector Road.

The development of the North-South Collector Road is a key component of the road network identified in the Transportation Master Plan.

3.2 Regional Policies

3.2.1 York Region Official Plan

The Regional Official Plan (OP) for York Region (approved in 1994, Office Consolidation 2008) is a policy document which guides economic, environmental and community building decisions directly affecting the use of land and the management of growth. The OP provides a framework to be used by municipalities in order to achieve the overall vision for the entire Region and provide for the protection of the environment.

In 2009, York Region adopted an updated York Region Official Plan, which has been submitted to the Minister of Municipal Affairs and Housing for approval. In the updated Official Plan, Sharon West is recognized as an urban area, and the South Sharon lands are identified as a potential urban expansion area. The North-South Collector Road will be required in order to provide the movement of people and goods throughout the Sharon West and South Sharon communities.

3.2.2 York Region Transportation Master Plan Update

The York Region Transportation Master Plan (TMP) is a strategic planning document designed to define a long-term transportation vision and integrated road and transit network plan that will support growth in York Region to the year 2031 and beyond. The TMP integrates transportation and land use planning, and is founded upon the Official Plan goals and policies. York Region’s updated TMP addresses new provincial legislation and growth projections, and was adopted in November, 2009.

In consultation with residents and key stakeholders, including East Gwillimbury, the Region developed a set of Sustainability Principles or “themes” to guide the selection of transportation infrastructure and services in the Region. The Principles included a number of specific objectives, as well as key measures to ensure that the Region’s future transportation initiatives and policies properly reflect the conditions established by each principle. The 11 Sustainability Principles are provided below.

1. Integrate Transportation, Land Use and Design
2. Protect and Enhance our Environment and Cultural Heritage
3. Support York Region's Economic Well-Being
4. Provide Access and Mobility for Everyone (in York Region)
5. Adopt Energy Efficient Transportation Systems
6. Put Pedestrians and Transit First
7. Implement and Support Transportation Demand Management
8. Implement and Support Transportation Supply Management
9. Ensure Fiscal Sustainability and Equitable Funding
10. Further Encourage Communications, Consultation and Engagement
11. Conduct On-Going Performance Measurement and Monitoring

The North-South Collector Road is part of an integrated road and transit network plan. It will be a key to moving people from the Sharon West and South Sharon communities. Residents of these areas will be able to travel quickly to various destinations, including Green Lane, where they can access transit services such as GO Transit.

3.3 Provincial Policies

3.3.1 Greenbelt Plan

The communities of Queensville, Sharon and Holland Landing are surrounded by the provincially designated Greenbelt Plan (2005) area. This portion of the Town of East Gwillimbury is identified as a ‘Settlement Area’ within the ‘Protected Countryside’ which is governed by policies protecting areas of natural heritage, hydrologic and/or landform features. The section of the Greenbelt Plan that most directly applies to this study is Section 4.2 Infrastructure, as the expansion of services to settlement areas within the Protected Countryside are subject to the infrastructure policies of the Greenbelt Plan. Therefore, the preferred solution for this study must satisfy the policies below:

Section 4.2 Infrastructure - Provides policy direction on the type and kinds of infrastructure permitted within the ‘Protected Countryside’ designation including the planning, design and construction requirements for any new infrastructure.

Section 4.2 states: Infrastructure is important to economic well-being, human health and quality of life in southern Ontario and the Greenbelt.

There is already extensive local and regional infrastructure within the Greenbelt to serve its settlements, agricultural and resource sectors and the rural economy. Existing infrastructure must be maintained and new infrastructure will be needed to continue serving existing and permitted land uses within the Greenbelt.

In addition, major infrastructure serving national, provincial and inter-regional needs traverses the Greenbelt. It is also anticipated that new and/or expanded facilities will be needed in the future to serve the substantial growth projected for southern Ontario.
Section 4.2.1 General Infrastructure: Provides policy direction on permitted existing, expanded or new infrastructure within the Protected Countryside provided it meets one of two objectives.

Section 4.2.1 reads: For lands falling within the Protected Countryside, the following policies shall apply:

1. All existing, expanded or new infrastructure subject to and approved under the Canadian Environmental Assessment Act, the Environmental Assessment Act, the Planning Act, the Aggregate Resources Act, the Telecommunications Act or by the National or Ontario Energy Boards, or which receives a similar environmental approval, is permitted within the Protected Countryside, subject to the policies of this section and provided it meets one of the following two objectives:
   a. It supports agriculture, recreation and tourism, rural settlement areas, resource use or the rural economic activity that exists and is permitted within the Greenbelt; or
   b. It serves the significant growth and economic development expected in southern Ontario beyond the Greenbelt by providing for the appropriate infrastructure connections among urban growth centres and between these centres and Ontario’s borders.

2. The location and construction of infrastructure and expansions, extensions, operations and maintenance of infrastructure in the Protected Countryside, are subject to the following:
   a. Planning, design and construction practices shall minimize, wherever possible, the amount of the Greenbelt, and particularly the Natural Heritage System, traversed and/or occupied by such infrastructure;
   b. Planning, design and construction practices shall minimize, wherever possible, the negative impacts and disturbance of the existing landscape, including, but not limited to, impacts caused by light intrusion, noise and road salt;
   c. Where practicable, existing capacity and coordination with different infrastructure services is optimized so that the rural and existing character of the Protected Countryside and the overall urban structure for southern Ontario established by Greenbelt and any provincial growth management initiatives are supported and reinforced;
   d. New or expanding infrastructure shall avoid key natural heritage features or key hydrologic features unless need has been demonstrated and it has been established that there is no reasonable alternative; and
   e. Where infrastructure does cross the Natural Heritage System or intrude into or result in the loss of a key natural heritage feature or key hydrologic feature, including
related landform features, planning, design and construction practices shall minimize negative impacts and disturbance on the features or their related functions, and where reasonable, maintain or improve connectivity.

The development of the North-South Collector Road satisfies the requirements of the relevant Greenbelt Plan policies. Section 4.2.1 - 1.b) is directly addressed. The proposed road will serve the growth and economic development expected in Sharon, and it will provide for appropriate connections within East Gwillimbury and help connect to surrounding communities in York Region and beyond.

3.3.2 Provincial Policy Statement

The 2005 Provincial Policy Statement contains policies that protect Ontario’s Natural Heritage. A number of Natural Heritage policies are applicable to the development of the North-South Collector Road. The following highlights selected Natural Heritage policies and describes how the development of the North-South Collector Road is consistent with these policies.

2.1.3 Development and site alteration shall not be permitted in:
   a) significant habitat of endangered species and threatened species;
   b) significant wetlands in Ecoregions 5E, 6E and 7E; and
   c) significant coastal wetlands.

The North-South Collector Road will not impact any of the above - with the exception of Butternut trees, which is addressed in Section 6.

2.1.4 Development and site alteration shall not be permitted in:
   a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
   b) significant woodlands south and east of the Canadian Shield;
   c) significant valleylands south and east of the Canadian Shield;
   d) significant wildlife habitat; and
   e) significant areas of natural and scientific interest
   unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

A significant woodland is located on the South Sharon property. The alignment of the North-South Collector Road has been designed to avoid the woodland.

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

The North-South Collector Road will require two watercrossings where there is known fish habitat – Sharon Creek and Tributary 6. Provincial requirements are met through permitting from the Ministry of Natural Resources, and federal requirements are met through permitting from Lake Simcoe Region Conservation Authority (LSRCA) on behalf of the Department of Fisheries and Oceans (DFO).
3.3.3 Places to Grow

The Places to Grow Plan contains policies which guide decisions on a range of issues such as infrastructure planning and land-use planning to ensure that stronger and more prosperous communities are built in the Greater Golden Horseshoe. Section 3 of Places to Grow contains policies for Infrastructure to Support Growth, including policies specific to transportation. The following policy is most directly related to the North-South Collector Road:

3.2.2 Transportation – General

1. The transportation system within the GGH will be planned and managed to –

   a) provide connectivity among transportation modes for moving people and for moving goods

The North-South Collector Road has been identified in the East Gwillimbury Transportation Master Plan as a key component of an integrated transportation system. Given the growth planned for Sharon, the planned North-South Collector Road is deemed necessary to provide connectivity and to move people and goods through the community.

3.3.4 Lake Simcoe Protection Plan

The Lake Simcoe Protection Plan addresses environmental protection of the Lake Simcoe watershed. The plan sets a new standard for environmental protection in the province and provides a roadmap to help restore and protect the health of Lake Simcoe by:

- Promoting immediate action to address threats to the ecosystem, such as excessive phosphorus in the lake, and
- Targeting new and emerging causes of stress in Lake Simcoe such as invasive species and climate change.

The plan is supported by a regulation that builds on and supports Ontario’s framework for promoting sustainable growth in communities in the Lake Simcoe watershed.

Sharon community, where the North-South Collector Road would be located, is lies within the Lake Simcoe watershed. The wet pond based storm water management strategy for Sharon West is well suited to address the objectives of the Lake Simcoe Protection Plan. All of the wet ponds will feature a forebay and main treatment cell configuration, similar to other recent SWM pond installations in the area. As documented in the TRCA’s SWAMP program 2002 report on a Pond-Wetland storm water management facility in Markham, the forebay-wetpond component is capable of removing 83% of total phosphorous and 76% of phosphate from its storm water source. This removal level was measured at the outlet of the wet pond, prior to polishing in the wetland component. In addition, a total of 48% of nitrogen was removed there. The similar conceptual configuration of the Sharon area ponds suggests that similar removal rates are achievable.
Lastly, all additional criteria outlined in section 3.3.3 and 3.3.4 of the MOE Stormwater Management Planning and Design Manual are accommodated in the SWM strategy.

3.4 Needs Assessment and Justification

The North-South Collector Road was presented and examined in the East Gwillimbury Transportation Master Plan. The following summarizes the needs assessment and justification as developed by the TMP.

**Purpose:** to improve access to Sharon and Queensville, as well as a new employment corridor along Highway 404.

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<th>Key Findings from the Transportation Master Plan, 2009</th>
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<tbody>
<tr>
<td><strong>Projected impact on future traffic</strong></td>
</tr>
<tr>
<td>Projected to experience high, but not excessive, traffic originating from both local developments and communities west of the Town’s borders; serves as a practicable north-south option to Second Concession Road and Leslie Street.</td>
</tr>
</tbody>
</table>

**Recommendation:** Consider for additional EA study (preliminary and final design)

**Justification:** The North-South Collector Road would provide direct access to the Sharon and Queensville communities and serve as a practical alternate north-south road to Leslie Street and Second Concession Road. Additionally, there is sufficient local traffic, population and employment growth projected in the next five years to warrant the southern portion of the proposed road (Phase 1 below), with additional growth projected in ten years to justify an extension (Phase 2 below).

**Proposed North-South Collector Road Phasing:**

**Phase 1 – 2011-2013:** complete the portion of the North-South Collector Road between Green Lane and Mount Albert Road to accommodate pending population and employment growth in Sharon.

**Phase 2 – 2014-2016:** complete the portion of the North-South Collector Road between Mount Albert Road and Doane Road to accommodate additional population and employment growth in Sharon and Queensville.

3.5 Proposed Residential and Employment Growth

Local growth rates were based on the approved Official Plan Amendment (OPA) population forecasts outlined in Table 1:
Table 3-1: Approved Official Plan Amendment Populations 2026

<table>
<thead>
<tr>
<th>Community</th>
<th>Residential Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queensville</td>
<td>30,000</td>
</tr>
<tr>
<td>Sharon</td>
<td>9,200</td>
</tr>
<tr>
<td>Totals</td>
<td>39,200</td>
</tr>
</tbody>
</table>

For growth beyond the OPA timeframe, it was assumed that Sharon and Queensville residential and employment populations would expand by another 25%. Hence, the population projection for 2031 was used to determine the transportation and road network requirements.

3.6 Opportunity Statement

The Municipal Class EA process requires a problem/opportunity statement that clearly identifies the problem or opportunity being addressed. As the North-South Collector Road was identified in the East Gwillimbury Transportation Master Plan, the Opportunity Statement for the TMP is presented below:

“This Master Plan will address the transportation servicing infrastructure needed to support future population and employment growth, as well as increased traffic congestion originating from areas within East Gwillimbury as well as outside of the Town’s boundaries”

In particular, the North-South Collector Road will provide direct access to the Sharon and Queensville communities and serve as an alternative to Leslie Street and Second Concession.

3.7 Project Description

Through the Class EA process, several potential routes for the North-South Collector Road were identified and examined. The evaluation took place using environmental, technical and economic criteria, which were provided to the public for comment at both Public Information Centres. The result of this project will identify the preferred routing of the North-South Collector Road in the Community of Sharon.
4.0 Existing Conditions

Natural environment features should be identified early in the EA process to determine significant features and potential impacts. Negative impacts to significant natural heritage features should be avoided where possible. Where they cannot be avoided, every effort should be made to mitigate adverse environmental impacts. This section identifies natural environmental features found in the study area.

4.1 Natural Environment

The Natural Environment findings are summarized below.

4.1.1 Landform and Soils

Land within and adjacent to the North-South Collector Road right-of-way is characterized by rolling hills, agricultural fields, forested areas and wetlands, extensive watercourses and associated brush areas. Land within Sharon West, to the west of Leslie Street, varies 43 metres in elevation. The potential location of the North-South Collector Road lies within the Schomberg Clay Plain (Chapman and Putnam, 1984). Soils in the vicinity of the ROW are typically Schomberg silt loam with adjacent areas of Percy fine sandy loam and Bondhead loam (Hoffman and Richards, 1955). Loam is a balanced mixture of sand, silt and clay with significant organic matter content. Schomberg silt loam is a brown lacustrine deposit consisting of alternating silt and clay layers. Rainfall captured by this soil type can infiltrate or runoff in equal proportions.

The northern part of the North-South Collector Road will travel across the East Holland River Subwatershed Catchment Area #8 while the southern part will travel across the East Holland River Subwatershed Catchment Area #6 (LSRCA, 2000).

4.1.2 Terrestrial

This section summarizes the results of field work undertaken by MMM Group Limited during the assessment of Sharon West (MMM, 2008) and South Sharon (the South Sharon Developments Inc. portion).

4.1.2.1 Vegetation Overview

The lands within the vicinity of the North-South Collector Road lie within the Huron-Ontario Section of the Great Lakes St. Lawrence Forest Region (Rowe, 1972). This Region is characterized by a mix of deciduous and coniferous tree species which include sugar maple (Acer saccharum ssp. saccharum), American beech (Fagus grandifolia), basswood (Tilia americana), eastern white cedar (Thuja occidentalis) and eastern hemlock (Tsuga canadensis).

The North-South Collector Road would traverse a landscape currently dominated by agricultural land use: cultivated fields and lands associated with farmsteads and residential buildings occupy approximately 71% of Sharon West, west of Leslie Street. The natural vegetation within Sharon West is composed of forests,
wetlands, hedgerows, and old field meadows. Coniferous, mixed and deciduous forests have established on
the rolling uplands, valley slopes and stream margins; coniferous and deciduous swamps and thicket
swamps have established on the floodplain of Sharon Creek; meadow marshes and shallow marshes have
established on hillside seepage slopes and on the margins of Sharon Creek and its tributaries; and
submerged and floating shallow water vegetation has established in the watercourses and ponds. Old field
meadows, thickets and regenerating woodlands have colonized former farm fields and building sites. Treed
and shrub hedgerows border most of the farm fields and the former railway line.

Sharon West
Forty-three vegetation types (Lee et. al 1998) were observed within the Sharon West lands during the
ecological land classification (ELC) of the study area. The observed vegetation types are typically common
in the Greater Toronto Area Region with the exception of Fresh-Moist Walnut Lowland Deciduous Forest
(FOD7-4) which is both regionally rare in York Region and provincially rare (S2S3) (Bakowsky, 1997).

Three-hundred-and-sixty-eight species of vascular plants were recorded within Sharon West. These include
eighteen species of conservation interest found west of Leslie Street (MMM, 2008). Two of these species of
conservation interest occur within or adjacent to the North-South Collector ROW and will be impacted by
construction of the proposed road. The two species of conservation interest are the Butternut (Juglans
cinerea) and Virginia stickseed (Hackelia virginiana). These occur at the crossing of Sharon Creek.

South Sharon – Sharon Farm Co-Tenancy
The natural vegetation on the Sharon Farm Co-Tenancy property is composed of coniferous forest, mixed
forest, old field meadows, cultural thickets, cultural woodlands (hedgerows), coniferous swamp, deciduous
swamp, thicket swamp, meadow marsh and shallow marsh. Fifteen ELC vegetation types were identified all
of which are common in the Greater Toronto Area Region (Bakowsky, 1997).

Species of conservation interest include the provincially endangered Butternut and six regionally rare
species (Varga et al. 2000). Nineteen Butternuts are scattered along the hedgerow at the northern boundary
of the property and one Butternut occurs along the hedgerow to the south. Regionally rare species are
found on the western side of the property where natural and cultural vegetation occurs.

South Sharon - South Sharon Developments Inc.
The natural vegetation on the South Sharon Developments Inc. property is composed of coniferous forest,
deciduous forest, old field meadows, cultural thickets, cultural woodlands (hedgerows), coniferous swamp,
deciduous swamp, meadow marsh and shallow marsh. Eleven ELC vegetation types were identified all of
which are common in the Greater Toronto Area (Bakowsky, 1997).

The provincially endangered Butternut is present on the property, as are nine species considered rare in
York Region. The Butternut is restricted to the vicinity of a farmhouse/residence on the eastern portion of
the property. Regionally rare species are found in natural and cultural vegetation on the western portion of
the property, in a patch of retained cultural meadow and cultural woodland and adjacent to Tributaries A and
B in the central portion of the property, and on the eastern portion of the property in the vicinity of farmhouses/residences. Regionally rare plants on the eastern portion of the property are black walnuts (Juglans nigra) and their location adjacent to farmhouses/residences suggests that they were planted.

### 4.1.2.2 Wildlife

#### Amphibians and Reptiles

Small numbers of six anuran (frogs and toads) and 2 reptile species were observed within Sharon West, west of Leslie Street. Green Frog (Rana clamitans), Northern Leopard Frog (Rana pipiens) and American Toad (Bufo americanus) were recorded in small numbers along Sharon Creek and small numbers of American Toad were recorded in the vicinity of Tributary 6. One species of anuran, the Gray treefrog (Hyla versicolor) was observed within the Sharon Farm Co-Tenancy property. Gray treefrog was detected in the portion of the Sharon Farm Co-Tenancy property adjacent to the East Holland River where tree and shrub cover is found and a small amount of suitable aquatic breeding habitat may be located. Anurans were not observed on the South Sharon Developments Inc. properties but field investigations suggest a small amount of habitat may be present in the western portion where standing water may be seasonally present during the spring and adjacent shrub and tree cover may provide terrestrial habitat. Reptiles were not observed in South Sharon, and salamanders were not observed in Sharon West, or in South Sharon.

Based on field surveys, Sharon Creek is considered to provide moderate to poor quality anuran habitat and Tributary 6 to provide poor quality habitat in the vicinity of the proposed crossings by the North-South Collector Road. Other than its western portion, South Sharon does not appear to provide anuran habitat. The western portions of these properties may provide limited poor quality habitat. No salamanders, turtles or snakes were observed during the field surveys in the vicinity of the North-South Collector Road ROW.

#### Dragonflies and Damselflies

Eight species of damselflies and ten species of dragonflies were observed within the Sharon West lands west of Leslie Street. Observed individuals were typically associated with the main channel of Sharon Creek and two ponds. Damselflies and dragonflies were sparse to absent along Tributary 6. All species are very common (S5) or common (S4) in Ontario (NHIC, 2006) while their official status in York Region has not been assessed by the LSRCA or the MNR (MMM, 2008). Observations of damselflies and dragonflies were not made within South Sharon but based on their habitat requirements, damselflies and dragonflies would be expected to be limited to the vicinity of Sharon Creek on the eastern edge of the properties and Tributary A in the central southern part of the South Sharon Developments Inc. property.

#### Breeding Birds

Fifty-eight species of breeding birds were recorded within Sharon West and South Sharon. Observed species included those found within forests, thickets, grassland and wetlands. The majority of species are tolerant of small habitat fragments while 9 species are considered area sensitive species (Freemark and Collins, 1989, USGS, 2006). Examples of species found in Sharon West and South Sharon Developments
Inc. lands and expected in the vicinity of the ROW are indigo bunting (Passerina cyanea), mourning dove (Zenaida macroura), downy woodpecker (Picoides pubescens), eastern phoebe (Sayornis phoebe), American robin (Turdus migratorius) and song sparrow (Melospiza melodia). No provincial Species at Risk (MNR, 2008) or provincially rare (S3, S2 or S1) species (NHIC, 2006) were found.

Mammals
Fifteen species of mammals were recorded as incidental observations in Sharon West. Examples included Eastern Cottontail (Sylvilagus floridanus), Woodchuck (Marmota monax), Red Fox (Vulpes vulpes) and White-tailed Deer (Odocoileus virginianus). Mammal species in South Sharon were not recorded, but could be expected to be similar to those found in Sharon West. Many of these species are associated with urban environments and some such as white-tailed deer and red fox are typically more associated with rural environments. White-tailed deer was not recognized to have a winter concentration in the forest area of Sharon although there is potential based on some of the conifer cover on and adjacent to the lands.

Wildlife Linkage
The natural features that provide a wildlife linkage function west of Leslie Street are Sharon Creek, its tributaries, and associated wetlands and riparian forest. These features presently provide a continuous pathway of natural vegetation and watercourses for the movement of wildlife within and across the project area. The natural features within Sharon West are linked to the surrounding region by Sharon Creek to the East Holland River.

There are no significant animal movement corridors on-site; field edges and the waterway convey small animals between local points (deer mouse, cottontail, garter snake). The riparian corridor/wetland feature serves to link the non-urban landscape (on and off-site) to the residential area to the south and may convey a limited number of urban tolerant species between these areas; i.e. raccoon, striped skunk. Although wildlife moving across the landscape would take advantage of the drainage features and fencerows, some of the wildlife movement likely is broadcast across the landscape.

4.1.2.3 Potential Constraints to Development

York Region Significant Woodlands
The York Region Significant Woodlands Study (North-South Environmental 2005) was approved by York Region Council on 26 January 2006. The Region is preparing to initiate an official plan amendment to include these lands in the York Region Official Plan. In the interim, York Region and the Lake Simcoe Region Conservation Authority have asked that proponents of development consider those lands currently identified as “Significant Woodlands” in the York Region Significant Woodlands Study report. Significant Woodlands in the vicinity of the North-South Collector Road are shown in Figure 4-1 (Figure 2.4.9 of the MESP) between Mount Albert Road and Green Lane. Significant Woodlands occur in Sharon West and South Sharon.
Figure 4-1: Biological Constraints to Development
The significant woodlands were identified by York Region to implement Section 2.1.4 of the Provincial Policy Statement. The PPS states that development and site alteration shall not be permitted in significant woodlands south and east of the Canadian Shield unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological function.

The significant woodlands in York Region were identified in relation to six criteria (North-South Environmental, 2005). Three of the criteria apply to woodlands within Sharon West:

i) Any woodland that supports a species designated by COSEWIC or COSSARO as Threatened, Endangered or of Special Concern. Three woodlands within Sharon West provide habitat for the Butternut tree which has been designated “endangered” in Ontario by COSSARO.

ii) Any woodland that is within 30 metres of a watercourse, surface water feature or evaluated wetland. Each of the designated woodlands within Sharon West satisfies this criterion.

iii) Any woodland over 2 ha that is within 100 metres of another significant feature or that occurs within the Regional Greenlands System.

The Town of East Gwillimbury has advised that a 10 metre setback from the dripline of trees at the edge of “significant woodlands” will be required to protect the surface roots of trees from development (e.g. soil removal, burial, trenching, grade changes influencing surface water runoff). The drip line of the forest edge of the significant woodland units was staked in June 2008 and subsequently surveyed. The proposed road stays well away from the dripline of the woodlands as much as possible. It does encroach into the nearest forest edge of the significant woodlands. The majority of Sharon Creek valleyland contains significant woodlands. The alignment selected for the North-South Collector Road crosses the woodlands at a narrow point, minimizing the impact to surrounding woodlands.

Town of East Gwillimbury Natural Heritage System

The Town is in the process of updating its Official Plan with respect to natural heritage. Features within the Natural Heritage System are separated in System A, B and C features. All three feature types are found within Sharon West and South Sharon. The draft Natural Heritage System report (Beacon 2008) recommends that no development or land use change take place on lands designated “A” and recommends the retention of System B lands. Replacement may be an acceptable mitigation for System B lands provided that there is no net loss of area or function. System C lands are not necessarily a development constraint, but replacement is encouraged.

The northern part of North-South Collector Road is proposed to cross Tributary 6 and Sharon Creek. Tributary 6 is classified as a System B feature, while Sharon Creek is subdivided into System A, B and C features in the vicinity of the crossing point. The North-South Collector Road is not proposed to cross Tributary 8 but land which it is proposed to cross adjacent to Tributary 8 is identified as a System A feature. The reason for this identification is unclear; the most plausible reason is identification as a Significant Valleyland. System B land also lies in the vicinity of Tributary 8. Tributary A on the South Sharon Developments Inc. property is identified as a System B feature.
Wetlands
Wetlands are subject to the policies of Ontario Regulation 179/06. For development proposals in wetlands that are not of Provincial Significance, and are greater than 0.5 ha in size, an EIS shall be prepared to the satisfaction of staff that there will be no negative impact on the wetland (Section 11.2). For development proposals in wetlands that are not of Provincial Significance, and are less than 0.5 ha in size, an EIS may be required to be prepared at the discretion of the Authority (Section 11.3). For development proposals within 30 metres of wetlands that are not of Provincial Significance, the Authority may, at the discretion of the Director, Watershed Management, require that an EIS be prepared to the satisfaction of the Authority (Section 11.4).

To implement this policy, the Authority has established a regulated zone within 30 metres of all wetlands that are not of Provincial Significance. Development within this zone may be permitted at the discretion of the Authority.

The width of the required setback from wetland boundaries (up to 30 metres) are to be established with reference to an EIS and are subject to approval from the LSRCA.

Wetlands occur within Sharon West along Sharon Creek, its tributaries including Tributary 6, Tributary 8 which runs directly to the East Holland River and to the east of the former rail line. Wetlands occur within the Sharon Farm Co-Tenancy property to the east of the former rail line. On the South Sharon Developments Inc. property, wetlands occur to the east of the former rail line and along Tributary A. These wetland locations and setbacks are shown in Figure 4-2 (Figure 2.4.6 of the MESP).
Butternut

The conservation status of Butternut in Ontario is “Endangered” (Endangered Species Act, 2007). The Butternut is protected by provisions of the Provincial Policy Statement (Section 2.1.3) and by development protocols of the Ontario Ministry of Natural Resources. Butternut is presently experiencing a range-wide decline owing to mortality from Butternut Canker.

The Ontario Ministry of Natural Resources, Aurora District Office, has provided informal comments on OMNR draft policies to protect Butternut trees on lands proposed for development (personal communication, Bill Draper with Bohdan Kowalyk, District Forester, Aurora District Office, 17th March 2006). The draft policies take into account the disease status of the tree. Three conditions are recognized: trees that have “archive potential”; trees that are “retainable”, and trees that are “not retainable”.

“Archive Potential”: Trees that have “archive potential” are trees that are >25 cm dbh and have no visible signs of canker or, if canker is present, then the trees have outgrown it. The gene pool of these healthy, and potentially disease-resistant, trees may be preserved (“archived”) by grafting live twigs from the trees (scions) onto the rootstock of other trees. The young saplings are subsequently transplanted to suitable habitat where they may grow to maturity.

“Retainable”: Trees that are “retainable” are trees that have >70% live crown and <20% of the bole and root flares affected by canker; or, trees that have >50% live crown and 0% canker on the bole and root flares. These trees are deemed to be sufficiently healthy to warrant retention in the landscape.

“Not-Retainable”: Trees that are “not retainable” are trees that have <70% live crown and/or >20% of the bole and root flares affected by canker. These trees are deemed to be too diseased to warrant retention on the landscape and may be cut down.

The following draft policies are expected to apply to the Butternut trees that have been observed within Sharon West lands:

- **Trees that are deemed to be “retainable” or to have “archive potential”** may be removed to facilitate the installation of public or quasi-public services such as roads. The trees may be transplanted to suitable habitat elsewhere within Sharon West provided that the trees are small enough to be removed by a commercial tree-spade and that there is a reasonable expectation that the transplant will be successful. Trees that are removed to facilitate the installation of public or quasi-public services shall be replaced according to a planting ratio to be determined by the Ontario Ministry of Natural Resources (MNR).

- **Trees that are deemed to be “not retainable”** may be removed to facilitate development or for any other purpose.

Trees that may be affected must be assessed by a designated Butternut Health Assessor. If the Butternut Health Assessor is not from MNR, the status must be reported to MNR and MNR must be enabled to examine the Butternuts. If trees are determined to be in “retainable” condition, their removal would require a
permit from MNR. Permits for general development purposes, such as roads, need to show overall benefit to the species, and go through a public posting on the Environmental Registry.
Figure 43: Rare and Endangered Species
Butternut trees are found on property belonging to the Sharon West Developers Group and the Sharon Farm Co-Tenancy Figure 4-3 (Figure 2.4.2 of the MESP). Trees that might have been impacted or potentially impacted by the North-South Collector Road occur at the Sharon Creek crossing, within a hedgerow along the boundary between the Sharon West Developers Group and the Sharon Farm Co-Tenancy property, and a hedgerow between the Sharon Farm Co-Tenancy property and the South Sharon Developments Inc. properties.

A Butternut health assessment was carried out on June 16, 2009 by a certified Butternut Health Assessor for Butternut specimens in proximity to the North-South Collector Road crossing of Sharon Creek (Kuntz Forestry Consulting, 2009). This was followed by a site review with the MNR (Bohdan Kowalyk, MNR Aurora District Office). Based on these assessments, it was determined that there is one retainable specimen that will be left in place and its distance from the North-South Collector Road was deemed by the MNR to not be an issue. A further specimen (B39) identified by MMM during the MESP study within the North-South Collector Road alignment at the Sharon Creek crossing was assessed to be non-retainable.

4.1.3 Fish and Aquatic Habitat

The aquatic resources in the vicinity of the North-South Collector Road are watercourses within the East Holland River subwatershed. The watercourses include the main branch of Sharon Creek as well as seven of its tributaries (unnamed and referred to as Tributaries 1 through 7) and a single unnamed tributary discharging directly in to the East Holland River (unnamed and referred to as Tributary 8) (MMM, 2008).

Only the main branch of Sharon Creek and Tributary 6 will be crossed and potentially impacted by the North-South Collector Road. Sharon Creek and Tributary 6 flow through a combination of agricultural, urban and natural areas within Sharon West. A bridge structure is proposed for the Sharon Creek crossing and a culvert at Tributary 6. This section summarizes the results of field work undertaken in the main branch of Sharon Creek and Tributary 6 to the west of Leslie Street.

4.1.3.1 Fish Community

Fish community investigations were conducted at eight locations along the main branch of Sharon Creek and six locations along Tributary 6 within Sharon West and the immediate vicinity. Historical fish community data was provided for two locations including a site at David Willson Trail and at Leslie Street by the Ministry of Natural Resources (MNR). Fish community investigations resulted in the capture of a combination of coolwater and warmwater fish species.

Main Branch of Sharon Creek

The main branch of Sharon Creek has been classified as a coolwater watercourse. Fish species captured during field investigations conducted in the main branch of Sharon Creek in the summer of 2005 consist of a combination of coolwater species; brook stickleback (Culaea inconstans), creek chub (Semotilus atromaculatus), western blacknose dace (Rhinichthys obtusus), white sucker (Catostomus commersonii), young-of-the-year (YOY) minnows (Cyprinidae sp.), and warmwater species; bluntnose minnow
(Pimephales notatus) and fathead minnow (Pimephales promelas). These fish species are common to small creeks and rivers throughout Southern Ontario and they are tolerant to a wide variety of habitats including those that have been impacted by human activities (Becker, 1983; Coker et al, 2001; Eakins, 2005; Scott and Crossman, 1998).

An assessment of water quality using the Index of Biotic Integrity (Steedman, 1988) can be conducted using fish community data that will place the watercourse into one of four categories; very good, good, fair and poor. The results of the fish community assessment in the main branch of Sharon Creek indicates that water quality ranges from “poor” to “good”. Sampling stations that indicate “poor” water quality are generally located in the upstream and downstream reaches. Reaches with “good” water quality are located in the middle reaches of the creek with the community exhibiting greater diversity and abundance of fish species than the upstream reaches. The dominance of disturbance tolerant fish species observed in the main branch of Sharon Creek can generally be attributed to the surrounding land use that has resulted in the removal of riparian zone vegetation, narrowing of the setback width and the likely introduction of pollutants (i.e. fertilizer).

**Tributary 6**

Fish community sampling in the spring of 2006 resulted in the capture of fish in Tributary 6. Fish species captured consist of a combination of coolwater species; brook stickleback, creek chub and northern redbelly dace (Phoxinus eos), and warmwater species; bluntnose minnow, brown bullhead (Ameiurus nebulosus) and fathead minnow. With the exception of northern redbelly dace and brown bullhead that were captured in the online pond and immediately downstream of the pond outlet, the remaining fish species captured in Tributary 6 are common to small creeks and rivers in Southern Ontario and are tolerant to impacts due to human activities (Becker, 1983; Coker et al, 2001; Eakins, 2005; Scott and Crossman, 1998). Tributary 6 functions as intermittent warmwater fish habitat as indicated by the fish community, water temperature data and flow regimes.

**4.1.3.2 Benthic Macroinvertebrate**

Benthic macroinvertebrates are small, aquatic organisms that exist in the substrate of a watercourse or water body and are excellent indicators of environmental conditions including habitat diversity and water quality (i.e. organic pollutants). An assessment of water quality can be conducted using benthic macroinvertebrate communities that will place the watercourse into one of seven categories; excellent, very good, good, fair, fairly poor, poor and very poor.

**Main Branch of Sharon Creek**

The results of the benthic macroinvertebrate community investigations are consistent with the results of the fish community assessment indicating the main branch of Sharon Creek has water quality that ranges from poor to good. A high percentage of woody vegetation along with coarse substrate materials (cobble, gravel) in the middle reaches provide suitable conditions for sensitive species that indicate better water quality. A
low percentage of woody vegetation, along with finer substrate materials (sand, silt) in the upstream and
downstream reaches, provide conditions that are not preferred by species sensitive to organic pollutants
(i.e. elevated nutrient levels) (Mandaville, 2002; Moring, 2001; Ourso, 2001; Rosenberg, 2001; Voshell,
2002). Although sensitive species are present, they do not represent a significant percentage of the
population as the benthic macroinvertebrate communities are dominated by organic pollution tolerant
species. The low percentage of organic pollution sensitive species and dominance of tolerant species
indicates that impacts to Sharon Creek have resulted in reduced water quality with the areas of better water
quality located in the middle reaches of the watercourse in Sharon West.

Tributary 6
Results of the benthic macroinvertebrate community assessment in Tributary 6 indicate that conditions are
better than the main branch of Sharon Creek with the results of the assessment indicating fair to very good
water quality. The sampled tributary generally has a low percentage of woody vegetation and a substrate
that is dominated by fine materials (sand, silt). Although the habitat conditions are not preferred by organic
pollution sensitive species, their populations are generally higher than in the main branch of Sharon Creek.
The presence of sensitive species in areas where the tributary is exposed to direct sunlight may be
attributed to potential groundwater inputs (seasonal and/or permanent) that maintain cooler water
temperatures and good quality of water to support pollution sensitive species (Voshell, 2002). Although
sensitive species represent a significant percentage of the community, the communities are dominated by
pollution tolerant species that is likely due to a lack of coarse substrate materials and poor water quality.

4.1.3.3 Aquatic Habitat

Aquatic habitat was assessed in the main branch of Sharon Creek and Tributary 6 to document general
habitat attributes including channel width and depth, substrate, in-water cover habitat and riparian canopy
cover. Detailed habitat mapping occurred at fish community sampling locations while Tributary 6 generally
consists of a combination of braided and defined flows through meadow marsh habitat.

Main Branch of Sharon Creek
Sharon Creek provides diverse morphological habitat and substrate with a riparian zone that varies from
open livestock fields to dense forest cover. In the vicinity of the North-South Collector Road, aquatic habitat
generally includes pools, runs and riffles with substrate consisting of coarse materials including gravel, sand
and cobble. The riparian zone in these reaches has a high percentage of woody riparian vegetation that
provides moderate to dense shade to the creek. Banks appear to be stable as there was little evidence of
erosion in these reaches. LSRCA has classified the main branch of Sharon Creek as a coolwater
watercourse.

Tributary 6
The aquatic habitat in Tributary 6 in the vicinity of the North-South Collector Road consists of undefined
intermittent flow from Mount Albert Road to the former railroad corridor crossing located to the south of
Mount Albert Sideroad. Downstream of this crossing the channel becomes defined with runs and pools and a substrate consisting of fine materials (i.e. silt) and sand. As the tributary approaches its confluence with Sharon Creek, the substrate becomes coarser and includes gravel and cobble. Tributary 6 is intermittent but does provide direct seasonal fish habitat for fish originating from Sharon Creek.

4.1.3.4 Aquatic Constraints to Development

Channel Protection and Setback Requirements
The LSRCA indicated in an October 6, 2005 correspondence and a January 23, 2006 meeting that a 30 m wide undisturbed setback from the watercourse banks is to be provided for Sharon Creek. The width of the setback is a result of the LSRCA classification of the main branch of Sharon Creek as cool water and the historic presence of redside dace. Tributary 6 has been classified as intermittent warmwater fish habitat and as a result an undisturbed 15 m setback from the banks of the channel will be provided. The classification as warmwater fish habitat is based on an assessment of the tributaries characteristics (fish community, aquatic habitat, flow regime, water temperature). Setbacks along Sharon Creek and Tributary 6 are shown in Figure 5-1 (Figure 2.4.9 of the MESP).

Species at Risk
Redside dace was last captured in 1994 immediately downstream of the David Willson Trail crossing of Sharon Creek in the MESP Lands. Redside dace is considered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) to be of “special concern” and the MNR considers it to be “threatened” in Ontario. Mr. Jeff Andersen, Senior Fisheries Biologist, LSRCA, indicated that reaches of Sharon Creek beyond the limits of Sharon West are no longer suitable redside dace habitat and that they are likely severely limited or extirpated from the watershed (Andersen, 2003).

4.2 Socio-Economic Environment

The study area is designated as a Community Area within the Settlement Area as identified by the Greenbelt Plan. It is also part of an existing Secondary Plan area, designated for urbanization. Much of the area is designated as Low Density Residential.

4.3 Archaeological Assessment

A Stage 1 site assessment was carried out in conjunction with the work completed for the Sharon Master Environmental and Servicing Plan (MESP), as well as a Stage 3 Archaeological Resource Assessment of the Temple Farm Site in particular. The complete reports for both the Stage 1 and Stage 3 Assessments are included in Appendix C.

Archeoworks Inc. was retained by MMM Group to conduct a Stage 1-2 archaeological assessment of the MESP lands. During the archaeological assessment of this study area, one historic Euro-Canadian scatter
and two isolated Aboriginal findspots were discovered. Additionally, the previously registered 19th century historic sites were relocated. Further investigations may be required for one of the identified sites.

Recommendations for a Stage 3 Archaeological Resource Assessment of the Temple Farm site were originally made in an interim report submitted to MMM Group in 2006 shortly after it was discovered that this site, originally encountered in 1989 while undertaking a Master Plan study of archaeological resources for the Town of East Gwillimbury and falling within our study area limits, was recommended for further work.

During the Stage 3 assessment of the Temple Farm site, only nine historic Euro-Canadian artifacts were collected. Based on the low artifact yields encountered during both the 1989 and 2006 Stage 2 pedestrian surveys, and the Stage 3 pedestrian and test-unit investigations, this site most likely represents an isolated, one-time dumping event. As the investigations did not offer any evidence of an actual site of occupation no cultural features were encountered and the artifact yields were extremely low, it can be concluded that this site does not represent a significant historical discovery. Further insight into the history of the village of Sharon by way of additional archaeological investigations is unlikely. It is recommended that the Temple Farm site be cleared of further archaeological concern.
5.0 Identification and Evaluation of Alternatives

This study is examining all of Phase One of the proposed North-South Collector Road - from Mount Albert Road to Green Lane. For the purpose of this study; Phase 1 of the proposed North-South Collector Road was further divided into two sub sections. The first is the northern portion, in the Sharon West community, where the road alignment had previously been identified. The second sub section is that in South Sharon. Four alternative road alignments were identified and evaluated for the southern sub section of the road. For each of the four alternatives, the subsection of the road in Sharon West is the same.

This Environmental Assessment confirmed the alignment as refined in the MESP and developed and evaluated alignment options for the portion of the road extending south from the Sharon West community to Green Lane.

The four alternatives for South Sharon as well as the alignment for the northern portion are displayed on Figure 5-1 below.
Figure 5-1: Alignment Alternatives
5.1 Options for the North-South Collector Road

The following options for the North-South Collector Road were evaluated, including the option to not build the collector, and options for alignments within South Sharon.

5.1.1 Do Not Build North-South Collector

As part of the EA process, the option to ‘do nothing’ and not build the North-South Collector Road was considered.

5.1.2 Alignment Alternatives in Sharon West

The preferred alignment for the northern portion of the road was determined during the MESP process. Multiple alignment options within the Sharon West community were not examined as part of this EA study as the Sharon West Community Secondary Plan has provided a conceptual alignment of a two lane collector road running from Mount Albert Road to the southern boundary of the community. The Sharon West Community MESP has refined the location of the North-South Collector Road to minimize impacts to the Sharon Creek, Tributary 6 and other environmental features while at the same time achieving acceptable driver safety and road curvature both within and beyond the MESP lands (MMM, 2008). The Lake Simcoe Region Conservation Authority approved the MESP June 11, 2009. The Town approved the MESP in March, 2010.

5.1.3 Alignment Alternatives in South Sharon

For the portion of the North-South Collector Road in South Sharon, four routing alternatives were considered (see Figure 5-2).

To connect with the proposed alignment of the North-South Collector Road in Sharon West and travel southward to connect with Green Lane, the southward extension will largely traverse cultivated areas and avoid significant environmental features or functions.
Figure 5-2: Alignment Alternatives in South Sharon
5.2 Screening of Options

The ‘do nothing’ option as well as the four road alignment alternatives were considered in a screening of options. The screening of the options is presented in Table 5-1 and discussed below.

Table 5-1: Pre-Screening of Options

<table>
<thead>
<tr>
<th>ALTERNATIVE SOLUTION</th>
<th>FACTORS INFLUENCING EVALUATION</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do not construct the proposed North-South Collector Road</td>
<td>Will not allow approved growth to proceed, and is inconsistent with the Official Plan, Places to Grow, and the Town of East Gwillimbury’s Transportation Master Plan.</td>
<td>Not Recommended</td>
</tr>
<tr>
<td>2. Construct Alignment Alternative #1</td>
<td>Proceeds through an Environmental Protection Area.</td>
<td>Not Recommended</td>
</tr>
<tr>
<td>3. Construct Alignment Alternative #2</td>
<td></td>
<td>Recommend for further evaluation</td>
</tr>
<tr>
<td>4. Construct Alignment Alternative #3</td>
<td>Satisfies the requirements of the Official Plan and Places to Grow, does not proceed through an Environmental Protection Area, and balances transportation and land use objectives.</td>
<td>Recommend for further evaluation</td>
</tr>
<tr>
<td>5. Construct Alignment Alternative #4</td>
<td></td>
<td>Recommend for further evaluation</td>
</tr>
</tbody>
</table>

Neither the option to not construct the North-South Collector Road, nor Alternative Alignment #1 is recommended for further evaluation beyond the screening. The ‘do nothing’ or ‘status quo’ alternative is not an adequate solution to the problem/opportunity statement. This will not allow approved development to proceed and as such, will not allow East Gwillimbury or York Region to comply with the goals and objectives of their respective Official Plans, nor will it satisfy the demands of the Places to Grow Act (2005). Alternative Alignment #1 proceeds through an Environmental Protection Area, and is therefore not a candidate route for the North-South Collector Road.

Alignment alternatives #2, 3 and 4 are recommended for further evaluation.
5.3 Development of Evaluation Criteria

The proposed road alignment alternatives were evaluated based on six socio-economic and environmental criteria, as follows:

- Technical: the road alignment alternatives were assessed based on how well they’re projected to operate;
- Economic: the road alignment alternatives were assessed based on projected capital and operating and maintenance costs;
- Natural environment: the road alignment alternatives were assessed based on their potential impacts on wetlands, water bodies, woodlands, ANSIs and significant habitat;
- Social environment: the road alignment alternatives were evaluated on their potential impacts to existing residences, businesses and/or community, institutional and recreational uses;
- Cultural environment: the road alignment alternatives were evaluated based on their potential impacts on archaeology and built heritage features; and
- Community planning: the road alignment alternatives were evaluated based on their level of conformity with local, regional and provincial plans and policies.

The point system developed for the socio-economic and environmental analysis includes the following:

- 4 points (very good) were assigned to alignments with minimal or no negative impacts;
- 3 points (good) were assigned to alignments with some negative impacts that can be mitigated;
- 2 points (neutral) were assigned to alignments with several impacts that can be mitigated;
- 1 point (poor) was assigned to alignments with some impacts that cannot be mitigated; and
- 0 points (very poor) were assigned to alignments with several negative impacts that cannot be mitigated.
5.4 Evaluation and Assessment of Alternatives

A number of criteria were used to evaluate alignment alternatives #2, 3 and 4. The results of the evaluation are detailed below:

Table 5-2: Evaluation of Alternatives

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Roadway Geometry</td>
<td>Designed with radii and tangents that are at minimum design values. Intersection with proposed East-West Collector Road may be skewed.</td>
<td>Designed with radii and tangents that are better than minimum design values. Can intersect with proposed East-West Collector Road within acceptable range.</td>
<td>Provides excellent horizontal geometry. Would result in a skewed connection with East-West Collector Road, creating an unacceptably skewed East-West Collector Road alignment.</td>
</tr>
<tr>
<td>Technical</td>
<td>Score: 2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operation and maintenance requirements associated with the alternative</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
</tr>
<tr>
<td></td>
<td>Score: 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Approval requirements</td>
<td>No additional environmental permits required.</td>
<td>No additional environmental permits required.</td>
<td>No additional environmental permits required.</td>
</tr>
<tr>
<td></td>
<td>Score: 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Economic</td>
<td>Capital costs</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
</tr>
<tr>
<td></td>
<td>Score: 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Operating and maintenance costs</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
</tr>
<tr>
<td></td>
<td>Score: 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Natural Environment</td>
<td>Economic Total Score</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Effects on groundwater</td>
<td>Low-Moderate</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Score: 2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Effects on surface water, aquatic habitat and biota</td>
<td>Minimal</td>
<td>Minimal</td>
<td>Minimal</td>
</tr>
<tr>
<td></td>
<td>Score: 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Effects on the terrestrial environment and biota</td>
<td>Minimal</td>
<td>Minimal</td>
<td>Minimal</td>
</tr>
</tbody>
</table>
## Natural Environment Total Score

<table>
<thead>
<tr>
<th>Description</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disruption of existing residences, businesses and/or community, institutional and recreational uses</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Disruption to current agricultural activities. Equestrian operation may be impacted</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Disruption to current agricultural activities. Equestrian operation may be impacted</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

## Social Environment Total Score

<table>
<thead>
<tr>
<th>Description</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects on traffic operations</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Minimal; would result in additional intersection at Green Lane; will conform with design standards, and improve traffic flow out of Sharon</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Minimal; would result in additional intersection at Green Lane; will conform with design standards, and improve traffic flow out of Sharon</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

## Cultural Environment Total Score

<table>
<thead>
<tr>
<th>Description</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects to archaeological resources</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Minimal for Sharon Village</td>
<td>10</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Minimal for Sharon Village</td>
<td>10</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Minimal for Sharon Village</td>
<td>10</td>
<td>10</td>
<td>8</td>
</tr>
</tbody>
</table>

## Community Planning Total Score

<table>
<thead>
<tr>
<th>Description</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conformity with the Places to Grow, ORMCP and Greenbelt Plan</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Conformity with the Places to Grow, ORMCP and Greenbelt Plan</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Conformity with the Places to Grow, ORMCP and Greenbelt Plan</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

## TOTAL SCORE

| Score | 45 | 46 | 42 |
5.5 Recommended Alternative

Only Alternatives 2, 3 and 4 were considered beyond the screening of alternatives, and scored in the evaluation criteria matrix. The final scores for Alternatives 2, 3 and 4 were viewed in conjunction with overall environmental, land use and transportation considerations. All factors were taken into account in selecting the recommended alternative.

The evaluation matrix reveals close scoring between Alternatives 2, 3 and 4. In fact, all three alternatives score the same on several of the criteria, and only four points differentiate the first and third ranking scores. Key features of each alternative were identified to assist in determining the recommended alternative.

Alignment Alternative #2
- Operates with radii that are minimal design standard

Alignment Alternative #3
- Operates with radii better than minimal design standard
- Best potential to meet the proposed East-West Collector Road at a 90 degree angle
- Further from Environmental Protection Area than Alternative #2

Alignment Alternative #4
- Provides excellent horizontal geometry
- May be impacted more by groundwater issues than Alternatives 2 and 3

Based on its advantages over the other two alternatives, Alignment Alternative 3 has been selected as the recommended alternative. This alternative provides a strong balance between environmental, transportation and land use objectives. It meets all transportation standards, does not present immitigable environmental constraints and supports land use policies and plans for the study area.

5.6 Intersection with East-West Collector North of Green Lane

The proposed future East-West Collector Road will be subject to a separate Class Environmental Assessment. For the purposes of this EA, a potential intersection between the North-South and East-West Collector Roads has been identified. The exact location of the proposed intersection will be determined through a separate EA. Figure 5-3 depicts North-South Collector Road Alternative 3 with a potential option for the proposed East-West Collector Road, displaying a possible intersection of the two roads.
Figure 5-3: Potential Intersection with Proposed Future East-West Collector Road
6.0 Analysis of the Preferred Solution

This section provides an analysis of the preferred road alignment – Alignment Alternative #3, including an analysis of the preferred design (Section 6.1) and assessment and mitigation of the preferred design (Section 6.2).

6.1 Preferred Design

As noted in the Geometric Design Guide for Canadian Roads published by the Transportation Association of Canada, a well designed road will provide an acceptable balance between level of service, cost, environmental impact, and level of safety. The acceptable balance must reflect project specific issues and local area policy. The preferred design for the North-South Collector Road has strived to achieve this balance in terms of the preliminary horizontal and vertical alignments as well as the proposed cross-section configuration.

6.1.1 Road Characteristics

Sharon Village Urban Design Guidelines were produced by the Town of East Gwillimbury in 2007. The Design Guidelines address the Sharon West portion of the North-South Collector Road study area, and include specific characteristics of the North-South Collector Road. It is proposed that the characteristics identified will be carried through the length of the road.

As stated in the Sharon Village Urban Design Guidelines, the North-South Collector Road will be a key link in the local road network to serve the local community. The road will have two 3.5 metre wide travel lanes plus 1.5 metre wide on-road bicycle lanes. A wider right-of-way will be provided at key intersections to accommodate a raised centre median and turn lanes. On-street parking will be prohibited, and concrete sidewalks will be added in the boulevard on both sides of the road. There will also be allowance for future transit service.

The North-South Collector Road has also been located and designed to minimize environmental impacts, and account for the environmental constraints of the area. The final design includes two culverts where the road crosses Sharon Creek and a tributary.

Figure 6-1 depicts a cross-section of the North-South Collector Road, as presented in the Sharon Village Urban Design Guidelines.
6.1.2 Design Criteria

The proposed design criteria for the North-South Collector Road are based on a design speed of 60 kph, as follows:

<table>
<thead>
<tr>
<th>Table 6-1 - Design Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North-South Collector Road</strong></td>
</tr>
<tr>
<td>------------------------------</td>
</tr>
<tr>
<td>Highway Classification</td>
</tr>
<tr>
<td>Number of Lanes</td>
</tr>
<tr>
<td>Posted Speed (kph)</td>
</tr>
<tr>
<td>Design Speed (kph)</td>
</tr>
<tr>
<td>Minimum Stopping Sight Distance (m)</td>
</tr>
<tr>
<td>Minimum ‘K’ Factor</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Grades Maximum</td>
</tr>
<tr>
<td>Minimum Radius (m)</td>
</tr>
<tr>
<td>Lane Width – through (m)</td>
</tr>
<tr>
<td>Lane Width – left turn (m)</td>
</tr>
<tr>
<td>Lane Width – right turn (m)</td>
</tr>
<tr>
<td>Shoulder Width (m)</td>
</tr>
<tr>
<td>Median Width</td>
</tr>
<tr>
<td>R.O.W. Width</td>
</tr>
</tbody>
</table>

The preferred design for Alignment Alternative #3 is presented in Figures 6-2 through 6-7. The figures include the proposed parcel fabric through Sharon West.
6.2 Assessment and Mitigation of Preferred Design

The proposed North-South Collector Road will help the Town of East Gwillimbury meet future transportation needs, and help support the population growth and land development objectives. The preferred alternative has been selected because it best avoids or allows the mitigation of environmental impacts. Such impacts will generally be limited to temporary impacts associated with construction activities of the road, while others may be part of longer-term impacts related to the development of the study area.

Because of its location in a relatively undeveloped area, construction of the North-South Collector Road will minimally impact residents. Industry standard noise and dust control measures will be utilized. Environmental inspection and monitoring will be carried out during construction and the timing of the construction activities will take local traffic patterns and other sensitive issues into account. It is anticipated that construction will result in minor and temporary inconveniences for local residents.

The construction and operation of the preferred design will be subject to the following parameters:

- The maintenance of flood plain function;
- The prevention of erosion and sedimentation;
- The maintenance of fish flow; and
- Appropriate compensatory measures for wetland and riparian vegetation loss.

An assessment and mitigation of the preferred design includes Consideration for:

- Terrestrial impacts (Section 6.2.1);
- Water supply impacts (Section 6.2.2);
- Groundwater impacts (Section 6.2.3);
- Stormwater Management (Section 6.2.4);
- Contaminated soils (Section 6.2.5);
- Air quality (Section 6.2.6);
- Noise (Section 6.2.7);
- Traffic impacts (Section 6.2.8);
- Utilities (Section 6.2.9); and
- Mitigation and Monitoring (Section 6.2.10).

6.2.1 Terrestrial

6.2.1.1 Overview of Impacts and Mitigation

The construction of the North-South Collector Road on Sharon West lands is expected to:

- Create conditions for wildlife strikes by moving vehicles on the North-South Collector Road;
• Be achieved with site grading (i.e. cut-and-fill, earth moving);
• Displace riparian forest and riparian wetland habitat at the crossing of Sharon Creek, and displace one sapling of Butternut (OMNR Endangered – Not Regulated) and one small population of Virginia Stickseed (R5 York Region) at the crossing of Sharon Creek;
• Displace area of riparian wetland habitat at the crossing of Tributary 6;
• Displace two areas of wetland habitat in an agricultural drainage channel that drains to Tributary 8;
• Displace a small area of wetland in a drainage swale in Property #6;
• In South Sharon, the North-South Collector Road will displace one small wetland and a portion of one larger wetland that have established on a hill-side seepage slope within Property #8; and
• Result in two crossings of the Natural Heritage System for which the concern is impacts to fish and aquatic habitat.

6.2.1.2 Vehicle Strikes of Local Wildlife Populations

As part of this study, consideration for the protection of natural heritage features and functions within Sharon West were balanced with the need to provide road crossings within this area. However, the location and number of crossings have been minimized and their locations were carefully selected. Nevertheless, vehicle strikes of local wildlife populations may occur on both adjacent streets and the North-South Collector Road. Species at greatest risk are: Northern Leopard Frogs, representative of amphibian crossing opportunity, White-tailed Deer, riparian birds and small mammals such as Striped Skunk and Raccoon.

White-tailed Deer presently move within and across Sharon West through cultivated fields, in forest patches and along the margins and floodplain of Sharon Creek. Post-development, the primary opportunity for travel will be the riparian corridors of Sharon Creek, and, to a lesser degree, the riparian corridors associated with Tributary 5, Tributary 6, and Tributary 8. In the absence of mitigation, animals moving to and from the large forest patch that borders the former rail corridor in Property #2 and Property #3 will be at risk from vehicle strikes if they are forced to move out of the Sharon Creek valley and across the North-South Collector Road.

Proposed Mitigation:

The proposed mitigation to minimize the number of vehicle strikes of White-tailed Deer and small mammals on the North-South Collector Road crossing of Sharon Creek is to ensure that the opening of the spanning structure is scaled to the requirements of the species that would benefit from a safe passageway beneath the roadway. Larger mammals, such as White-tailed deer, require a larger opening than smaller mammals such as Raccoon, Red Fox, and Eastern Cottontail. A minimum openness index ([height of opening x width of opening] / [length of span]) of 0.6 to 1.0 is considered to be acceptable for the passage of White-tailed Deer (Ontario Ministry of Transportation 2005), and on the order of 0.1 for small mammals and amphibians. In addition, the spanning structure needs to be wide enough to provide a continuous terrestrial bench for wildlife passage. The culvert has been properly sized to achieve these targets to allow wildlife to travel through the culvert.
6.2.1.3 Site Grading

Site grading through cut-and-fill and earth moving will be a fundamental part of the construction of the North-South Collector Road. On the relatively hilly portion of Sharon West, the hills will be lowered by approximately 1.5 m at the north end and 7.0 m at the south end. It is anticipated that much of the earth movement will occur within the development area surrounding the North-South Collector Road.

6.2.1.4 Sharon Creek Crossing

The crossing alignment for the North-South Collector Road at Sharon Creek was selected to maximize the opportunity for a right-angle crossing of the stream channel, and to minimize the displacement of wetland and forest vegetation while maximizing the opportunity for an alignment that achieves acceptable degrees of curvature on corners of the roadway and that meets transportation needs both within and beyond Sharon West. The crossing occurs at the location of an existing farm ford across Sharon Creek. An open-bottom culvert will be used to cross Sharon Creek, and a full construction plan will be developed.

The alignment of the North-South Collector Road at Sharon Creek traverses the following vegetation types: Fresh-Moist Manitoba Maple Lowland Deciduous Forest (FOD7-2), Reed-canary Grass Mineral Meadow Marsh (MAM2-2), Jewelweed Mineral Meadow Marsh (MAM2-9), Forb Mineral Meadow Marsh (MAM2-10), Willow Mineral Deciduous Swamp (SWD4-1), Dry-Moist Old Field Meadow (CUM1-1), and Cultural Woodland (CUW). The alignment of the crossing traverses approximately 55-60 metres of natural vegetation.

One sapling of Butternut (B39) (OMNR Endangered – Not Regulated) and a small population of Virginia Stickseed (P4)(R5 York Region) are present at the proposed crossing location. The Fresh-Moist Manitoba Maple Lowland Deciduous Forest (FOD7-6) and Willow Mineral Deciduous Swamp (SWD4-1) have been designated “Significant Woodland” by York Region. One mid-age Butternut tree (B40) and three saplings of Butternut (B14-B16) are in close proximity to the west margin of the footprint for the North-South Collector Road. The mid-age tree (B40) and two of the saplings (B14, B16) may warrant “Retainable” status. The remaining sapling (B15) is quite diseased and may warrant “Not-Retainable” status.

The natural vegetation and Sharon Creek provide habitat for American Toad, Green Frog, Northern Leopard Frog, and for several species of damselflies and dragonflies. Natural habitat crossed by the right-of-way (ROW) at the Sharon Creek crossing is 55 to 60 metres in width and bordered by agricultural fields. This suggests that the North-South Collector Road right-of-way at the Sharon Creek crossing will be dominated by species tolerant of small habitat fragments. Exemplar species include Downy Woodpecker, Warbling Vireo, Common Yellowthroat, Red-winged Blackbird, Song Sparrow, Yellow Warbler, and Mallard.

In the absence of mitigation, the sources of disturbance on terrestrial vegetation and wildlife habitat (see Section 6.1.3.2 of the MESP for the effects of construction on fish habitat) are expected to include: i) site grading; ii) the construction of approaches to the spanning structure; iii) the construction of footings for the spanning structure; iv) the construction of a temporary access road for the movement of work crews, material and equipment across the floodplain and Sharon Creek; v) the removal and compaction of vegetation at work sites and storage areas; vi) the removal and stockpiling of soils; and, vii) and the shading
of wetland vegetation beneath the spanning structure. In the absence of mitigation, the disturbance from construction may result in the partial or complete transformation of wetland vegetation to Dry-Fresh Old Field Meadow.

**Proposed Mitigation:**

Specimen B39 could not be found on a following site visit in June 2009. The original health assessment for this specimen was provisional as ‘non-retainable’. During detail design attempts should be made to confirm the specimen's location and to update the health assessment using the new MNR health assessment protocol.

The proposed mitigation to preserve the population of Virginia Stickseed is to transplant the population to suitable habitat within the floodplain or within the terrestrial setback from regulated wetlands.

The Butternut health assessment carried out on June 16, 2009 by a certified Butternut Health Assessor (Kuntz Forestry Consulting, 2009), and the site review with the MNR (Bohdan Kowalyk, MNR Aurora District Office), concurred that there is one retainable specimen that will be left in place and its distance from the North-South Collector Road was deemed by the MNR to not be an issue. A further specimen (B39) identified by MMM during the MESP study within the North-South Collector Road alignment at the Sharon Creek crossing was assessed to be non-retainable, but was not located during the 2009 assessments, as described in Section 5.1.2 of this study.

The proposed mitigation to minimize the displacement of wetland vegetation is to: i) install silt fences to prevent sediment runoff to adjacent wetland features; ii) peel back the A and B soil horizons and associated seed banks from the work sites and stockpile for future replacement and restoration; iii) restore the soil profile of work sites by replacing the stockpiled A and B horizons; iv) restore surface grade elevations to pre-construction conditions; v) and restore exposed soils with a seed mix of native wetland asters, herbs and grasses.

**Net Effect:**

A small population of Virginia Stickseed and potentially one “retainable” Butternut sapling (B39) and will be preserved by transplantation to suitable habitat nearby. If affected, two additional “retainable” Butternut saplings (B14, B16) will be preserved by transplantation to suitable habitat nearby. If affected, one mid-age Butternut tree (B40) will be displaced by the roadway. Replacement trees for the displaced stem will be planted in suitable habitat nearby.

Wetland vegetation will be displaced at the Sharon Creek crossing by shading effects from within the spanning structure and by the placement of fill for the approaches to the spanning structure. The proposed mitigation will prevent off-site vegetation change downstream of the crossing and reduce the risk that construction disturbance will lead to the partial or complete transformation of wetland vegetation within former work sites. The potential for significant vegetation change within former work sites remains owing to the challenge of restoring soil profiles and local moisture regimes.
Fresh-Moist Manitoba Maple Lowland Deciduous Forest (FOD7-6) will be displaced by the placement of fill for the approach to the spanning structure.

The removal of forest and wetland vegetation will displace a small portion of local habitat for riparian wildlife species.

6.2.1.5 Tributary 6

Tributary 6 will be crossed with an open bottom precast culvert. The alignment of the crossing for the North-South Collector Road at Tributary 6 was chosen to maximize the opportunity for a right-angle crossing of the channel, minimize the displacement of wetland and forest vegetation, and maximize the opportunity for an overall alignment that meets the transportation needs both within and beyond Sharon West.

The alignment of the crossing for the North-South Collector Road traverses the following vegetation types: Dry-Moist Old Field Meadow (CUM1-1) and Reed-Canary Grass Mineral Meadow Marsh.

The vegetation and associated seasonal watercourse at the crossing location provide habitat for American Toad. No damselflies or dragonflies were observed at this location during field surveys. No regionally rare species, provincially rare species, or Species at Risk were observed at the proposed crossing location. Breeding birds using this area are expected to be those tolerant of small habitat fragments as the extent of natural habitat is limited. The alignment of the crossing traverses approximately 35 metres of natural vegetation. The affected wetland is part of a linear wetland complex that borders Tributary 6. Species expected include Red-winged Blackbird, Common Yellowthroat, Song Sparrow and Common Grackle.

In the absence of mitigation, the significant sources of disturbance on terrestrial vegetation and wildlife habitat are expected to include: i) site grading; ii) the construction of approaches to the spanning structure; iii) the construction of footings for the spanning structure; iv) the construction of a temporary access road for the movement of work crews, material and equipment across the tributary; v) the removal and compaction of vegetation at work sites and storage areas; vi) the removal and stockpiling of soils; and, vii) and the shading of wetland vegetation beneath the spanning structure. In the absence of mitigation, the disturbance from construction may result in the partial or complete transformation of wetland vegetation to upland old-field species.

**Proposed Mitigation:**

The proposed mitigation is to: i) install silt fences to prevent sediment runoff to adjacent wetland features; ii) peel back the A and B soil horizons and associated seed banks from the work sites and stockpile for future replacement and restoration; iii) restore the soil profile of work sites by replacing the stockpiled A and B horizons; iv) restore surface grade elevations to pre-construction conditions; v) restore exposed soils with a seed mix of native wetland asters, herbs and grasses.

**Net Effect:**

Wetland vegetation will be displaced at the Tributary 6 crossing by shading effects from within the spanning structure and by the placement of fill for the approaches to the spanning structure. The proposed mitigation will prevent off-site vegetation change downstream of the crossing and reduce the risk that construction
Disturbance will lead to the partial or complete transformation of wetland vegetation within former work sites. The potential for significant vegetation change within former work sites remains owing to the challenge of restoring soil profiles and local moisture regimes.

6.2.1.6 Wetlands in Agricultural Drainage Channel (Property #5)

The alignment of the North-South Collector Road in the southern portion of Sharon West was chosen to maximize the opportunity for a straight alignment between the southern boundary of OPA 122 and the crossing at Sharon Creek.

The proposed alignment will displace two small wetlands that have established on the margins of the agricultural drainage channel that drains to Tributary 8: 0.04 ha of Reed-canary Grass Mineral Meadow Marsh (MAM2-2) and 0.04 ha of Cattail Mineral Shallow Marsh (MAS2-1). The wetlands may provide marginal habitat for American Toad. No regionally rare species, provincially rare species, or Species at Risk were observed in the wetlands.

Proposed Mitigation:

No mitigation is proposed at this location in view of their small size and the lack of special features.

Net Effect:

Two small wetlands in an agricultural drainage channel, and associated habitat for American Toad, will be displaced.

6.2.1.7 Wetland in Agricultural Swale (Property #6)

The proposed alignment for the North-South Collector Road will displace the western portion of a small wetland complex that has established in an agricultural swale on Property #6. Approximately 0.02 ha of Willow Mineral Thicket Swamp (SWT2-2) and Cattail Mineral Shallow Marsh (MAS2-1) will be displaced by the footprint. No amphibians, reptiles, damselflies or dragonflies were observed at this location during field surveys. Nevertheless marginal habitat for such species may be present. No regionally rare species, provincially rare species or Species at Risk were observed in the wetlands.

Proposed Mitigation:

No mitigation is proposed at this location in view of the small wetland size and the lack of special features.

Net Effect:

Approximately 0.02 ha of wetland vegetation of marginal wildlife value will be displaced in an agricultural swale.
6.2.1.8 Wetlands on Hill-Side Seepage Slope South of OPA 122 Boundary (Property #8)

South of Sharon West, the alignment of the North-South Collector Road was chosen to: i) avoid the forest and wetland complex on the north side of Green Lane; ii) minimize the displacement of wetlands that have established on an extended hill-side seepage slope south of the OPA 122 boundary; and, iii) avoid the concentration of Butternut trees in the hedgerow to the east of the proposed alignment.

The proposed alignment will displace a portion of two small Forb Mineral Meadow Marshes (MAM2-10) that form part of a wetland complex that has established on hillside seepage. The total area of displaced vegetation (approximately 0.05 ha) is difficult to determine at this stage resulting in uncertainty concerning the amount of fill that will be required to construct the roadway. No regionally rare species, provincially rare species, or Species at Risk were observed in the affected wetlands.

Proposed Mitigation:

The proposed mitigation to minimize the impact of road construction on adjacent wetlands downslope of the displaced wetlands is to install granular material at the base of the roadbed and to consider the requirement for additional measures, such as the installation of french drains, to ensure that flow of groundwater downslope will not be impaired.

No mitigation is proposed to compensate for the displaced wetlands since the restoration of an equivalent area of hillside seepage elsewhere within Sharon West is not considered to be technically feasible.

Net Effect:

Displacement of two small wetlands (approximate total area 0.05 ha) that form part of a wetland complex. The alignment avoids the larger wetland features up-slope and down-slope of the displaced wetlands. No regionally rare species, provincially rare species, or Species at Risk were observed in the displaced or adjacent wetlands.

The proposed mitigation to minimize interference with groundwater flow will reduce the potential for drying effects and vegetation change in downslope wetlands and ponding effects and vegetation change in wetlands upslope of the roadway.

6.2.1.9 Fish and Aquatic Habitat

The construction of a North-South Collector Road in Sharon West, west of Leslie Street will result in the construction of two new watercourse crossings. A brief description of impacts to these watercourses, mitigation strategies and net effects for both of the watercrossings follows.

Sharon Creek Crossing

The alignment of the crossing for the North-South Collector Road at Sharon Creek was chosen to maximize the opportunity for a right-angle crossing of the channel and minimize the disturbance to the watercourse
and riparian vegetation, while maximizing the opportunity for an alignment that achieves acceptable degrees of curvature on corners of the road and that meets transportation needs (driver safety) both within and beyond Sharon West. The alignment of the road will cross Sharon Creek immediately downstream of an existing ford through the channel used by farm equipment and within close proximity to the service corridor to minimize impacts to the floodplain.

Due to the amount of flow to be conveyed and the potential for Sharon Creek to provide redside dace habitat, an open bottom precast structure is the preferred crossing structure at this location. An open bottom precast culvert structure does not typically result in the loss of fish habitat. Impacts to the aquatic habitat associated with this type of crossing include the potential transport of deleterious substances (i.e. sediment, fuel, etc) associated with construction activity that could physically injure fish or destroy/alter habitat, elimination of floodplain vegetation that could result in reduced productivity, shading under/in the vicinity of the crossing location and injury to fish during construction due to work in the water or de-watering.

The use of an open bottom precast culvert crossing will allow the channel to continue to flow, and to a certain extent meander, naturally under the crossing, provided realignment of the channel is not required to direct water into/through the crossing structure. This type of crossing method will require the construction of footings on the floodplain. This has the potential to result in the encroachment by equipment/personnel and the transport of deleterious substances from the construction area. However, the potential for these impacts is reduced through the preparation and implementation of a mitigation plan and construction that will likely occur at some distance from the channel.

In the absence of proper mitigation measures, impacts associated with the construction of an open bottom precast culvert crossing of Sharon Creek have the potential to contravene the Fisheries Act through the introduction of a deleterious substance and/or result in a Harmful Alteration, Disruption or Destruction (HADD).

Tributary Crossing

The North-South Collector Road will cross Tributary 6 to the north of Sharon Creek. Tributary 6 is an intermittent watercourse which provides warmwater fish habitat. The impact of the road crossing structure to the aquatic habitat and biota will be dependent on the type of crossing that will be constructed. It is anticipated that an open bottom precast culvert will be selected as the preferred crossing structure at this location. A box culvert was also considered. Both types of crossings share similar impacts; however, the extent and severity of the impacts differ between the crossing structures due to the different construction methods as well as their design. Potential impacts including the transport of deleterious substances (i.e. sediment, fuel, etc.) associated with construction activity that could physically injure fish or destroy/alter habitat, elimination of floodplain vegetation that could result in reduced productivity, shading under/in the vicinity of the crossing location and injury to fish during construction due to work in the water or de-watering. Typically, impacts to the aquatic habitat are more severe with a box culvert versus an open bottom precast culvert structure.
The use of an open bottom precast culvert crossing will allow the channel to continue to flow, and to a
certain extent, meander naturally under the crossing, provided realignment of the channel is not required to
direct water into/through the crossing structure. This type of crossing method will require the construction of
footings on the floodplain. This has the potential to result in the encroachment by equipment/personnel and
the transport of deleterious substances from the construction area. However, the potential for these impacts
is reduced as construction will occur at some distance from the channel. In the absence of proper mitigation
measures, impacts have the potential to contravene the Fisheries Act and result in the Harmful Alteration,
Disruption or Destruction (HADD) of fish habitat.

The use of a box culvert crossing will result in more extensive disturbances due to the need to realign the
watercourse into and through the culvert. This will result in the hardening of the channel (i.e. riverstone) to
prevent meandering in the culvert. Additional impacts associated with a box culvert include the elimination of
floodplain vegetation at the crossing location, potentially a greater reduction to the productivity of the
watercourse through the crossing structure due to reduced light penetration and the associate decline in
terrestrial energy inputs, the elimination of groundwater inputs into the reach in question as it will be entirely
enclosed in the culvert and may potentially result in the creation of a fish barrier.

In the absence of proper mitigation the construction of road crossings over the unnamed tributaries has the
potential to contravene the Fisheries Act through the introduction of deleterious substance and/or result in a
HADD.

Proposed Mitigation:

An open bottom precast culvert is typically considered the most effective at minimizing impacts to aquatic
habitat and biota due to the limited in-water work required. In order to minimize impacts to the aquatic
habitat it is necessary to develop an effective mitigation plan including but not limited to type of construction
to isolate the work area during construction (if required), de-watering procedures, permitted temporary
watercourse crossings, sediment and erosion control measures, equipment and fuelling plan, the clear
delineation of work areas to minimize effects associated with soil disturbance, encroachment into the
watercourse and/or undisturbed areas and site restoration (i.e. planting, seeding etc.).

Net Effect:

The preparation and implementation of a mitigation plan (i.e. sediment and erosion control measures, fuel
plan, etc.) will reduce the risk that construction effects will result in the transport of deleterious substances.

It is anticipated that through the construction of an open bottom precast structure that avoids in-water work
(i.e. footing excavation, realignment, etc.) and suitable mitigation measures (i.e. construction methods)
being developed and implemented, a HADD will not occur.

In the event that a box culvert is selected as the preferred crossing structure, it is anticipated that impacts to
fish habitat cannot be entirely mitigated through the mitigation plan. As a result, the construction of this type
of crossing will likely produce a HADD. If a HADD does occur, fish habitat compensation measures will be
required to address these outstanding impacts and result in a net gain to the productive capacity of fish
habitat.
6.2.2 Water Supply

Water supply within York Region is the responsibility of the Region. This includes the operation of pumping stations, storage facilities and trunk mains. Local distribution is the responsibility of the local municipality. The new development within Sharon West will be developed on full municipal services, including a municipal water distribution system.

Water supply to Sharon West will be provided by the existing well system and the 600 mm Leslie Street watermain, which interconnects the Queensville, Holland Landing and Newmarket area wells and pumping stations. These wells all draw water from the Yonge Street Aquifer. The Region has advised that adequate water supply will exist, based on the expected population for Sharon West and other proposed development within the communities of Queensville and Holland Landing. This will in part be accomplished by the Region’s extension of a Lake Ontario based supply to the communities of Newmarket and Aurora. The Region has advised the existing Permit to Take Water (PTTW) issued by the Ministry of the Environment, governing the withdrawal of groundwater from the Yonge Street Aquifer, is adequate for the demands from the new development surrounding the North-South Collector Road.

The MOE water well records available for the study area have been reviewed. There are records for approximately 340 drilled wells in the vicinity of the MESP study area. Essentially all of the existing Sharon Community is serviced by a municipal distribution system connected to the municipal water supply system from the Queensville wells. Many of the records therefore correspond to properties that have been serviced. A water well survey was carried out to identify and assess potential effects to the private wells on and/or adjacent to the MESP study area.

A well survey was carried out in October and November 2007. Letters were delivered to 157 nearby businesses and residences on October 24 and 25, 2007 indicating that MMM staff would be in the area on November 7, 8, 9, 2007 conducting the survey. An additional four houses that had not received the notification letter during the initial delivery were provided with one on November 7, 2007. Properties within approximately 300 m of the development area were visited and provided with a notification letter. In summary, of the 161 total properties that were provided with a notification letter, 140 property owners provided no response or no contact which included a second visit to each of the properties where no one was home. Six property owners indicated that they did not wish to participate, while 15 property owners provided information on their wells ranging in extent from interviews with the completion of the water well survey form, to obtaining brief information about the well at the owner’s front door. Five water well survey forms were completed throughout the three day site visit in November. The area surveyed is presented on Figure 2.2.7. One well owner along May Avenue was interviewed and provided information about the quality and quantity of water from their well. The owner indicated that their well is used for watering purposes and not used to obtain drinking water. There were no problems identified with the quality of the water from the well and the owner recalled that the well ran dry once due to the filling of their swimming pool. The well was identified by the owner as a drilled well with a diameter of 0.89 m and a depth of approximately 15 m according to the owner. The static water level of the well was measured to be 5.61 m below the top of the well casing at the time of the site visit.
Along Leslie Street, three property owners were interviewed and provided information about their wells. One of the properties has two wells present, one drilled well and the other an older dug well. The drilled well is used for drinking water purposes. The owner did not identify any issues with the water quality in the drilled well, however indicated that the water quality in the dug well was not good and not used regularly. The owner recalled that both wells ran dry once in the past due to gardening and farm operations. Both wells were covered and were not accessible for a water level measurement. A second property along Leslie Street contains a drilled well approximately 91 m deep and used for drinking water and other household uses. The owner indicated that the well has never run dry but indicated that the water used to contain a metallic taste prior to the owner installing a water softener treatment system. A third property along Leslie Street contains a well used for drinking water and watering purposes. The owner indicated that there was low pressure in the well when obtaining water. No issues were identified in terms of the water quality aside from rusting of the pipes. One property owner along Mount Albert Road was interviewed and provided information about their well. The property contains a 0.89 m diameter well with a depth of approximately 12 m and is used for drinking water purposes and sometimes watering of the lawn. The owner indicated that the well ran dry twice, with the first incident as a result of leaving the water softener system on overnight, and the second due to the dry summer and watering of their lawn. No issues were identified with the water quality. The static water level in the well was measured to be 8.19 m below the top of the well casing.

### 6.2.3 Groundwater

#### 6.2.3.1 Impacts Due to Site Grading

Site grading (i.e., cut-and-fill, earthmoving) is anticipated to affect the groundwater table elevation in portions of the site. In particular, groundwater table elevations will likely decrease in the cut areas that intercept the current water table elevation and may rise in the fill areas. On the relatively hilly portion of Sharon West, the lowering of the hills by approximately 1.5 m at the north end and 7.0 m at the south end will have the largest potential for effect to the groundwater table elevation. In addition, the preliminary grading designs suggest possible retaining walls ranging in height from 0.5 m to 3.5 m may be required. The design of these retaining walls should encourage infiltration and runoff to the natural drainage features.

Within Sharon West, the infiltration through pervious surfaces, i.e. landscaped and open spaces, is relatively low due to the low permeability of the native soils (clayey silts and sandy silts). The site is in general a relatively low priority recharge area. This characteristic limits the magnitude of change but will also limit the effectiveness of mitigation measures. In addition to the physical ground surface elevation changes, the earthworks equipment will change the physical character of native soils (i.e., density, porosity, moisture content, etc.) at the cut surface, in the fill areas and haul routes. These physical changes will lower the in-situ hydraulic conductivity of the soils which could locally effect infiltration and the flow of groundwater. The potential effect of a lower groundwater table elevation is a reduction in discharge to streams and wetlands that have a groundwater baseflow component and could reduce groundwater availability at nearby shallow private water supply wells that have low water levels.
Predicted Effect (Without Mitigation):

The potential reduction of groundwater available to private water supply wells in the area and discharge to watercourses and wetlands.

Proposed Mitigation:

Includes monitoring before and during construction to identify sensitive well locations and to confirm interference claims, connection to municipal distribution system where available, lower pumps, and drilling deeper wells. Directing non-connected impervious runoff (e.g., roof runoff) to pervious surfaces will help mitigate infiltration losses due to increased imperviousness. Directing rear lot runoff on properties backing onto the natural environment lands (e.g., watercourses) and constructing infiltration swales to intercept this rear lot runoff just within the natural environment areas will further promote infiltration to maintain baseflow to the watercourses.

Net effects:

Water service billing information indicates very few unserviced properties in the site vicinity. Based on MOE well records, most of the private water supply wells area are, or were, located upgradient of Sharon West so little, if any, effect is anticipated.

6.2.3.2 Changes to Groundwater Conditions

The minor groundwater contributions to the watercourses within Sharon West are anticipated to change as a result of site grading, installation of underground services and a reduction of infiltration due to the hardening of pervious surfaces and compaction of soil. These changes will result in a change to the groundwater interactions that these aquatic habitats are dependent upon. The changes to groundwater contribution are anticipated to have an effect on the smaller East Holland River tributaries located in Sharon West with a greater effect to those tributaries/tributary reaches that occur at higher elevations and receive groundwater inputs. These tributaries are dependent upon groundwater contributions (seasonal or permanent) originating from the upper weathered soils and the suspected areas of alluvial deposits that appear to be present in the mid-section of Sharon West.

In the absence of mitigation measures, there is a potential for similar impacts to the main channel of Sharon Creek. These changes have the potential to impact the function of this watercourse as coolwater habitat and result in changes to the biota, specifically its function as potential redside dace habitat, as redside dace prefer to inhabit watercourses with average summer temperatures below 20°C. In the absence of mitigation these effects have the potential to contravene the Fisheries Act and may result in the Harmful Alteration, Disruption or Destruction (HADD) of fish habitat.

Proposed Mitigation:

The proposed mitigation to minimize the effects of lowered groundwater elevations is to; i) re-grade lots to supply runoff to infiltration galleries along the top of the watercourse valleys/undisturbed setbacks and, ii) design and construct infiltration friendly retaining walls. The proposed mitigation to minimize the capture and redirection of groundwater flow by more permeable fill materials in excavated trenches for buried services is
to install clay plugs/barriers at regular intervals in the trench to prevent groundwater flow along the trench. In contrast, if a high water table is present in the area which could put building foundations at risk of water damage, the preferential flow paths created by servicing trenches can help to lower the groundwater level.

Net Effect:

The proposed mitigation measures will contribute by maintaining groundwater inputs into the watercourses in order to partially reduce the potential for drying effects and a change to the thermal regime. These measures will assist in maintaining the contributions of the indirect fish habitat associated with the unnamed tributaries due to their seasonality and primary reliance on surface water inputs.

6.2.4 Stormwater Management

The existing OPA 122 document establishes the requirements of the Stormwater Management system. The Storm Water Management strategy for Sharon West includes:

- A Master Servicing Plan based on the existing Stormwater Management Study for Sharon;
- Maintenance of existing rates of groundwater infiltration;
- Protection of ground water quality and surface water quantity and quality;
- The Stormwater Management system shall generally follow the natural drainage divides of the watersheds draining the community;
- A requirement to minimize wetland and fish habitat impacts as well as downstream remedial work;
- Stormwater Management Facilities are to be located adjacent to areas of open space or parkland;
- Post-Development peak runoff rates are not to exceed pre-development levels; and
- Stormwater Management facilities are to be based on Best Management Practices related to storm water management.

The April, 2006 LSRCA Watershed Development Policies provide guidelines applicable to the development of the OPA 122 lands. All policies are in agreement with the criteria stated in Section 3.1 of the OPA. A summary of relevant Stormwater Management related policies include:

- Enhanced Level (Level 1) water quality protection of all watercourses inside and downstream of OPA 122,
- Control of post-development peak flow rates to pre-development levels for all storms with return periods ranging from 2 to 100 years,
- Minimum 24 hour detention of all runoff resulting from a 25mm storm, and
- Source and conveyance controls are to be considered for all new development.
Effects monitoring should be initiated the year following the initiation of construction to document potential changes in the composition and abundance of breeding forest birds. To be useful, effects monitoring should continue at varying levels of intensity for an extended period of time. Consideration should be given to annual monitoring for the first five years following construction; biannual monitoring for the following five years; and, once every five years for the following fifteen years, including directive B100. According to this directive, the North-South Collector Road connecting Green Lane to Mt. Albert Road is required to pass the 50 year storm event (assuming the total span is equal to or larger than 6.0 meters) or 25 year event (if the total span is less than 6.0 meters) for all crossings without overtopping and with the requisite amount of freeboard.

Overall the storm drainage conveyance system will be a dual major and minor conveyance system, whereby major (infrequent events) storm drainage will be conveyed on the surface, and the minor (frequent events) will be conveyed via a pipe network to appropriate outlets. The system design is described further below.

All municipal infrastructures are to be designed with regard for environmental constraints therefore storm sewers will be contained within the proposed rights of way. Crossing of environmental features will be minimized and where necessary disturbance to these features will be minimized.

The LSRCA has issued minimum requirements for Stormwater Management facilities inside its jurisdiction in its watershed development policies. The sections of the policies that apply to the OPA 122 lands are summarized below:

Stormwater Management facilities are to be located above the existing 1:100 year floodplain. Incremental storage between the 1:100 and the regulatory floodplain is to be maintained. The pond volume below the pond’s high water level is not considered as available storage for the regulatory floodplain.

Berming for facilities within the floodplain shall not exceed 0.3m above the existing ground elevation.

Stormwater quality facilities must effectively treat the first flush with regard to contaminants such as sediment, phosphorous, and thermal pollution prior to leaving the proposed development site.

All proposed end-of-pipe water quality control facilities must be designed to meet or exceed LSRCA Stormwater Management and MOE guidelines.

The design and location of Stormwater Management ponds are to comply with all standards and criteria of local and regional municipalities (East Gwillimbury and York Region)

The aquatic environment of Sharon Creek and its tributaries require a high level of water quality control to sustain their habitat functions. In addition, LSRCA development policies require the implementation of Enhanced Level water quality improvement as outlined in the Stormwater Management Planning and Design Manual, (MOE, 2003) for all new development inside its jurisdiction. All of the storm water management facilities proposed to service the Sharon West lands meet this requirement. Additional water quality requirements arise from the Lake Simcoe Environmental Strategy (LSEMS). As both watersheds eventually discharge to Lake Simcoe, the water quality recommendations made in LSEMS are applicable to the development of Sharon West and South Sharon. LSEMS makes particular reference to the treatment of
phosphorous and nitrogen as pollutants of concern in Lake Simcoe. Fortunately, the wet pond based storm water management strategy for Sharon West is well suited to address these recommendations. All of the wet ponds will feature a forebay and main treatment cell configuration, similar to other recent SWM pond installations in the area. As documented in the TRCA’s SWAMP program’s 2002 report on a Pond-Wetland storm water management facility in Markham, the forebay-wetpond component is capable of removing 83% of total phosphorous and 76% of phosphate from its storm water source. This removal level was measured at the outlet of the wet pond, prior to polishing in the wetland component. In addition, a total of 48% of nitrogen was removed there. The similar conceptual configuration of the Sharon area ponds suggests that similar removal rates are achievable. Lastly, all additional criteria outlined in section 3.3.3 and 3.3.4 of the MOE Stormwater Management Planning and Design Manual are accommodated in the SWM strategy.

The previous stormwater management studies for Sharon West (OPA 55), recommended several levels of water quantity control for the lands west of Leslie Street. For all lands tributary to Sharon Creek, 24 hour detention of the 25mm storm event was considered sufficient. For lands draining to Tributary 8, additional quantity control for events from the 2 through 100 year storms was required. These recommendations were based on hydrologic modeling and hydrograph analysis. In the previous study, post-development peak flow rates for lands contributing to Sharon Creek were below pre-development rates, illustrating that erosion control extended detention was sufficient for quantity control purposes. For lands draining to Tributary 8, quantity control of the 2 through 100 year storms was necessary to ensure that storm flow rates at Roger’s Reservoir do not increase. As part of the MESP study, hydrologic models of the pre-development and post-development conditions were constructed to estimate flow rates at five flow points. Overall, the levels of control at the SWM facilities are sufficient to meet the recommendations of the OPA 55 Stormwater Management Study.

The Town of East Gwillimbury will likely require a developer to be responsible for a post-construction monitoring program for a period of up to 3 years to ensure the proposed SWM facilities are performing as designed and approved. A monitoring report must be prepared at the end of the period by a registered Professional Engineer in Ontario on behalf of the developer/owner. The report shall include all site observations, monitoring and test results, assessments of removal efficiencies, system performance, conclusions and recommendations, including a remedial plan to improve the efficiency and system performance to the level that it was designed and approved under MOE’s Certificate of Approval conditions. If the Town and developer agree, the Town could take over the post-construction monitoring program with funds provided by the developer/owner. This is important to the Town from its risk management perspective because once the stormwater management facility is assumed by the Town; the Town will be responsible for ensuring the facility will be in compliance with the MOE’s Certificate of Approval conditions.

### 6.2.5 Contaminated Soils

A series of soil investigations were undertaken for the development properties within Sharon West by Soil Engineers Ltd. The results of the investigations indicate that there are no specific environmental hazards
known at or near the North-South Collector Road alignment, given the largely agricultural historical uses. No further environmental investigation with respect to soil contamination was recommended.

The soil investigations are identified in the References list.

6.2.6 Air Quality

Material handling, such as excavation, loading and hauling, is the most significant source of dust during construction activities. However, dust control during these activities can be easily achieved through planning and proper implementation of construction practices and mitigation measures. These mitigation measures may include, but are not limited to, using appropriate dust suppression measures such as spraying down the site and roadways, limiting excavation on windy days, washing trucks, and using dust covers on haulage trucks.

The construction activities required are not expected to create quantities of dust that will exceed acceptable MOE guidelines. However, while the appropriate mitigation measures will be implemented during construction, there may be localized residual dust emissions around the site.

To prevent air quality impacts associated with construction vehicle exhaust fumes, emission control devices on equipment should be functional and effective, and new or well-maintained heavy equipment and machinery, preferably fitted with muffler/exhaust system baffles, and engine covers should be used.

6.2.7 Noise

Two noise sensitive areas were identified that may be impacted by the future North-South Collector Road. The first is a home located on the north side of Green Lane approximately 200 metres west of the most westerly alignment alternative. The second are the homes on Whitebirch Lane and David Willson Trail. These are located just over 100 metres from the proposed alignment of the North-South collector. Given the smaller setback and that the existing ambient sound at these homes are expected to be quieter due to the greater distance from arterial roads, the receptors on Whitebirch Lane and David Willson Trail were considered the most critical and the assessment focused on these.

Assumptions

Where data was not available or could not be confirmed, conservative estimates were made.

AADT traffic volumes were assumed to be ten times those during the p.m. peak hour. Given that the community of Sharon is largely a bedroom community, a larger than typical proportion of the daily traffic could be expected to travel during the peak hour. Therefore, assuming a typical ten times peak hour likely overestimates daily traffic.

MTO’s Noise Guide provides an estimate of truck traffic for MTO’s highways. Truck volumes are expected to be significantly less than those found on a highway. Nevertheless, traffic volumes were assumed to include five percent medium trucks and eight percent heavy trucks as per the Noise Guide.
Despite the road being constructed to allow for the development of the adjacent lands, future development was assumed to not provide any mitigation of the traffic noise from the future road yet traffic volumes were assumed to grow to the 2021 levels found in the Master and Environmental and Servicing Plan.

Noise Criteria

The noise level criteria typically used for environmental assessments are found in MTO’s Noise Guide and are summarized as follows:

If the increase in sound level above the ambient is expected to be less than five dB and if the overall sound level is expected to be less than 65 dBA, no mitigation is required.

If the increase in sound level above the ambient is expected to be five dB or more or if the overall sound level is expected to be 65 dBA or more, noise control mitigation measures on the right-of-way are to be investigated.

The “do nothing” ambient sound level was not determined. The Noise Guide suggests using 45 dBA for Class 3 Areas (small communities with populations of less than 1000 or agricultural areas, etc.) and using 50 dBA for Class 2 Areas (communities that have an acoustical environment that has qualities of both urban and rural areas). Although the neighbourhood on Whitebirch Lane and David Willson Trail may have some acoustic qualities of an agricultural area, the community of Sharon has a population greater than 1000. Accordingly, “do nothing” ambient sound level was assumed to be 50 dBA.

Noise Assessment

A cursory noise assessment of the nearest property on Whitebirch Lane was undertaken and a future 2021 sound level of the North-South Collector Road was determined to be 50 dBA.

Since the sound level without any mitigation including any that will be provided by the future intervening houses will be 50 dBA at the most critical receptor, the sound level will not increase by more than 5 dB and will not exceed 65 dBA. Therefore no mitigation is required.

If the ambient sound level was determined to be 45 dBA or less, the resulting sound level increase would be five dB or more and mitigation should be investigated within the right-of-way. It should be emphasized that a sound level of 45 dBA or less is not expected given the proximity to the Town of Newmarket. Sharon is on the fringe of the urban boundary and as such sound levels are unlikely to be as low as 45 dBA during the day. Furthermore, even if ambient sound levels were found to be this low, mitigation is not expected to be necessary. The development of the intervening housing between the critical receptor and the North-South Collector Road will provide some mitigation. It is recognised that a portion of the exposure angle will be a school and depending on the layout of the site may not provide any mitigation but over half of the exposure angle will be developed by houses.

Finally, mitigation may not be practical. Since mitigation must be constructed along the right-of-way, this would require that roads and the front of the future school to be blocked by the noise fence.
Conclusions

Sound levels will be below 65 dBA at the nearest receptor locations.

Assuming the do nothing ambient sound level at the receptor is 46 dBA or more, the sound level will not increase by five dB.

If the ambient sound level is less than 46 dBA at the receptor, the sound level may increase by five dB. However, the increase will be reduced when the intervening lands are developed. This is expected to occur before 2021 traffic volumes are achieved and therefore before maximum sound levels are reached.

Based on the conservative assumptions taken in the noise assessment and the results, the sound levels produced by traffic on the North-South Collector Road will not have a noise impact at nearest noise sensitive receptors.

Therefore, the issue of traffic noise from the future North-South Collector Road does not pose a constraint to the construction of the road.

6.2.8 Traffic

There will be occasional disruptions to traffic during construction activities. These impacts will be temporary and can be minimized by ensuring that disruptions are restricted to off-peak hours and that proper signage is posted.

6.2.9 Utilities

Construction schedules shall be co-ordinated with the local hydro utility company and similarly, with other municipal services and utilities including telephone, gas and cable, to ensure any disturbance in service is minimal and short-term.

6.2.10 Mitigation and Monitoring

Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.

All waste generated during construction must be disposed of in accordance with MOE requirements.

Monitoring programs should be carried out for each of the following areas of potential impacts:

6.2.10.1 Hydrogeologic

An appropriate monitoring well network should be installed and routine monitoring linked to surface water monitoring in local tributaries and wetlands to assess the effects of development during construction and post-development phases. In addition, a private water well monitoring program should be implemented. An initial monitoring network has been established using available monitoring well installations. Baseline monitoring has been ongoing since 2007.
The preconstruction well network should be monitored throughout the construction period to confirm changes in water levels. After construction is completed, both grading and underground services, further monitoring should only be extended to confirm levels in well network are as expected.

6.2.10.2 Aquatic

Baseline monitoring should be initiated prior to construction to provide reference conditions for monitoring potential changes to the aquatic habitat and communities (fish community where permitted by the MNR and benthic macroinvertebrate community). Sampling in Sharon Creek should be undertaken in the summer to minimize effects to spring spawning fish while sampling in the unnamed tributaries should occur in the spring as these systems are typically intermittent and will not have flow during the summer months. Aquatic community and habitat information should be collected from monitoring stations located throughout the main branch of Sharon Creek and in all tributaries prior construction. Where indirect habitat is present, data collection should be limited to collection of habitat and benthic macroinvertebrate community data. Monitoring should follow an acceptable protocol (i.e. Ontario Stream Assessment Protocol) in order that methodology can be repeated during future monitoring events to ensure consistency. Monitoring stations should be established independently of locations where fish habitat compensation measures are required to address HADDs due to the different schedules of monitoring and the desire to have pre-construction monitoring stations located in watercourse reaches that will remain undisturbed (i.e. road crossing, buried utilities, etc.) following construction.

Monitoring during construction will be undertaken annually during the summer for Sharon Creek and spring in the unnamed tributaries to ensure that all mitigation (i.e. sediment and erosion control, fish removals, etc) and enhancement measures (i.e. plantings) are being implemented, maintained and assessed for improvement as well as enforced to assure compliance with all approvals and Authorizations. Aquatic community and habitat monitoring should also be undertaken following site grading and should continue each year thereafter until construction is completed. Monitoring should take place at each of the monitoring stations established for baseline monitoring using the same protocol (and version) used in baseline monitoring to evaluate whether construction mitigation measures are effective and identify short term and potentially long term impacts that may be addressed during the construction phase.

Effects monitoring should be initiated following construction to document potential changes to aquatic communities and habitats. The effects monitoring should take place at each of the monitoring stations established for baseline monitoring using the same protocol (and version) used in baseline monitoring. The monitoring should be undertaken the first year following the completion of construction and continue every 3 years for next 9 years, during the summer for Sharon Creek and spring for the unnamed tributaries. The information obtained during baseline and construction monitoring events will be compared to post-construction monitoring events to assess impacts of development and the success of mitigation and enhancement measures.
6.2.10.3 Sharon Creek Floodplain

Baseline monitoring should be initiated prior to construction to provide reference conditions for monitoring potential changes in the composition of wetland vegetation in response to a predicted reduction in surface water runoff arising from the redirection of flow to stormwater management pond #5 and stormwater management pond #4; and, to a predicted reduction in the frequency and severity of flooding events due to the managed release of surface water runoff from stormwater ponds. Of particular interest is the potential for vegetation change on or near the margins of the floodplain since it is these areas that may experience the greatest change in moisture regime. The composition and abundance of species should be recorded in mid-May, Mid-June and mid-August to ensure that all species are recorded.

Effects monitoring should be initiated following construction to document potential changes in the composition of wetland vegetation in response to a reduction in surface water runoff arising from the redirection of flow to stormwater management pond #5 and stormwater management pond #4; and, to a predicted reduction in the frequency and severity of flooding events due to the managed release of surface water runoff from stormwater ponds. The effects monitoring should take place at each of the monitoring stations established for baseline monitoring. The monitoring should be undertaken the first year following the completion of construction and every 3 years thereafter for the next 9 years.

6.2.10.4 Birds

A number of studies have documented the decline of forest birds with increasing urban and suburban development (Canterbury et al. 2000, Blair 1996; Friesen et al. 1995; Dowd 1992, Goldstein et. al. 1986; Bessinger and Osborne 1982; DeGraaf and Wentworth 1981; Aldrick and Coffin 1980; Gavareski 1976). Species found to be particularly sensitive to increasing urbanization include many forest insectivores, neotropical migrants, forest interior species, and ground-nesting species. Forest birds that presently breed within the MESP lands and that may be considered to be sensitive to increasing urbanization include the following: Ruffed Grouse, Wild Turkey, American Woodcock, Pileated Woodpecker, Eastern Wood Pewee, Willow Flycatcher, Eastern Phoebe, Great Crested Flycatcher, Eastern Kingbird, Chestnutsided Warbler, Black-and-white Warbler, American Redstart, and Ovenbird. It is of interest, therefore, to verify whether or not these species will continue to breed within the MESP lands following urbanization. Baseline monitoring should be initiated prior to construction to provide reference conditions for monitoring changes in the composition and abundance of breeding forest birds. Permanent stations for conducting point-count surveys should be established in representative forest conditions across Sharon West and South Sharon. The baseline survey should be conducted in mid-April, mid-May and Mid-June to ensure that all species are recorded.

Effects monitoring should be initiated the year following the initiation of construction to document potential changes in the composition and abundance of breeding forest birds. To be useful, effects monitoring should continue at varying levels of intensity for an extended period time. Consideration should be given to annual monitoring for the first five years following construction; biannual monitoring for the following five years; and, once every five years for the following fifteen years.
7.0 Approvals

It is anticipated that the following approvals and permits will be required and undertaken during the Detail Design phase of this project:

- Local permits will be required from the Town of East Gwillimbury prior to and during the construction of the North-South Collector Road;
- Permit approval from the LSRCA within areas subject to Ontario Regulation 179/06 under the Conservation Authorities Act;
- Approval from the LSRCA within fish habitat in accordance with the Level III Fish Habitat Agreement with Fisheries and Oceans Canada, under the Federal Fisheries Act; and
- Easements from property owners, including Hydro One.

A Permit to Take Water for the development of Sharon West has been approved through the Master Environmental Servicing Plan, and will not be specific to the North-South Collector Road.
8.0 Property Acquisition Requirements

Property will be acquired through the development process.
9.0 References


Soil Engineers Ltd. 2008. A Report to Pagerman Holdings Inc. *Phase I Environmental Site Assessment, Proposed Residential Subdivision, Leslie Street, South of Mount Albert Road, Town of East Gwillimbury*. 


Appendix A: Public and Agency Consultation
# Agency Stakeholder List

<table>
<thead>
<tr>
<th>Title</th>
<th>FirstName</th>
<th>LastName</th>
<th>JobTitle</th>
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</table>
# Class Environmental Assessment

North-South Collector Road

In the Community of Sharon

Title | FirstName | LastName | JobTitle | Company | Address | City | PostalCode |
--- | --- | --- | --- | --- | --- | --- | --- |
Mr. Steven | Mitchell | Facilities, Architecture and Assessment | Ministry of Education | 900 Bay Street, 21st Floor (Mowat Block) | Toronto | M7A 1L2 |
Ms. Dorothy | Moszynski | Central Region EA Coordinator | Ministry of the Environment | 5775 Yonge Street, 9th Floor | Toronto | M2M 4J1 |
Ms. Filomena | Savoia | Director – Central Region Office | Ministry of Labour | 1201 Wilson Avenue, Building E – 2nd Floor | Downsview | M3M 1J8 |
Mr. Marc | Magierowicz | Planner, Community Planning and Development | Ministry of Municipal Affairs and Housing | 777 Bay Street, 2nd Floor | Toronto | M5G 2E5 |
Mr. Bruce | Singbush | Manager, Central Municipal Service Office | Ministry of Municipal Affairs and Housing | Planning Services 2nd floor 777 Bay Street | Toronto | M5G 2E5 |
Mr. Peter | Waring | Area Supervisor | Ministry of Natural Resources | Aurora District York Durham Team Area Strategic Planning Sections 50 Bloomington Road West | Aurora | L4G 3G8 |
Mr. Neil | Downs | Manager of Corporate Policy Unit | Ministry of Tourism and Recreation | Ferguson Block 9th Floor, 77 Wellesley Street West | Toronto | M7A 1N3 |
Ms. Roger | Hanmer | Regional Director – Central Region Operations | Ministry of Transportation | 1201 Wilson Avenue, 2nd Floor Building D | Downsview | M3M 1J8 |
Mr. Paul | Weaver | Operations Director | Ontario Hydro Centre Ontario Electric | Newmarket Service Centre 301 Mulock Drive | Newmarket | L3Y 4X9 |
Mr. David | Pickles | Senior Policy Advisor | Ontario Native Affairs Secretariat | 720 Bay Street 4th Floor | Toronto | M5G 2K1 |
Mr. Garry | Pringle | Environmental Assessment Coordinator | Ontario Realty Corporation | 77 Wellesley Street West, 11th Floor | Toronto | M7A 1N3 |
Mr. Greg | Wall | Senior Real Estate Coordinator | Hydro One Networks | 185 Clegg Road | Markham | L6G 1B7 |

## Regional Contacts

Mr. Tom | Pechkovsky | Manager Planning Services | York Catholic District School Board | Catholic Education Centre, 320 Bloomington Road West | Aurora | L4G 3G8 |
Ms. Jane | Ross | Co-ordinator of Land Use Planning | York Region School Board | Education Centre, 300 Harry Walker Parkway South | Newmarket | L3Y 8E2 |
Mr. Tom | Hogenbirk | Manager, Engineering | Lake Simcoe Region Conservation Authority | PO Box 282, 120 Bayview Parkway | Newmarket | L3Y 4X1 |
Mr. Tom | Charpentie | | Bell Canada | 444 Millard Avenue 2nd Floor | Newmarket | L3Y 2A3 |
Mr. Peter | Roberts | Supervisor of Planning and Records | Consumers Gas | 500 Elgin Mills Road East | Richmond Hill | L5C 5G1 |
Mr. | | | Rogers Television York Region | 395A Mulock Drive | Newmarket | L3Y 8P3 |
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December 23, 2008

To Whom It May Concern,

RE: ORC Initial Comments on Notice of Study Commencement Class EA for the Proposed North South Collector Road. Sharon Community – West of Leslie Street.

Thank you for circulating Ontario Realty Corporation (ORC) on your Notice of Study Commencement. The ORC is the strategic manager of the government's real property with a mandate of maintaining and optimizing value of the portfolio, while ensuring real estate decisions reflect public policy objectives of the government.

Our preliminary review of your notice and supporting information indicates that ORC-managed property could be in the study area. As a result, your proposal may have the potential to impact this property and/or the activities of tenants present on ORC-managed lands.

**Potential Negative Impacts to ORC Tenants and Lands**

**General Impacts**
Negative environmental impacts associated with the project design and construction, such as the potential for dewatering, dust, noise and vibration impacts, and impacts to natural heritage features/habitat and functions, should be avoided and/or appropriately mitigated in accordance with applicable regulations best practices and MNR and MOE standards. Avoidance and mitigation options that characterize baseline conditions and quantify the potential impacts should be present as part of the EA project file. Details of appropriate mitigation, contingency plans and triggers for implementing contingency plans should also be present.

**Impacts to Land holdings**
Negative impacts to land holdings, such as the taking of developable parcels of ORC managed land or fragmentation of utility or transportation corridors, should be avoided. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study.

If takings are suggested as part of any alternative these should be appropriately mapped and quantified within EA report documentation. In addition, details of appropriate mitigation and or next steps related to compensation for any required takings should be present. ORC requests circulation of the draft EA report prior to finalization if potential impacts to ORC managed lands are present as part of this study.
Cultural Heritage Issues
If proposed alternatives may impact cultural heritage features on ORC managed lands, we would request that the examination of cultural heritage features be enhanced to include issues such as cultural landscapes, archaeology and places of sacred and secular value.

Potential Triggers Related to ORC’s Class EA

The ORC Class Environmental Assessment (ORC Class EA) applies to a range of realty and planning activities including leasing or letting, planning approvals, selling, demolition and property maintenance/repair. For details on the ORC Class EA please visit the Environment and Heritage page of our website found at [http://www.ontariorealty.ca/What-We-Do/Class-EAs---Consultations.htm](http://www.ontariorealty.ca/What-We-Do/Class-EAs---Consultations.htm) and [http://www.ontariorealty.ca/What-We-Do/Heritage.htm](http://www.ontariorealty.ca/What-We-Do/Heritage.htm). If the ORC Class EA is triggered, consideration should be given to explicitly referring to the ORC’s undertaking in your EA study.

The purchase of ORC lands or disposal of rights and responsibilities (e.g. easement) for ORC lands triggers the ORC’s Class EA. If any of these are being proposed as part of any alternative, please contact the Sales and Marketing Group through ORC’s main line (Phone: 416-327-3937, Toll Free: 1-877-863-9672) at your earliest convenience to discuss next steps.

The undertaking of physical work on ORC lands also triggers the ORC Class EA. If any work is proposed on ORC lands, please contact the undersigned at your earliest convenience to discuss next steps.

Specific Comments

Please note that although the Notice provided some boundaries of the Study Site, ORC requires a more detailed map, to identify any potentially impacts to ORC managed land. Please provide one at your earliest convenience.

Concluding Comments

Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions on the above I can be reached at the contacts below.

Sincerely,

Lisa Myslicki
Environmental Coordinator
Ontario Realty Corporation - Professional Services
1 Dundas Street West,
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M5G 2L5
(416) 212-3768
lisa.myslicki@ontariorealty.ca
July 3, 2009

To Mr. Bob Burdett and Mr. Don Allan

RE: Notice of Public Information Centre (PIC #2) Class EA for Proposed North-South Collector Road in Sharon Community – West of Leslie Street

Thank you for circulating Ontario Realty Corporation (ORC) on your Notice of Public Information Centre. The ORC is the strategic manager of the government's real property with a mandate of maintaining and optimizing value of the portfolio, while ensuring real estate decisions reflect public policy objectives of the government.

As you may be aware, ORC is responsible for managing real property that is owned by the Ministry of Energy and Infrastructure (MEI). Our preliminary review of your notice and supporting information indicates that ORC-managed property is directly adjacent to the study area. As a result, your proposal may have the potential to impact this property and/or the activities of tenants present on ORC-managed lands. Please note that lands managed by Hydro One, on behalf of ORC, are in the study area. Attached please find a map that identifies these properties to assist you in identifying and avoiding potential impacts on ORC-managed lands.

Potential Negative Impacts to ORC Tenants and Lands

General Impacts
Negative environmental impacts associated with the project design and construction, such as the potential for dewatering, dust, noise and vibration impacts, and impacts to natural heritage features/habitat and functions, should be avoided and/or appropriately mitigated in accordance with applicable regulations best practices and Ministry of Natural Resources (MNR) and Ministry of the Environment (MOE) standards. Avoidance and mitigation options that characterize baseline conditions and quantify the potential impacts should be present as part of the EA project file. Details of appropriate mitigation, contingency plans and triggers for implementing contingency plans should also be present.

Impacts to Land holdings
Negative impacts to land holdings, such as the taking of developable parcels of ORC managed land or fragmentation of utility or transportation corridors, should be avoided. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study.

If takings are suggested as part of any alternative these should be appropriately mapped and quantified within EA report documentation. In addition, details of appropriate mitigation and or next steps related to compensation for any required takings should be present. ORC requests circulation of the draft EA report prior to finalization if potential impacts to ORC-managed lands are present as part of this study.
Heritage Management Process & Class Environmental Assessment (EA) Process

Should the proposed activities impact cultural heritage features, on ORC managed lands, a request to examine cultural heritage issues which can include the cultural landscape, archaeology and places of sacred and secular value could be required. The Ontario Realty Corporation Heritage Management Process should be used for identifying and conserving heritage properties in the provincial portfolio (this document can be downloaded from the Heritage section of our website: http://www.ontariorealty.ca/What-We-Do/Heritage.htm). Through this process, ORC identifies, communicates and conserves the values of its heritage places. In addition, the Class EA ensures that ORC considers the potential effects of proposed undertakings on the environment, including cultural heritage.

Potential Triggers Related to MEI’s Class EA

The ORC is required to follow the MEI Class Environmental Assessment Process for Realty Activities Not Related to Electricity Projects (MEI Class EA). The MEI Class EA applies to a wide range of realty and planning activities including leasing or letting, planning approvals, disposition, granting of easements, demolition and property maintenance/repair. For details on the ORC Class EA please visit the Environment and Heritage page of our website found at http://www.ontariorealty.ca/AssetFactory.aspx?did=2240

If the MEI Class EA is triggered, and deferral to another ministry’s or agency’s Class EA or individual EA is requested, the alternative EA will be subject to a critical review prior to approval for any signoff of a deferral by the proponent. The alternative EA needs to fulfill the minimum criteria of the MEI Class EA. When evaluating an alternative EA there must be explicit reference to the corresponding undertaking in the MEI Class EA (e.g., if the proponent identifies the need to acquire land owned by MEI, then “acquisition of MEI-owned land”, or similar statement, must be referenced in the EA document). Furthermore, sufficient levels of consultation with MEI’s/ORC’s specific stakeholders, such as the Ontario Ministry of Natural Resources, must be documented with the relevant information corresponding to MEI’s/ORC’s undertaking and the associated maps. In addition to archaeological and heritage reports, a Phase I Environmental Site Assessment (ESA), on ORC lands should also be incorporated into the alternative EA study. Deficiencies in any of these requirements could result in an inability to defer to the alternative EA study and require completing MEI’s Class EA prior to commencement of the proposed undertaking.

In summary, the purchase of MEI-owned/ORC-managed lands or disposal of rights and responsibilities (e.g. easement) for ORC-managed lands triggers the application of the MEI Class EA. If any of these realty activities affecting ORC-managed lands are being proposed as part of any alternative, please contact the Sales and Marketing Group through ORC’s main line (Phone: 416-327-3937, Toll Free: 1-877-863-9672), and contact the undersigned at your earliest convenience to discuss next steps.
**Specific Comments**

If the project involves an individual EA and the undertaking directly affects all or in part any ORC-managed property, please send the undersigned a copy of the DRAFT Individual EA report and allow sufficient time (minimum of 30 calendar days) for comments and discussion prior to finalizing the report to ensure that all MEI Class EA requirements can be met through the EA study.

**Concluding Comments**

Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions on the above I can be reached at the contacts below.

Sincerely,

Lisa Myslicki  
Environmental Coordinator  
Ontario Realty Corporation - Professional Services  
1 Dundas Street West,  
Suite 2000, Toronto, Ontario  
M5G 2L5  
(416) 212-3768  
lisa.myslicki@ontariorealty.ca
Appendix 1: Location of ORC property
The meeting began with introductions, and a presentation by Bob Burdett and Pam Foster on the background and purpose of the North-South Collector Road EA.

The following summarizes key discussion points during and after the presentation.

It was asked how defined the roadway corridors in the final recommendation will be, and what the right-of-way will be. How far the road alignment will be able to shift between the final recommendation from MMM and the commencement of construction will be at the discretion of the Ministry of the Environment. MMM will prepare approximately three preliminary alignment alternatives.

It was suggested that applicable sections of the Sharon Master Environmental and Servicing Plan (MESP) should appear in an appendix of the EA document. Bob Burdett indicated that some sections of the MESP will be cross-referenced. This EA is only reviewing and confirming the transportation details of the Sharon MESP. Among other things, MMM will consider the location of medians and centre turn lanes.

In a discussion about where the North-South collector road would connect with Green Lane, Dan Terzievski indicated that a 400 metre minimum distance from Leslie Street would be a typical requirement of the Region. In the alignment alternatives, MMM will provide details on proposed intersections with Green Lane and Mount Albert Road.

There was a question of timing for signalized intersections. The Region will need to agree that signals are needed. Dan Terzievski added that signals will be added if warranted.
There was discussion regarding roadway access to proposed school sites, whether there would be direct access and frontage onto the North-South collector road or access only from a local road. This concern may be addressed in the Sharon Village Urban Design Guidelines.

Megan Belore from MNR noted that there are new permitting requirements for Species at Risk. She cautioned that processing a permit can take a while, as it requires Minister sign-off. There was some discussion about requirements regarding Redside Dace habitat.

**Project Schedule**

The project schedule indicates two additional Stakeholder Advisory Committee meetings, to occur in advance of the PICs in April and June. For the April Stakeholder Advisory Committee, MMM Group will:

- Provide preliminary alignment alternatives
- Provide environmental impact information

This material will also be included in the first PIC.

The project schedule indicates the Environmental Study Report will be completed during summer 2009. It was cautioned that Council does not meet often in the summer, and may not be able to receive the Environmental Study Report.

To meet the draft plan approvals June schedule, John Kennedy suggested the second PIC be hosted in May. Others thought May would be too soon. June would remain the date for the second PIC.

**Next Steps**

Bob Burdett presented a review of the next steps. MMM will advise of the next Stakeholder Advisory Committee meeting date in April.

**Action Items:**

- Invite property owners in the PESO lands to join the Stakeholder Advisory Committee
- Ensure an East Gwillimbury planner attends the next Stakeholder Advisory Committee meeting
- Invite representatives from Ladyfield Group to attend the next Stakeholder Advisory Committee meeting
- Include topographic maps for the PIC to help explain the alignments chosen
North South Collector Road Environmental Assessment
Stakeholder Advisory Committee Meeting #2

April 8, 2009
1:30 – 3:00pm
East Gwillimbury Civic Centre
Holland Landing Room

Stakeholder Advisory Committee Meeting attendees:

Don Allan, Town of East Gwillimbury
Carolyn Kellington, Town of East Gwillimbury
Chris Kalimootoo, Town of East Gwillimbury
Andrew Madden, Diral Development Corporation
Dorothy Moszynski, Ministry of the Environment
Faris Georgis, York Region
Eric Gupta, York Region
Rosa Ruffolo, York Region
Jude Tersigni, Menkes
Dan Terzievski, York Region
Templar Trinaistich, Delta Urban Inc.
Bob Burdett, MMM Group
Pam Foster, MMM Group

The meeting began with introductions, and a presentation by Bob Burdett on study updates of the North-South Collector Road EA.

The following summarizes key discussion points during and after the presentation.

There was a question about the width of bike lanes and the general purpose lane, and additional questions about the necessity of the median. These widths, and suggestions for the median, have been determined through the Sharon Master Environmental and Servicing Plan (MESP).

It was noted that it is too early to show the South Sharon Developments Inc. development blocks.

There was discussion on identifying the connection between the North-South and East-West Collector Roads. A separate environmental assessment (EA) will be conducted for the East-West Collector Road. This study will identify a ‘zone’ where the intersection can be located. Without an EA for the East-West Collector Road, the specific location of the intersection cannot be identified.

It was asked if visibility was taken into account at the proposed North-South Collector Road intersection with Green Lane. Bob Burdett indicated that visibility, as well as site distance, proximity to railroad tracks and bridges, and proposed development plans south of Green Lane, were also considered in determining the intersection at Green Lane.
It was asked if it is possible to terminate the North-South Collector at the East-West Collector Road and not continue to Green Lane. It was suggested that this is not a feasible alternative, given the transportation modeling results of the draft Transportation Master Plan. The North-South Collector Road is planned to extend to Green Lane.

There was a discussion regarding the potential transplantation of butternut trees in the study area. *Since the meeting, MMM has confirmed that one Butternut sapling on the Sharon West property will be retained through transplantation and compensation planting. This will require a permit through the Ministry of Natural Resources.*

There was concern regarding the type of fencing to be used in the South Sharon – Green Lane Lands and the potential for garbage dumping at this site. This will be addressed during the detailed design phase; however some level of commitment to fence type can be identified in the EA.

It was asked when the draft Transportation Master Plan (TMP) will be adopted. It is expected that Council will approve the TMP very shortly. It was asked if the timing of the adoption of the TMP impacts the need and justification for the North-South Collector Road. The need and justification is addressed by the Sharon Community Plan, OPA 122. Adoption of the TMP is therefore not required to provide need and justification for the North-South Collector Road.

There was a question about overland flow on the South Sharon – Green Lane Lands, and how it will be impacted by the North-South Collector Road. This has been addressed in the PESO, and the projected land use has been taken into account.

It was requested that stormwater management and watershed information be provided in the final North-South Collector Road EA document.

**Next Steps**
- First PIC, April 15th
- Stakeholder Advisory Committee Meeting #3 – late May/early June

**Action Items:**
- Update presentation and maps based on comment during the meeting
Bob Burdett delivered a presentation on the alternative alignment options, and advised that there is now a fourth alternative road alignment being considered.

The bike lane is displayed as being 1.2 metres wide, plus the gutter. Eric Gupta would prefer the bike lane shown as 1.5 metres and no mention of the gutter.

Dorothy Moszynski asked what map the former environmental protection area was identified on. Bob Burdett said it's not displayed on an MNR map, but had been located on a map prepared by another consulting firm in 2004. Dorothy suggested that the study area be shown on a map.

Bob Koziol presented the advantages and disadvantages of each of the 4 road alignment alternatives. Bob Burdett noted that from a transportation perspective, the new alternative - Alternative 4 - is best. Alternative 1, which proceeds through an Environmental Protection Area is no longer being considered as a possible alignment due to the significant environmental issues.

Dorothy Moszynski asked if we've developed mitigation measures for each alternative. To date, we have not identified specific mitigation measures, but this will be addressed as the study is completed.

It was mentioned that the need exists to identify the connection with the proposed future East-West Collector Road.

Carolyn Kellington asked if the preferred option could have an alignment between the existing Alternatives 2 and 4. Bob Burdett and Bob Koziol both replied that this was possible. Alternative 4 could be shifted to the west to achieve a more desirable angle with the proposed East-West Collector Road.
The posted speed of the North-South Collector Road will be 50km/h.

Andrew Madden noted that he prefers either Alternative 2 or 3. Alternative 4 would be acceptable if the alignment were to start curving south of his property.

Dan Terzievski asked about visibility for drivers approaching Green Lane. Bob Koziol replied that visibility will be acceptable with Alternatives 2 and 3, but Alternative 4 provides the best visibility conditions.

Dorothy Moszynski asked about surface water management for all road alignment alternatives being considered. Bob Koziol replied that storm sewers and oil separators will be used.

Templar Trinaistich asked if representatives from Menkes had been notified of the new fourth alternative. Bob Burdett replied that he has attempted to contact Menkes by phone and e-mail, but at the time of the meeting had not reached Menkes. *Since the SAC meeting, Bob has connected with Jude Tersigni from Menkes. Jude’s primary concern regarding Alternative 4 is the connection with the proposed East-West Collector Road.*

Dorothy Moszynski asked that “DRAFT” be put back into all references to the East Gwillimbury Transportation Master Plan.

Eric Gupta questioned the timing of the submission of the Town’s Transportation Master Plan and the North-South Collector Road study. He noted that this study should be submitted after the Transportation Master Plan.

Dorothy Moszynski suggested that comments on potential effects and mitigation measures be added to the evaluation.

Bohdan Kowalyk asked if there was only one Butternut tree in any of the proposed road alignment alternatives. Bob Burdett replied that there is only one that may require transplantation. Bohdan said that an evaluation of the tree is required to obtain an MNR permit for transplantation. Bohdan asked if MNR had received the MESP document.

Dorothy Moszynski suggested showing two alternatives for the creek crossing portion of the North-South Collector Road, with one alternative avoiding the butternut. Bob Burdett explained that the alternative for the MESP portion has been determined and reviewed through the MESP studies and that the crossing had been selected at the site of an agricultural ford to minimize environmental effects.

**Next Steps**

- Modify Alternative 4 and demonstrate the connection to the proposed East-West Collector Road
- Revise display boards based on comments from SAC meeting #3
- Place revised display boards on the ftp site
- Host final PIC - June 23rd
- Submit Environmental Study Report
NOTICE TO SHARON RESIDENTS of Study Commencement
Class Environmental Assessment for Proposed North South Collector Road, Sharon Community - West of Leslie Street

This Class EA undertaking is for the proposed North South Collector road running from an intersection with Green Lane West, between the East Holland River and Leslie Street northward through the Sharon West community to cross Mount Albert Road and proceed to the location of the proposed Thompson Drive extension to connect to Leslie Street. The route of much of the proposed road, along with potential impacts and mitigation, has been identified through the Secondary Planning Process and through the MESP studies.

The environmental investigations will review alternative routes for the proposed North South Collector Road in the Sharon Community.

The Class EA for the proposed Collector Road is being undertaken in accordance with the requirements of the Municipal Class Environmental Assessment (June 2000, as amended in 2007). The project is currently being planned under “Schedule C”.

Public input and comment are invited for incorporation into the planning and design of this project. Public Consultation Centres will be scheduled to provide additional information and review aspects of the project, including alternatives being considered, and to answer questions regarding the project. Separate notification will be provided for this meeting.

The Town of East Gwillimbury is the proponent for this undertaking. If you wish to comment on the Class EA for the proposed North South Collector Road in Sharon Community - West of Leslie Street, please contact the Town’s Consultant, MMM Group, or the Town at the following addresses:

Bob Burdett, B.Sc.  
Senior Project Manager  
MMM Group Ltd.  
100 Commerce Valley Drive West  
Thornhill, ON  
Tel. (905) 882-4211 ext. 2223  
Fax. (905) 882-7276  
E-mail: BurdettB@mmm.ca

Don Allan  
Manager of Development Engineering  
The Town of East Gwillimbury  
19000 Leslie Street  
Sharon, ON L0G 1V0  
Tel. (905) 478-3819  
E-mail: dallan@eastgwillimbury.ca
NOTICE OF PUBLIC INFORMATION CENTRE
Class Environmental Assessment for Proposed North South Collector Road. Sharon Community – West of Leslie Street

This Class EA undertaking is for the proposed North South Collector road running from an intersection with Green Lane West, between the East Holland River and Leslie Street northward through the Sharon West community to Mount Albert Road. The route of much of the proposed road, along with potential impacts and mitigation, has been identified through the Secondary Planning Process and through the MESP studies. The environmental investigations will review alternative routes for the proposed North South Collector Road in the Sharon Community.

The Class EA for the proposed Collector Road is being undertaken in accordance with the requirements of the Municipal Class Environmental Assessment (June 2000, as amended in 2007). The project is currently being planned under "Schedule C".

A Public Information Centre has been scheduled to provide additional information on the project, including alternatives being considered.

Public Information Centre
Wednesday, April 15, 2009
6:00 – 9:00 p.m.
East Gwillimbury Civic Centre
19000 Leslie Street, Sharon, ON
Holland Landing Room

If you wish to comment on the Class EA for the proposed North South Collector Road in Sharon Community – West of Leslie Street, please contact the Town's Consultant, MMM Group, or the Town at the following addresses:

Bob Burdett, B.Sc.
Senior Project Manager
MMM Group Ltd.
100 Commerce Valley Drive West
Thornhill, ON
Tel. (905) 882-4211 ext. 2223
Fax. (905) 882-7276
E-mail: BurdettB@mmmg.ca

Don Allan
Manager of Development
Engineering
The Town of East Gwillimbury
19000 Leslie Street
Sharon, ON L0G 1V0
Tel. (905) 478-3819
E-mail: dallan@eastgwillimbury.ca

This notice issued March 2009
North-South Collector Road Environmental Assessment

Local Roadway Improvements Recommended in the Draft Transportation Master Plan, 2009
Key Findings from Draft Transportation Master Plan

North-South Collector Road

- **Projected Impact on Future Traffic:**
  Projected to experience high traffic emanating from both local developments and communities west of the Town’s borders; serves as an alternative to Second Concession Road and Leslie Street

- **Potential socio-economic & environmental impacts:**
  Special measures may be necessary to mitigate the impacts on one woodlot and two creeks adjacent to the proposed road

Justification for Project

- The North-South Collector Road will provide direct access to the Sharon and Queensville communities and serve as an alternative to Leslie Street and Second Concession
- Sufficient local traffic, population and employment growth projected in the next five years to warrant the southern portion of the proposed road
- The North-South Collector Road was identified in the Sharon Community Plan, OPA 122

Phasing:
- Green Lane to Mount Albert Road 2011 - 2013
- Mount Albert Road to Doane Road 2014 - 2016
- *This Class EA addresses only Green Lane to Mount Albert Road*
Municipal Class EA Undertakings – Project Variations

- **Schedule A:**
  - Minimal environmental effects
  - Projects are pre-approved
  - Example: normal or emergency operational and maintenance activities
- **Schedule A+:**
  - Projects are pre-approved, however the public is to be advised prior to project implementation
  - Example: construction of sidewalks
- **Schedule B:**
  - Improvements and minor expansions to existing facilities
  - Potential for some adverse environmental impacts
  - Example: construction of new roads with a cost less than $2.2 million
- **Schedule C:**
  - The construction of new facilities and major expansions to existing facilities
  - Example: construction of new roads with a cost greater than $2.2 million

The North-South Collector Road falls under Schedule C

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**The Municipal Class EA**

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
<th>PHASE 4</th>
<th>PHASE 5</th>
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<td>PROBLEM OR OPPORTUNITY</td>
<td>ALTERNATE SOLUTIONS</td>
<td>ALTERNATE DESIGN CONCEPTS FOR PREFERRED SOLUTION</td>
<td>ENVIRONMENTAL STUDY REPORT</td>
<td>IMPLEMENTATION</td>
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* Phases 3 and 4 for any Schedule C Project included in the Master Plan must be completed prior to implementation
North-South Collector Study Area

Sharon Village
South Sharon – Green Lane Lands

Alternative 1
- Maintains the grid pattern of the road network
- Proceeds through an environmental protection area and creates a remnant parcel

Alternative 2
- Operates with a radii that meets design criteria
- Potential to meet the proposed East-West Collector Road at a skewed angle

Alternative 3
- Potential to meet the proposed East-West Collector Road at a 90 degree angle
- Permits development on both sides of the road
- Operates with radii that are less than design standard

Road Characteristics

- A link in the local road network to serve local community
- The road will have two travel lanes of 3.5 m and two on-road bicycle lanes of 1.2 m (plus gutters)
- A wider right-of-way will be provided at key intersections to accommodate a raised centre median
- On-street parking will be prohibited
- Concrete sidewalks in the boulevard on both sides
- Allowance for future transit
**Potential Environmental Impacts**

- Crossing of Sharon Creek and Tributary No.6
  - Located to maximize right-angle crossing
  - Minimize loss of wet land and forest vegetation
  - Sharon Creek crossing occurs at an existing farm ford across the creek
  - Open bottom culverts are proposed to minimize affect on fish habitat

- Impact to Butternut sapling at Sharon Creek crossing will be retained through transplantation and compensation planting

- The proposed route avoids the Butternut trees on the hedgerow along the Sharon West / South Sharon – Green Lane property line boundary

- Virginia Stickseed population at Sharon Creek crossing will be retained through transplantation

**Evaluation Criteria**

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<th>Constructability of the alternative</th>
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<td>Operation and maintenance associated with the alternative</td>
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<td>Approval requirements</td>
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<td>Effects on ambient noise levels</td>
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<td>Geotechnical effects</td>
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<td>Financial</td>
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<td>Operating and maintenance costs</td>
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<td>Natural Environment</td>
<td>Effects on groundwater</td>
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<td>Effects on surface water, aquatic habitat and biota</td>
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<td>Effects on the terrestrial environment and biota</td>
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### Evaluation Criteria

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<th>Social Environment</th>
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<td>Effects of traffic operations</td>
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<td>Effects on approved/planned land uses</td>
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<td>Effects on agricultural resources</td>
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<td>Cultural Environment</td>
<td>Effects to archaeological resources</td>
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<td>Effects to built heritage features/cultural landscape units</td>
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<td>Community Planning</td>
<td>Conformity with the Places to Grow, ORMCP and Greenbelt Plan</td>
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<td>Disturbing or altering existing community character to structure</td>
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<td>Conforming to approved local, regional and provincial plans and policies</td>
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### Next Steps

- Engineering review of alignment in MESP lands
- Identification and evaluation of alternative routes on South Sharon – Green Lane Lands
- Selection of preferred alternative on South Sharon – Green Lane Lands
- Engineering review of preferred alternative
- Public Information Centre #2, presentation of recommended alternative – June, 2009
- Completion of Environmental Study Report – Summer 2009
How to Get Involved

For further information on the study, please contact:

**Bob Burdett, B.Sc.**  
Senior Project Manager  
MMM Group Ltd.  
100 Commerce Valley Drive West  
Thornhill, ON L3T 0A1  
Tel. (905) 882-4211 ext. 2223  
E-mail: BurdettB@mmm.ca

**Don Allan**  
Manager of Development Engineering  
The Town of East Gwillimbury  
19000 Leslie Street  
Sharon, ON L0G 1V0  
Tel. (905) 478-3819  
E-mail: dallan@eastgwillimbury.ca
NOTICE OF PUBLIC INFORMATION CENTRE (PIC #2)
Class Environmental Assessment for Proposed North-South Collector Road in Sharon Community – West of Leslie Street

This Class EA undertaking is for the proposed North-South Collector Road running from an intersection with Green Lane West, between the East Holland River and Leslie Street northward through the Sharon West community to Mount Albert Road. The route of much of the proposed road, along with potential impacts and mitigation, has been identified through the Secondary Planning Process and through the MESP studies. Environmental investigations have reviewed alternative routes for the proposed North-South Collector Road in the Sharon Community.

The Class EA for the proposed North-South Collector Road is being undertaken in accordance with the requirements of the Municipal Class Environmental Assessment (October 2000, as amended in 2007). The project is currently being planned under “Schedule C”.

The first Public Information Centre was held in April 2009 to introduce the study and present alternative road alignment options. The second Public Information Centre will present an evaluation of alternatives and the recommended road alignment. The second Public Information Centre will be held:

Tuesday, June 23, 2009
5:00 – 7:00 p.m.
East Gwillimbury Civic Centre
19000 Leslie Street, Sharon ON
Holland Landing Room

If you wish to comment on the Class EA for the proposed North South Collector Road in the Sharon Community – West of Leslie Street, please contact the Town’s Consultant, MMM Group, or the Town at the following addresses:

Bob Burdett, B.Sc.
Senior Project Manager
MMM Group Ltd.
100 Commerce Valley Drive West
Thornhill, ON
Tel. (905) 882-4211 ext. 2223
Fax. (905) 882-7276
E-mail: BurdettB@mmm.ca

Don Allan
Manager of Development Engineering
The Town of East Gwillimbury
19000 Leslie Street
Sharon, ON L0G 1V0
Tel. (905) 478-3819
E-mail: dallan@eastgwillimbury.ca

This notice issued June 2009
North-South Collector Road
Class Environmental Assessment

Local Roadway Improvements
Recommended in the Draft Transportation Master Plan, 2009
Key Findings from Draft Transportation Master Plan

North-South Collector Road

- **Projected Impact on Future Traffic:**
  Projected to experience high traffic volumes originating from both local developments and communities west of the Town’s borders; serves as an alternative to Second Concession Road and Leslie Street

- **Potential socio-economic & environmental impacts:**
  Special measures may be necessary to mitigate the impacts on one woodlot and two creeks adjacent to the proposed road

---

Justification for the Project

- The North-South Collector Road will provide direct access to the Sharon and Queensville communities and serve as an alternative to Leslie Street and Second Concession
- Sufficient local traffic, population and employment growth projected in the next five years to warrant the southern portion of the proposed road
- The North-South Collector Road was identified in the Sharon Community Plan, OPA 122

**Phasing:**
- Green Lane to Mount Albert Road 2011 - 2013
- Mount Albert Road to Doane Road 2014 - 2016
- *This Class EA only addresses the Green Lane to Mount Albert Road section*
Road Characteristics

- A key link in the local road network to serve local community
- The road will have two 3.5 m wide travel lanes plus 1.5 m wide on-road bicycle lanes
- A wider right-of-way will be provided at key intersections to accommodate a raised centre median and turn lanes
- On-street parking will be prohibited
- Concrete sidewalks in the boulevard on both sides
- Allowance for future transit service

North-South Collector Study Area
Sharon Village

Alternative 1
- Maintains the grid pattern of the road network
- Proceeds through an environmental protection area and creates a remnant parcel

Alternative 2
- Operates with radii that are minimal design standard

Alternative 3
- Operates with radii better than minimal design standard
- Potential to meet the proposed East-West Collector Road at a 90 degree angle

Alternative 4
- Provides excellent horizontal geometry

South Sharon – Green Lane Lands
South Sharon – Green Lane Lands
Potential North-South and East-West Collector Intersections

Potential Environmental Impacts

- Crossing of Sharon Creek and Tributary No.6
  - Located to maximize right-angle crossing
  - Minimize loss of wetland and forest vegetation
  - Sharon Creek crossing occurs at an existing farm ford across the creek
  - Open bottom culverts are proposed to minimize effect on fish habitat
- Impact to Butternut sapling at Sharon Creek crossing may be mitigated through transplantation and compensation planting
- The proposed route avoids the Butternut trees in the hedgerow south of Sharon West
- Virginia Stickseed population at Sharon Creek crossing may be retained through transplantation
## Evaluation Criteria

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<tbody>
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<td>Technical</td>
<td>Roadway Geometry</td>
<td>Provides excellent horizontal geometry. Can intersect with proposed future East-West Collector Road in an acceptable manner.</td>
<td>Designed with radii and tangents that are at minimum design values. Intersection with proposed East-West Collector Road may be skewed.</td>
<td>Designed with radii and tangents that are better than minimum design values. Can intersect with proposed East-West Collector Road within acceptable range.</td>
<td>Provides excellent horizontal geometry. Would result in a skewed connection with East-West Collector Road, creating an unacceptably skewed East-West Collector Road alignment.</td>
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<td>Operation and maintenance requirements associated with the alternative</td>
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<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
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<td>Approval requirements</td>
<td>Roadway bisects environmentally sensitive woodlot. May not be approved by agencies.</td>
<td>No additional environmental permits required.</td>
<td>No additional environmental permits required.</td>
<td>No additional environmental permits required.</td>
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<td>Geotechnical effects</td>
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### Financial

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<td></td>
<td>Operating and maintenance costs</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
<td>Similar for all alternatives</td>
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</tbody>
</table>

### Natural Environment

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effects on groundwater</td>
<td>Moderate</td>
<td>Low-Moderate</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Effects on surface water, aquatic habitat and biota</td>
<td>Moderate</td>
<td>Minimal</td>
<td>Minimal</td>
<td>Minimal</td>
</tr>
<tr>
<td></td>
<td>Effects on the terrestrial environment and biota</td>
<td>High</td>
<td>Minimal</td>
<td>Minimal</td>
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</table>

### Cultural Environment

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
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<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effects to archaeological resources</td>
<td>Minimal for Sharon Village</td>
<td>Minimal for Sharon Village</td>
<td>Minimal for Sharon Village</td>
<td>Minimal for Sharon Village</td>
</tr>
<tr>
<td></td>
<td>Effects to built heritage features/cultural landscape units</td>
<td>Minimal for Sharon Village</td>
<td>Minimal for Sharon Village</td>
<td>Minimal for Sharon Village</td>
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</tr>
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### Community Planning

<table>
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<tr>
<th>Category</th>
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<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conformity with the Places to Grow, ORMCP and Greenbelt Plan</td>
<td>Conforms</td>
<td>Conforms</td>
<td>Conforms</td>
<td>Conforms</td>
</tr>
<tr>
<td></td>
<td>Disturbing or altering existing community character or structure</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
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</tr>
<tr>
<td></td>
<td>Conforming to approved local, regional and provincial plans and policies</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>
## Evaluation Criteria

<table>
<thead>
<tr>
<th>Category</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Environment</td>
<td>Disruption to current agricultural activities. Equestrian operation may be impacted</td>
<td>Disruption to current agricultural activities. Equestrian operation may be impacted</td>
<td>Disruption to current agricultural activities. Equestrian operation may be impacted</td>
<td>Disruption to current agricultural activities. Equestrian operation may be impacted</td>
</tr>
<tr>
<td>Effects on traffic operations</td>
<td>Moderate; would result in additional intersection at Green Lane; will conform with design standards, and improve traffic flow out of Sharon</td>
<td>Minimal; would result in additional intersection at Green Lane; will conform with design standards, and improve traffic flow out of Sharon</td>
<td>Minimal; would result in additional intersection at Green Lane; will conform with design standards, and improve traffic flow out of Sharon</td>
<td>Minimal; would result in additional intersection at Green Lane; will conform with design standards, and improve traffic flow out of Sharon</td>
</tr>
<tr>
<td>Effects on approved/planned land uses</td>
<td>Impacts to existing woodlot</td>
<td>Minimal; no impacts to existing woodlot, constrains property east of woodlot</td>
<td>Minimal; no impacts to existing woodlot, less constriction east of woodlot</td>
<td>Moderate; no impacts to existing woodlot, but adversely impacts planned land uses</td>
</tr>
<tr>
<td>Effects on agricultural resources</td>
<td>Minimal</td>
<td>Minimal</td>
<td>Minimal</td>
<td>Minimal</td>
</tr>
</tbody>
</table>

### Results of Evaluation

- The preferred alignment is Alternative 3
- While Alternatives 2, 3, and 4 appear similar in the evaluation matrix, Alternative 3 provides better land use planning opportunities.
- In terms of roadway geometry, Alternative 4 has better roadway geometry, but Alternative 3 has acceptable roadway geometry and meets the proposed East-West Road alignment in a more acceptable manner.
Next Steps

• Review comments from June Public Information Centre
• Completion of Environmental Study Report
  – Fall 2009

How to Get Involved

For further information on the study, please contact:

Bob Burdett, B.Sc.
Senior Project Manager
MMM Group Ltd.
100 Commerce Valley Drive West
Thornhill, ON L3T 0A1
Tel. (905) 882-4211 ext. 2223
E-mail: BurdettB@mmm.ca

Don Allan, CET, CST
Manager of Development Engineering
The Town of East Gwillimbury
19000 Leslie Street
Sharon, ON L0G 1V0
Tel. (905) 478-3819
E-mail: dallan@eastgwillimbury.ca
North-South Collector Road Class Environmental Assessment
Summary of Public Consultation Events

Two Public Information Centres (PIC) were held during the course of the Class Environmental Assessment for the proposed North-South Collector Road in Sharon.

The first Public Information Centre was held on April 15, 2009 from 6-9pm at the East Gwillimbury Civic Centre, Holland Landing Room. There were 20 residents in attendance. Three comment sheets were returned. The comments provided are:

1. Do you have any comments or information you’d like to provide about this project?

   - I think it would be much safer and encourage bike riding if there was a separate bicycle path. Then people from the north could access the very nice trail south from Green Lane through Newmarket. I presently ride on Leslie Street to reach the path and do not feel safe beside the cars. Bicycle lanes are not safe because cars turning must cross the path.

   - Any road building should allow east-west trails to cross or north-south to cross.

   - I think you should not do alternative #1. I can’t really speak to the difference between #2 and #3.

2. We sincerely hope that this Public Information Centre gave you the opportunity to learn about this study, and to provide comments. Do you have any comments for us about how the meeting was run, or how we could have improved the meeting?

   - Good informal meeting

The second and final Public Information Centre was held on June 23, 2009 from 5-7pm at the East Gwillimbury Civic Centre, Holland Landing Room. There were 25 attendees. Two comment sheets were returned. The comments provided are:

1. Do you have any comments or information you’d like to provide about this project?

   - I would like consideration to be given to making the north-south collector road 4 lanes. Protecting the Sharon Village should be most important, never allowing Leslie to become a 4 lane highway. Plan adequately for future growth.

   - From the display info, I would say that Alternative 1 is the least desirable – in terms of effects on groundwater, woodlots, environment and residential area.
2. We sincerely hope that this Public Information Centre gave you the opportunity to learn about this study, and to provide comments. Do you have any comments for us about how the meeting was run, or how we could have improved the meeting?

- Plenty of information and personnel on hand to answer questions. Thank you.
- Well set up presentation.

Several residents of Leslie Street attended and expressed concern over the decision to make the North-South Collector Road two lanes instead of four.

Bohdan Kowalyk of the Ministry of Natural Resources attended and commented that no Butternut trees are affected by the proposed road. He said that MNR typically requires a 25 m setback from the ROW and that while the 10-15 m setback "seemed all right" he still had to make a recommendation on dropping the setback from 25 m to the actual distance. Bohdan's biggest concern was with the lots encroaching on the trees.
## North-South Collector Road EA - Comments Received

<table>
<thead>
<tr>
<th>Comment – author and date</th>
<th>Comment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 23, 2009 R. Craig Doran</td>
<td>On behalf of the Leslie Street Community Group, I have been asked to convey our concern of the capacity of the North-South Collector Road, that is of being 2 lanes and not 4 lanes. We can appreciate that the 404 is to be extended and that the 2nd Concession is planned to be 4 lanes, however with the elimination of the Sharon By-pass from the former Official Plan, we are concerned with the traffic on Leslie street with future development. It has been agreed by the Town to keep Leslie Street 2 lanes. However, the town has also recommended an increased density in Sharon including north of Farr Avenue and also when Queensville development takes off, Leslie Street will most likely be up to capacity again. Since the by-pass was eliminated, if the north-south collector is not 4 lanes and Leslie Street is at capacity, what options would the Region have? The Region could make Leslie Street 4 lanes and there goes the heritage village concept of Sharon. It is raw land presently west of Sharon. Why not make the Collector 4 lanes for a safety factor to preserve the future Leslie Street Streetscaping plans in which the EA to be completed in 2015. Also, the 4 lanes may be a safety factor for west Sharon residents in case of emergencies.</td>
<td></td>
</tr>
<tr>
<td>R. Craig Doran July 2, 2009</td>
<td>As a follow-up to our correspondence on June 23rd and attending the open meeting last Tuesday we wish to add the following comments regarding the Sharon North-South Collector. Regardless of the formal designation, could the actual usage be defined an arterial road? Our research indicates that a road with a limited number of street intersections along the route and no private entrances is really an arterial road. If we understand the plans correctly, there will only be a limited number of street intersections along the route and no private entrances. Further we understand that the characteristics of an arterial road include traffic movement as the primary consideration with land access a secondary consideration. For collector road, traffic movement and land access we understand are of equal importance. Future residents may have a concern with the speed regardless of what is posted. Would traffic calming designs be required to be incorporated and how will pedestrians cross the road? We briefly consulted with a traffic engineer. He concurred that 4 lanes would be beneficial to accommodate future traffic demand. He made a comment, that we had not considered. The suggestion was that if only 2 lanes were constructed there could be a right-away to accommodate 4 lanes if required in the future. This in our opinion would be a solid engineering decision. One of our members of the Leslie Street Community Group also recommended that bike lanes be incorporated into the design. What stage are we at in the decision making process? Thank you in advance for your assistance in this matter.</td>
<td></td>
</tr>
<tr>
<td>R. Craig Doran July, 2009</td>
<td>On behalf of the Leslie Street Community Group, I have been asked to convey our concern of the capacity of the North-South Collector Road, that is of being 2 lanes and not 4 lanes. It has been agreed by the Town to keep Leslie Street 2 lanes. However,</td>
<td>Response from Wayne Hunt, July 17, 2009: Hi Craig Please forward all requests for</td>
</tr>
</tbody>
</table>
the town has also recommended an increased density in Sharon including north of Farr Avenue and also when Queensville development takes off, Leslie Street will most likely be up to capacity again. Since the by-pass was eliminated, if the north-south collector is not 4 lanes and Leslie Street is at capacity, what options would the Region have? The Region could make Leslie Street 4 lanes and there goes the heritage village concept of Sharon. Regardless of the formal designation, could the actual usage be defined an arterial road? Our research indicates that a road with a limited number of street intersections along the route and no private entrances is really an arterial road. If we understand the plans correctly, there will only be a limited number of street intersections along the route and no private entrances. Further we understand that the characteristics of an arterial road include traffic movement as the primary consideration with land access a secondary consideration. For collector road, traffic movement and land access we understand are of equal importance. Future residents may have a concern with the speed regardless of what is posted. Would traffic calming designs be required to be incorporated and how will pedestrians cross the road?

We briefly consulted with a traffic engineer. He concurred that 4 lanes would be beneficial to accommodate future traffic demand. He made a comment, that we had not considered. The suggestion was that if only 2 lanes were constructed there could be a right-away to accommodate 4 lanes if required in the future. This in our opinion would be a solid engineering decision.

| R. Craig Doran | Thanks Wayne, I understand that Don is on holidays and we are comfortable to wait for his return, we were just inquiring about the status. The paper did mention that we could deal with Don or the consultant and we decided to work together with Don because we know him, he has many years experience with the Town and we wish to work in conjunction with the Town in our communications to maintain a positive working relationship. We also understand that our correspondence was forwarded by Don to the consultant and he has acknowledged this to us and it is appreciated. During our presentation at Monday's night special council meeting the issue was raised by us again. Another comment made in our presentation, that was not previously noted in past correspondence to Don was that the design is based on the MESP and are the numbers accurate? On Monday night the amendment to increase the density by 33% for the Village of Sharon was passed. What about Queensville, Mount Albert, Holland Landing, are their densities going to increase with the introduction of the Provincial growth legislation? I understand and appreciate that to design road systems projections are required to be estimated, however have the projections changed. The numbers changed by 33% in one night for the Village or Sharon which will have a direct impact with traffic on Leslie Street. We are concerned with the north/south traffic flow and the possibility of the widening of Leslie Street to 3 or 4 lanes. The only correspondence that was forwarded by Don to us is from a previous EA and review of OP Amendment No. 55 dated December, 17, 2001 in which it was passed by the Town to allow for the provision of a center lane within the existing Leslie Street road allowance. Our group was against this and to my understanding was successful for the Mayor and Council to change this as noted in 2001 and changes were made and included in section 6.4 of the design. |
| July, 2009 | Response from Bob Burdett, July 17, 2009: Mr. Doran, We are responding to your earlier correspondence. Two lanes, rather than four, are recommended for the future North-South Collector Road. This Collector Road is intended to be a residential, not a commercial or industrial roadway. Access to the Collector is provided by the local street system, since there is no direct access from the adjacent residential properties. However, there will be full moves access from the abutting commercial developments. The Collector Road will have no on-street parking allowed, which increases the carrying capacity of the roadway and also facilitates bicycle movement. As you will recall from the display materials at the Public Information Centre, bike lanes are already included in the road design. In response to your email dated July 2, we agree that the characteristics of an arterial road include traffic movement as the primary consideration. In |
OP 122. It includes that there should only be two lanes through Leslie Street. Further it notes it shall be only two lanes of through traffic and that any change would relate only to turning lanes at intersections. We just want to emphasize to the consultant that the design capacity of Leslie Street is lower if it does not have a continuous center turning. It could have been interpreted by the consultant that Leslie Street is planned to be 3 lanes, and was passed in 2002. In our opinion, OP 122 has Leslie Street as 2 lanes except for turning lanes at intersections.

We are in the opinion that the mid block collector, regardless of the formal designation, the actual usage is an arterial road. In our opinion, there are just intersections along the route and no private entrances. We are in the opinion that it should be constructed as four lanes. If only constructed as 2 lanes have the right-of-way for widening to 4 lanes. At the same time, work in pike paths and a medium strip if warranted. We briefly consulted with a traffic engineer. He concurred that 4 lanes of the mid block collector would be beneficial to accommodate future traffic demand. Councilor Morton also inquired about the idea of the four lanes at Monday’s meeting and the Carolyn referred to the EA in her response. Looking forward in working with Don when he returns from his holidays. Thank you Wayne for following up.

Regards,
Craig
York Region have explicitly stated that Leslie Street will continue to operate with only two through lanes of traffic, with the future provision of left turn lanes at specific intersections. As outlined in Official Plan Amendment 122, Sections 6.3.3 and 6.4, it is the intent of the Town and Region to maintain the character and function of this Heritage Policy District Area.

<table>
<thead>
<tr>
<th>R. Craig Doran</th>
<th>Mr. Burdett</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 31, 2009</td>
<td>Thank you for your reply. The Leslie Street Community Group has requested me to respond. We are not professional traffic planners but we do anticipate problems with the north/south traffic. We just want to point out some items that may have not been taken into consideration in the design process. We appreciate your dialogue and wish to proceed in a positive direction. Please take the best and leave the rest.</td>
</tr>
<tr>
<td></td>
<td>“In response to your email dated July 2, we agree that the characteristics of an arterial road include traffic movement as the primary consideration. In contrast to the design for the North-South Collector Road, arterial roads are designed to traverse an entire municipality and connect to other municipalities or regions.”</td>
</tr>
<tr>
<td></td>
<td>The proposed Collector runs to Doane Road to the north and Green Lane to the south. Doane Road is the south end of Queensville (which we have been told will have over 30,000 people) and Green Lane is noted in the Draft York Region Official Plan as a Regional Corridor. The road will connect 2 entire municipalities. Newmarket to the south, as you are aware is also a Regional Center in the York Region OP.</td>
</tr>
<tr>
<td></td>
<td>Our research indicates that there was also a transportation study done by Cansult Ltd. many years ago. We do not have access to this study but it has been noted to us that it may have indicated that Highway 404 would have to be at least 6 lanes and Woodbine would have to be 4 lanes to accommodate just the Queensville traffic. At this time we cannot confirm this and if this is not true please totally disregard the comment. However, widening Woodbine, at this time, in our opinion, would do not significantly effect the north/south traffic because it is east of the 404. For example, by observation when the 404 was only to Aurora Road, traffic on Woodbine north of Aurora Road was extremely heavy. When the 404 was extended to Davis Drive, the observed traffic was dramatically reduced. North/south traffic west of the 404 continues to be a major concern for our group. To keep the Village of Sharon, Leslie Street is required to remain 2 lanes and not widened. We are pleased that the Town is on side that it wants to remain 2 lanes through Sharon, however, currently it is a Regional Road and technically to our understanding they could widened it. If another lane in the future is required in the village of Sharon, for the best interest in saving the village core, it is our opinion it would be the better decision to widen the North/South collector.</td>
</tr>
<tr>
<td></td>
<td>“While the North-South Collector is not a high speed arterial, it will provide some measure of relief for Leslie Street.”</td>
</tr>
<tr>
<td></td>
<td>In our opinion it will be the opposite. Leslie Street will become the measure of relief for the mid block collector if it is not 4 lanes or able to be widened to 4 lanes.</td>
</tr>
<tr>
<td></td>
<td>“With the extension of Highway 404, a new interchange at Doane Road...”</td>
</tr>
</tbody>
</table>
and the widening of Second Concession to four lanes, the transportation analysis results indicate that two lanes are sufficient for the traffic expected on the North-South Collector Road. Additionally, because it does not extend outside of East Gwillimbury, the North-South Collector Road does not provide the same connections beyond the Town as either Highway 404 or Second Concession. It is, therefore, anticipated that commuters from outside of Sharon would choose to use either the 404 or Second Concession, particularly with the new interchange which will be constructed at Doane Road and Highway 404 as noted previously.

Finally, traffic is also expected to be diverted from Leslie onto both the 404 or Second Concession which will provide additional relief to Leslie Street.

Transportation analysis based on what numbers? On July 13th, the Mayor and Councillors passed an amendment to increase the density of Sharon by 33% (approximately 9,000 to 12,000 people). That is the current OP, what if they further increase the numbers in future OP's. We assume that these are not in your numbers that your analysis is based on or are they? It is our understanding that by 2015, and for each year thereafter, a minimum of 40% of all residential development will occur within the built up area as defined by the Province’s “Places to Grow”. We just want to clarify that your assessment is based on accurate numbers. How old is your transportation analysis?

In addition, it is our understanding that 12,000 residents would generate about 3,000 vehicle trips during the peak hours, total both directions. Assuming a two thirds/one third directional split results in about 2000 vehicles per hour in the peak direction. The theoretical capacity for a one lane road is 2000 vehicles per hour. Therefore, you would need at least two lanes in the peak direction to serve 12,000 people. Question: does the Leslie Street count as one of these roads?

Although the Collector does not extend outside EG, commuters may choose to use it depending where they are going to. The road currently is designed to end at Green Lane. For example, if they are going to the Go Station, it may end up easier than the 2nd concession if you are coming from Queensville (Go Station is east of the 2nd). Also, if they are travelling to Newmarket and they going to the 404 plaza, bigger box stores on Leslie south of Davis and also the beer or liquor store (all in Newmarket). Queensville residents may use Leslie Street and the collector because the 404 and 2nd concession is a longer route. Holland Landing residents may also not choose to use the 2nd concession to access east Newmarket or the 404 at Green lane. We understand that the 2nd is currently 2 lanes, however it is our understanding that more Holland Landing and Queensville residents are currently using Leslie Street rather than the 2nd. Also, we understand that there was talk at one time to extend the NS Collector south of Green Lane. We understand that Metrus owns the land. It may be a natural extension into their land. If so, then it would have been extended out of East Gwillimbury.

The final comment, “traffic is also expected to be diverted from Leslie onto both the 404 or Second Concession which will provide additional relief to Leslie Street”. It is our understanding that this was the Town’s argument when the by-pass from the former OP, which our group was totally against. In the short term we would agree that there will be a relief in traffic, however, it is our opinion, before your 25 year design period is over, Leslie Street would be to capacity, especially if there is only a 2 lane collector.
### Class Environmental Assessment
#### North-South Collector Road
#### In the Community of Sharon

<table>
<thead>
<tr>
<th>Date</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>August, 2010</td>
<td>The Traffic Engineer which we consulted concurred that a right-of-way that can accommodate 4 lanes would be beneficial to accommodate future traffic demand if it is ever needed. We just want to ensure that this is strictly an accurate Engineering design decision and not a political one. If the EA concludes that 2 lanes is recommended, our group would request the Town does not accept a plan of subdivision without the provision of an adequate right-of-way to widen the collector to 4 lanes if future demand requires it. The right-of-way should be wide enough to include but not limited to necessary streetscaping, bike paths, safety requirements etc. Thank you again for your time and listening to our concerns, we appreciate it.</td>
</tr>
<tr>
<td>Phil Claxton</td>
<td>If the ’North-South’ connection is to be built next year between Green Lane and the Mt. Albert sideroad, I suggest that the town incorporate a park and bike path connection all the way from the existing trail by the river up to Sharon. The park and trail should be put under the new North-South roadway as proposed in the plan when the road is built.</td>
</tr>
<tr>
<td>October 5, 2009</td>
<td>As a follow-up to the open meeting of October 5th please find additional comments regarding the north/south collector. It is our understanding from the meeting that comments are being received until October 16th and a finalized document is being submitted October 19th. With no disrespect intended to any party, but in our opinion, a week-end is a quick turn around to receive input from the public and forward a finalized document. There seemed to be from the meeting, unresolved concerns with the current residents of EG regarding the proposed Transportation Master Plan. In addition, our records indicate no response or acknowledgement of receipt, of this last sent correspondence by us, dated July 31, 2009. If there was, we apologize and please disregard the comment. Additional comments; There seems to be a contradiction between Mr. Burdett comments of “connections beyond the town” and what was posted at the meeting and some comments made by Mr. Richardson. Posted on signage was, “Improved direct access to Sharon and Queensville” Also posted was, “serves as a practical north-south option to 2nd and Leslie”. Some of these issues were also mentioned by Mr. Richardson. Comment of Mr. Burdett, “With the extension of Highway 404, a new interchange at Doane Road and the widening of Second Concession to four lanes, the transportation analysis results indicate that two lanes are sufficient for the traffic expected on the North-South Collector Road”. Our group still finds this hard to believe and there are further comments in our last correspondence. However, our additional question is, does the numbers also include the Bradford By-pass being constructed? As Mr. Richardson mention if it is not constructed, commuter traffic not residing in our area, are required to move north/south and east/west. We still find it hard to believe that we can move 150,000 EG residents north/south with proposed master plan but what if we also have to move the commuter traffic passing through our area. The LSCG supported a by-pass years ago prior to it being removed from the past OP. Without the bypass we know have potential commuter traffic issues regarding Leslie Street and moving a potential 150,000 residents. We concur that the 404 will solve traffic issues on Woodbine and in the short term will relieve some traffic on Leslie Street. However, in our opinion, without the bypass that was removed from the OP, it will only be...</td>
</tr>
<tr>
<td>R. Craig Doran</td>
<td>Response from Wayne Hunt, October 16, 2009: Hi Craig I have asked our consultant to review and respond to your questions. Please note that the EA process requires a thirty day review period which would commence after we present the TMP to Council to commence the 30 day review period. Consideration to adopt the TMP would be some time after the 30 day review period. We are planning to bring the report to Council on Nov. 2nd and request that the 30 day review period commence thereafter. We do welcome comments at any time and we thank you for yours.</td>
</tr>
</tbody>
</table>

Response from Wayne Hunt, October 16, 2009:

Hi Craig

I have asked our consultant to review and respond to your questions. Please note that the EA process requires a thirty day review period which would commence after we present the TMP to Council to commence the 30 day review period. Consideration to adopt the TMP would be some time after the 30 day review period. We are planning to bring the report to Council on Nov. 2nd and request that the 30 day review period commence thereafter.

We do welcome comments at any time and we thank you for yours.
| short term and Leslie Street will be up to capacity in the long term. In the past, it is our understanding that the Region wanted to widen Leslie Street. Leslie Street is a regional road and it is our understanding that the Region can widen Leslie street if they wish, regardless of what the Town says. I understand and appreciate what is included in the current Regional plan to keep Leslie Street to 2 lanes with the provisions of some turning lanes but that can be changed just like our by-pass was removed from the OP. The LSCG is requesting that the north/south collector be 4 lanes. If only 2 lanes are constructed, than we request that there is a provision for an adequate right-of-way to widen the collector to 4 lanes. In our opinion this is cheap insurance to the potential of widening Leslie Street. |
Appendix B: First Nations Consultation
## First Nations Contact List

<table>
<thead>
<tr>
<th>Title</th>
<th>First Name</th>
<th>Last Name</th>
<th>Job Title</th>
<th>First Nation</th>
<th>Address</th>
<th>City</th>
<th>Postal Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief</td>
<td>Jeff R.</td>
<td>Marsden</td>
<td>Alderville First Nation</td>
<td>PO Box 46, RR #4</td>
<td>Roseneath</td>
<td>K0K 2X0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Valerie</td>
<td>Monague</td>
<td>Beausoleil First Nation (Christian Island)</td>
<td>1 O-Gema Street Christian Island</td>
<td>Cedar Point</td>
<td>L0K 1R0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Brett</td>
<td>Mooney</td>
<td>Chippewas of Georgina Island</td>
<td>RR#2, PO Box 12</td>
<td>Sutton West</td>
<td>L0G 1R0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Sharon</td>
<td>Stinson-Henry</td>
<td>Chippewas of Mnjikaning (Rama)</td>
<td>5884 Rama Road, Suite 200</td>
<td>Rama</td>
<td>L0K 1T0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Keith</td>
<td>Knott</td>
<td>Curve Lake First Nation</td>
<td>22 Winookeeda Road</td>
<td>Curve Lake</td>
<td>K0L 1R0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Greg</td>
<td>Cowie</td>
<td>Hiawatha First Nation</td>
<td>123 Paudash Street, RR#2</td>
<td>Keene</td>
<td>K0L 2G0</td>
<td></td>
</tr>
<tr>
<td>Councillor</td>
<td>Luc</td>
<td>Laine</td>
<td>Chief in Charge of Land Claims</td>
<td>Wendake Meeting Ground of Nations</td>
<td>Wendake, QC</td>
<td>G0A 4V0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Chris</td>
<td>Nahrgang</td>
<td>Kawartha Nishnawbe First Nation</td>
<td>RR#4</td>
<td>Burleigh Falls</td>
<td>K0L 2H0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Tracy</td>
<td>Gauthier</td>
<td>Mississaugas of Scugog Island</td>
<td>22521 Island Road</td>
<td>Port Perry</td>
<td>L9L 1B6</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Bryan</td>
<td>LaForme</td>
<td>Mississaugas of the New Credit First Nation</td>
<td>RR#6, 2789 Mississauga Road</td>
<td>Hagersville</td>
<td>N0A 1H0</td>
<td></td>
</tr>
<tr>
<td>Chief</td>
<td>Dave</td>
<td>General</td>
<td>Six Nations of the Grand River Territory</td>
<td>PO Box 5000</td>
<td>Ohsweken</td>
<td>N0A 1M0</td>
<td></td>
</tr>
<tr>
<td>Ms.</td>
<td>Lori</td>
<td>Jacobs</td>
<td>United Anishnabaag Councils</td>
<td>1024 Mississauga Road</td>
<td>Buckhorn</td>
<td>K0L 1J0</td>
<td></td>
</tr>
<tr>
<td>Mr.</td>
<td>Allan</td>
<td>Dokis</td>
<td>Intergovernmental Affairs Director</td>
<td>Union of Ontario Indians - Nippising First Nation</td>
<td>PO Box 711, Highway 17</td>
<td>North Bay</td>
<td>P1B 8J8</td>
</tr>
<tr>
<td>Mr.</td>
<td>Randy</td>
<td>Pitt</td>
<td>Office Manager</td>
<td>Association of Iroquois and Allied Indians</td>
<td>387 Princess Avenue</td>
<td>London</td>
<td>N6B 2A7</td>
</tr>
</tbody>
</table>
Bob Burdett
Senior Project Manager
MMM Group Limited
100 Commerce Valley Drive West
THORNHILL, ONTARIO L3T 0A1

Dear Mr. Burdett:

Re: Notice of Study Commencement
Class EA for the Proposed North South Collector Road
Sharon Community – West of Leslie Street

I am writing in response to your letter of December 1, 2008 addressed to Franklin Roy inquiring about any claims that may affect the subject property. I regret that we were unable to respond earlier.

We can advise that our inventory includes litigation cases in the vicinity of this property. They are entitled: Alderville Indian Band, Beausoleil Indian Band, Chippewas of Georgina Island Indian Band, Chippewas of Rama Indian Band, Curve Lake Indian Band, Hiawatha Indian Band, Mississaugas of Scugog Indian Band v. HTMQ and Ontario (Third Party), Federal Court of Canada, filed in Montreal, Court file reference # T-195-92; and

Moose Deer Point First Nation, Chief Edward Williams suing on his own behalf and on behalf of the members of Moose Deer Point First Nation v. Her Majesty the Queen in Right of Ontario, Superior Court of Justice File #01-CV-220612CM.

I am unable to comment with respect to the possible effect of these claims as the cases have not yet been adjudicated and any statement regarding the outcome of the litigation would be speculative at this point. It is recommended that you consult legal counsel as to the effect this action could have on the lands you are concerned with.
If you are interested in further details about the claims, copies of the pleadings can be obtained from the Court for a fee; please contact the appropriate Court Registry Office and make reference to the court file number listed above.

We cannot make any comments regarding claims filed under other departmental policies. For information on any claims you should also contact Don Boswell of the Specific Claims Branch at (819) 953-1940 to inquire about any Specific Claims, and Guy Morin of the Comprehensive Claims Branch at (819) 956-0325 to inquire about any current Comprehensive Claims.

If you have any further questions please do not hesitate to contact me at (819) 994-1947.

Sincerely,

Marc-André Millaire
Litigation Team Leader
Litigation Portfolio Operations East
Litigation Management and Resolution Branch

DISCLAIMER: In this Disclaimer, "Canada" means Her Majesty the Queen in right of Canada and the Minister of Indian Affairs and Northern Development and their servants and agents. Canada does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any data or information disclosed with this correspondence or for any actions in reliance upon such data or information or on any statement contained in this correspondence. Data and information is based on information in departmental records and is disclosed for convenience of reference only. Canada does not act as a representative for any Aboriginal group for the purpose of any claim. Information from other government sources and private sources (including Aboriginal groups) should be sought, to ensure that the information you have is accurate and complete.
Mr. Bob Burdett  
Senior Project Manager  
MMM Group Limited  
100 Commerce Valley Drive West  
Thornhill, ON L3T 0A1  
Tel: (905) 882-1100

Re: Notice of Study Commencement  
Class EA for the Proposed North South Collector Road  
Sharon Community – West of Leslie Street

To Mr. Bob Burdett:

Thank you for your inquiry dated December 24, 2008 regarding the above noted project.

The responsibilities of the Ministry of Aboriginal Affairs (MAA) include conducting land claim and related negotiations on behalf of the Province. MAA can provide you with information about land claims that have been submitted to the Ministry, are currently in active negotiations, or are being implemented. We can also advise as to whether there is any litigation with an Aboriginal community that may be relevant to your project.

You should also be aware that many First Nations and Métis communities either have or assert rights to hunt and fish in their traditional territories. These territories often include lands and waters outside of a First Nation reserve. As well, in some instances project work may affect archaeological and burial sites. Aboriginal communities with an interest in such sites may include communities other than those in the vicinity of the proposed project.

With respect to your project, we have reviewed the brief materials you have provided, and can advise that this project does not appear to be located in an area where First Nations may have existing or asserted rights that could be impacted by your project.
You should also be aware that information upon which the above comments are based is subject to change. First Nation or Métis communities can make assertions at any time, and other developments can occur that might require additional communities to be notified.

Yours truly,

Pam Wheaton
Director
Aboriginal and Ministry Relationships Branch
August 11, 2009

MMM Group Limited  
100 Commerce Valley Drive West  
Thornhill, ON L3T 0A1

Attention: Bob Burdett, Senior Project Manager

Re: Class EA for the Proposed North-South Collector Road—East Gwillimbury

Dear Mr. Burdett:

As a member of the Williams Treaties First Nations, Rama First Nation acknowledges receipt of your letter of June 11, 2009, which was received on June 29, 2009.

A copy of your letter has been forwarded to Karry Sandy-McKenzie, Barrister & Solicitor, Coordinator for Williams Treaties First Nations for further review and response directly to you. Ms. Sandy’s address is 8 Creswick Court, Barrie, ON L4M 2J7 and her telephone number is (705) 792-5087.

We appreciate your taking the time to share this important information with us.

Sincerely,

\[Signature\]
Chief Sharon Stinson Henry

c: Council, Rama First Nation  
   Jeff Hewitt, General Counsel  
   Karry Sandy-McKenzie, Barrister & Solicitor  
   Chief Rodney Monague Jr., Portfolio Chief for Williams Treaty Nations

SSH/sw
Appendix C: Archaeological Assessment
Stage 1-2 Archaeological Assessment (AA) of:
The Master Servicing Plan (MSP) Lands
Part of Lots 8-12 and
Part of Original Road Allowance Between Lots 10 and 11
Concession 2
Town of East Gwillimbury
Regional Municipality of York
Ontario

Project Number: 15-5149-05
Licence & CIF #: P029-210
P029-325-2006

March 2007

Presented to:
Marshall Macklin Monaghan
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F: 905-477-3309

Prepared By:
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L3X 1X4
T: 416-676-5597
F: 416-676-5810
PROJECT PERSONNEL:

Project/Field Director:

Kim Slocki

Field Archaeologists:

Marina Brown
Sarah DeDecker
John Dunlop
Rachel Katz
Mike Lawson
Katie Noonan

Report Preparation:

Katie Noonan

Artifact Analysis:

Katie Noonan
Kim Slocki

Graphics:

Mike Lawson
Katie Noonan
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Introduction

Archeoworks Inc. was retained by Marshall Macklin Monaghan, of Thornhill, Ontario, to conduct a Stage 1-2 archaeological assessment of the Master Servicing Plan (MSP) Lands, located in the Town of East Gwillimbury, Regional Municipality of York, within part of Lots 8-12 and part of the original road allowance between Lots 10 and 11, Concession 2, as part of a Master Servicing Plan. The subject property measures approximately 500 acres in size (see Figure 1). The Stage 1-2 survey, reported herein, was conducted under the project and field direction of Ms. Kim Slocki during the months of September through to December, 2005 and May 2, 19, July 25 and December 21, 2006. The weather varied during the Stage 2 assessment from sunny to snowy with temperatures ranging from 5 to 25 degrees. This study was conducted in accordance with the Ontario Heritage Act (1990) under an archaeological consulting licence (P029) issued to Kim Slocki.

Figure 1: 1:50,000 Map Identifying Location of Study Area (Newmarket 31 D/3)
1) Registered Archaeological Sites

In order that an inventory of archaeological resources could be compiled for this study area, two sources of information were consulted: the site record forms for registered sites housed at the Ministry of Culture (MCL) and published and unpublished documentary sources. The study area under review is located within Borden Block BaGu. According to the MCL site record files, there are 10 archaeological sites registered within a 2000-metre radius of the study area. Four of these 10 sites (BaGu-26, BaGu-30, BaGu-33 and BaGu-57) are located within the study area limits, while one site (BaGu-15) is located just outside. A description of all 10 sites is provided below.

All of the previously registered sites located within the study area boundaries have been documented in "Phases 2&3 Archaeological Master Plan of the Town of East Gwillimbury" (ASL, 1990). Of the sites located within the study area boundaries, two of these are prehistoric. The Spring Valley site: BaGu-26 (Lot 9, Concession 2) and the Nanabush site: BaGu-30 (Lot 10, Concession 2), consist of a single reworked projectile point of Onondaga chert, possibly Early Archaic, and a single projectile point tip, also of Onondaga chert, respectively. No further work was recommended at either of these two sites. The remaining two registered sites within the study area, including the site that is located just outside the study area boundaries, are Euro-Canadian historic sites and are described below.

The Temple Farm site: BaGu-57 (east half of Lot 10, Concession 2) is located in a ploughed field just west of the Sharon Temple lands and originally consisted of seven ceramic fragments scattered over an area of 1200 square metres, and dating to the mid-nineteenth century. Archival research revealed that the patent for this 200-acre Lot was originally granted in 1805 to David Willson, who was responsible for the construction of the Sharon Temple and a meeting place for the religious society known as the Children of Peace, which he founded. In 1851 Willson sold 65 acres of the east half of Lot 10 to his son John. The 1851-2 census listed John D. Willson, aged 55, his wife Mariah, aged 33, and their son Job, aged 22, as living in a one-storey frame house. Two families were listed as occupying this house. David Willson and his wife Phebe Titus are also listed with a one storey frame house, as well as one house built for meeting (The Sharon Temple) and one place of worship for the Children of Peace (The Meeting House). The 1881 census lists John D. Willson as occupying a two-storey frame house, again with one other family, although no structures were illustrated on the 1860 Tremaine map of York County. The 1878 Illustrated Historical Atlas of York County does not show any homesteads either, only two places of worship and commercial storefronts. Census info suggests that both David and John Willson occupied the Lot, each living with another family. It is not clear if these are two separate houses (the second family is not listed), or one and the same. Further work was recommended for BaGu-57 if the site cannot be protected from development, as it may correspond to John Willson's house. This site has been relocated¹.

¹ The Temple Farm Site (BaGu-57) has been subjected to Stage 3 investigations and has been cleared from further archaeological concerns (see Conclusions and Recommendations).
The Willson site: BaGu-15 was registered in 1985 when an archaeological assessment was conducted, identifying the location of a meeting house, a cookhouse, the Willson study, the Willson house and associated smokehouse and cellar, all on Lot 10, Concession 2 in the area surrounding the Sharon Temple. Further work was recommended (ASI, 1988). This site is located just east of the study area boundaries.

The McLeod site: BaGu-33 (Lot 11, Concession 2) is located at the southwest corner of Mount Albert Road and Leslie Street. This site originally consisted of 81 ceramic sherds and 24 miscellaneous artifacts, with a mean ceramic date of 1847. Preliminary archival research conducted during ASI’s Master Plan assessment suggested that the site was likely connected to the household of Murdock McLeod, between 1820 and 1850. Murdock McLeod purchased the south half of the Lot in 1820 from Joseph Sutherland, who received the Crown patent for the whole Lot in 1805. McLeod was a member of the Children of Peace and his wife was a member of the Religious Society of Friends. The Master Plan suggested that there is a good chance that intact archaeological deposits remain, and that the subsurface features of the site should be well-preserved as they are located in a ploughed field. The 1860 Tremaine map of York County does not illustrate any structures on the Lot and the 1878 Illustrated Atlas of the County of York only illustrates the Estate of Judah Doan (who acquired the northeast quarter of the Lot in 1849) southeast of where the site is located. As such, the McLeod site could potentially provide valuable information about an important historical personage who lived in Sharon, and further archaeological investigations were recommended if the area could not be protected from disturbance (ASI, 1988). This site has been relocated.

Table 1: Sites within 2.0 Kilometres or less to the Study Area

<table>
<thead>
<tr>
<th>Borden #</th>
<th>Name</th>
<th>Cultural Affiliation</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BaGu-15</td>
<td>Willson</td>
<td>Early Euro-Canadian</td>
<td>Homestead</td>
</tr>
<tr>
<td>BaGu-19</td>
<td>Newmarket 1</td>
<td>Euro-Canadian</td>
<td>Findspot</td>
</tr>
<tr>
<td>BaGu-26</td>
<td>Spring Valley</td>
<td>Prehistoric</td>
<td>Findspot</td>
</tr>
<tr>
<td>BaGu-30</td>
<td>Nanabush</td>
<td>Prehistoric</td>
<td>Findspot</td>
</tr>
<tr>
<td>BaGu-33</td>
<td>McLeod</td>
<td>Euro-Canadian</td>
<td>Homestead</td>
</tr>
<tr>
<td>BaGu-42</td>
<td>Kelly</td>
<td>Prehistoric</td>
<td>Campsite</td>
</tr>
<tr>
<td>BaGu-49</td>
<td>Thophilus Wakefield</td>
<td>Euro-Canadian</td>
<td>Homestead</td>
</tr>
<tr>
<td>BaGu-53</td>
<td>Eves</td>
<td>Euro-Canadian</td>
<td>Homestead</td>
</tr>
<tr>
<td>BaGu-57</td>
<td>Temple Farm</td>
<td>Euro-Canadian</td>
<td>Homestead</td>
</tr>
<tr>
<td>BaGu-6</td>
<td>Drive-In</td>
<td>Early Archaic</td>
<td>Campsite</td>
</tr>
</tbody>
</table>

Having noted the presence of these sites in relation to the study area, it might be useful to place them in the proper context by reviewing the cultural history of occupation in Southern Ontario provided in Table 2 below.

Table 2: History of Occupation in Southern Ontario

<table>
<thead>
<tr>
<th>Period</th>
<th>Archaeological Culture</th>
<th>Date Range</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PALEO-INDIAN</td>
<td>Gainey, Barnes, Crowfield</td>
<td>11,000 - 10,400 BP</td>
<td>Small nomadic hunter-gatherer bands. Fluted projectile points</td>
</tr>
</tbody>
</table>

Stage 1-2 AA of MSP Lands, Town of East Gwillimbury, York Region
<table>
<thead>
<tr>
<th>Archeoworks Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Late</strong></td>
</tr>
<tr>
<td><strong>ARCHAIC</strong></td>
</tr>
<tr>
<td>Early</td>
</tr>
<tr>
<td>Middle</td>
</tr>
<tr>
<td>Late</td>
</tr>
<tr>
<td><strong>WOODLAND</strong></td>
</tr>
<tr>
<td>Early</td>
</tr>
<tr>
<td>Middle</td>
</tr>
<tr>
<td>Late</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>HISTORIC</strong></td>
</tr>
<tr>
<td>Early</td>
</tr>
<tr>
<td>Late</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

2) Physiographic Description and Precontact Potential

An investigation of the study area’s physiography was conducted by reviewing *The Physiography of Southern Ontario (3rd Edition)*, a volume published by the *Ministry of Natural Resources* and authored by L.J. Chapman and D.F. Putnam. This investigation is conducted to aid the researcher in developing an argument for archaeological potential based on the environmental conditions of each subject property. Environmental factors such as close proximity to water, soil type, and nature of the terrain, for example, can be used as predictors to determine where human occupation may have occurred in the past.
The study area is situated within the Schomberg Clay Plains physiographic region of Southern Ontario. The surface under the clay is that of a drumlinized till plain. The smaller drumlins are completely covered, but many of the larger ones escaped complete burial although the clay may occur well up the slopes of the hills. Since the rolling relief of the underlying till plain has not entirely been eliminated these areas are not so flat as many lake plains. The Schomberg sediments are typically varved clays with annual layers of two, three, four or more inches in thickness. The summer band makes up three-quarters to four-fifths of the thickness, is more silty, and is grey in colour. The winter band is slightly denser and is brownish grey. Both portions of the varve are highly calcareous and small fossil shells are sometimes found in them. It is very slippery when wet and inclined to be mealy when dry (Chapman & Putnam, 1984). The original vegetation was hardwood forest, the well-drained sites supporting sugar maple, black maple, beech, ironwood, and basswood; the areas of imperfect and poor drainage were dominated by elm, ash, soft maple, and white cedar. Being associated with well-drained upland soils of drumlinized areas, such as the Bondhead series, and being fairly easily accessible to colonization routes from York, these clay plains were well settled and thoroughly cleared during the first half of the 19th century. Mixed farming was the rule with dominance of grain in the cropping program. Wheat, oats and barley were plentiful. The area has long been noted for the raising of good beef cattle (Chapman & Putnam, 1984).

In terms of archeological potential, potable water is arguably the single most important resource necessary for any extended human occupation or settlement. As water sources have remained relatively stable in southern Ontario since post-glacial times, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location. In fact, the Ministry of Tourism, Culture and Recreation (now the Ministry of Culture) primer on archaeology, land use planning and development in Ontario stipulates that undisturbed lands within 300 metres of a primary water source, and undisturbed lands within 200 metres of a secondary water source, are considered to be of high archaeological potential (1997: pp.12-13). As such, with the East Branch of the Holland River bordering the study area, and several of its tributaries flowing through the study area, we find high potential for the location and recovery of additional prehistoric Aboriginal archaeological resources within the study area boundaries.

3) Review of Historical Land Use and Potential

To assess a study area’s potential for the recovery of historic remains, several documents are reviewed in order to gain an understanding of the land-use history. These specifically include the Illustrated Historical Atlases for the Counties of Ontario. The study area comprises part of Lots 8-12, Concession 2, in the Township of East Gwillimbury (now the Town of East Gwillimbury), York County (now the Regional Municipality of York). A review of the study area within the 1878 Illustrated Historical Atlas of York County indicates that it was inhabited by the following:
Table 3: Historical Review of Study Area: 1878 Inhabitants

<table>
<thead>
<tr>
<th>Township of East Gwillimbury</th>
<th>Lot</th>
<th>Concession</th>
<th>Inhabitant/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>2</td>
<td>C. Oxtaby and Haines Est. Two structures (Haines) within study area and block of structures along Leslie Street (village of Sharon) outside study area boundaries.</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>2</td>
<td>G.M. Doan. Block of structures including a church along Leslie Street (village of Sharon) outside study area boundaries.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>2</td>
<td>J. Wilson. Block of structures and 2 churches along Leslie Street (village of Sharon). Only one church falls within study area limits</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>2</td>
<td>Geo. R. Hogaboom and Judah Doane Estate. One homestead just west of Leslie Street outside study area boundaries.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>2</td>
<td>Wellington Selby. One structure within study area boundaries.</td>
</tr>
</tbody>
</table>

Thus, three historic homesteads and one church fall within the study area limits, while the majority of the historic village of Sharon, including two additional churches and the Temple of the Children of Peace, fall outside the study area boundaries. Taking into account all of this information and the already encountered historic sites, high potential for encountering additional significant historical remains can be established within close proximity to the location of the historic structures mentioned above (see Figure 2).

![Map of study area](image.png)

*Figure 2: Historical Map of Study Area: 1878*
4) Field Research

Stage 2 archaeological fieldwork was undertaken to identify and describe any additional archaeological resources extant within the limits of the study area (see Figure 3). Permission to enter the study area and to collect any artifactual remains was granted on September 14th, 2005.

4.1: Stage 2 Assessment

Of the approximately 500 acres of land to survey, a total of approximately 70 acres of land was not systematically assessed (see Figure 3). This includes a large wooded area located within the western portion of the study area; this area to remain preserved, as well as two previously disturbed locations comprising two paved cul de sacs and an area containing sand and gravel fill and construction material (Figure 3, Plates 1-3). Due to the low archaeological potential the disturbed areas represent, testing was not undertaken.

Physiographic factors affecting potential include the bisecting tributaries of the East Branch of the Holland River and surrounding floodplain. As these areas are wet and low-lying and represent low archaeological potential, testing was not warranted (Figure 3, Plate 4).

The remainder of the surveyed subject lands was subjected to a pedestrian and shovel test-pit form of survey, complying with the Archaeological Assessment Technical Guidelines (1993), published by the Ministry of Tourism, Culture and Recreation, now the Ministry of Culture. Approximately 35 acres of land, consisting of a mixture of herbaceous and fallow fields, rural residential grassed frontages, farm complexes and wooded areas immediately adjacent to tributaries of East Branch of the Holland River were subjected to a shovel test-pit survey, at survey intervals of five metres (see Figure 3, Plates 5-7). These areas were test-pitted at this interval due to the established high Aboriginal potential of the study area relating to the close proximity of the tributaries as well as the established high Euro-Canadian historic potential within the study area. Shovel test-pit surveys are defined as excavating 30x30cm units at set intervals of five metres on a grid pattern in areas requiring this form of assessment. Approximately 5500 test-pits were excavated to sterile subsoil depths of 20-40cm and the topsoil was screened through six-millimetre mesh in order to facilitate the recovery of artifacts. All test-pits were backfilled. Despite careful scrutiny, no archaeological remains were encountered during the test-pit survey.

Due to steeply sloping terrain conditions, an additional 25 acres of land, consisting of a mixture of fallow fields and woodlot, was also subject to a shovel test-pit survey at survey intervals of 10 metres (Figure 3). Approximately 2000 test-pits were excavated to sterile subsoil depths of 20-30cm and the topsoil was screened through six-millimetre mesh in order to facilitate the recovery of artifacts. All test-pits were backfilled. Despite careful scrutiny, no archaeological remains were encountered during the test-pit survey.
On account of variations in vegetation cover, the remaining surveyed lands (approximately 370 acres), consisting of cultivated fields, were assessed by means of pedestrian survey (Plate 8). Since these fields were weathered substantially under heavy rains which had occurred since ploughing, visibility and field conditions were excellent. As the potential to encounter both historic and prehistoric archaeological remains was high, the pedestrian survey was also conducted at an interval of five metres. Throughout the course of this pedestrian survey, two isolated Aboriginal findspots (see Figure 3:}

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*Stage 1-2 AA of MSP Lands, Town of East Gwillimbury, York Region*
P1&P2, Plate 9), and one late 19th to early 20th century historic scatter (see Figure 3: H1, Plate 10) were encountered. Additionally, two previously registered historic sites (see Figure 3: BaGu-33 and BaGu-57, Plates 11-12) were relocated. These are detailed in the following sections. Once artifacts were encountered, survey intervals were reduced to a half metre, for a radius of 15 metres. All artifacts encountered during our Stage 2 assessment in the field were collected. Other than what is listed below, no additional archaeological remains were encountered.

4.2: Newly Encountered Historic Site (H1)

During the pedestrian survey, one late 19th to early 20th century, historic Euro-Canadian site (H1) was encountered (see Figure 3). Listed below in Table 4 is a summary of artifacts found at the site location, followed by an approximate date range and possible association for the site based on further historical research collected at the Archives of Ontario.

Site H1: BaGu-125

H1 consisted of a large surface scatter (see Figure 3). Encountered approximately 750m north of Green Lane Road and 200m west of Leslie Street, within the southeast corner of Lot 8, Concession 2 (UTM 17T 0624782, 4883028), this site contained late 19th to early 20th century historic remains. A sample of artifacts was collected from the surface, and is listed below in Table 4.

Table 4: Historic Artifact Inventory: Pedestrian survey (H1): BaGu-125

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Quantity</th>
<th>Material</th>
<th>Class</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>.001</td>
<td>1</td>
<td>Glass</td>
<td>Architectural</td>
<td>One clear window glass fragment (1.8mm)</td>
</tr>
<tr>
<td>.002</td>
<td>1</td>
<td>Glass</td>
<td>Foodways</td>
<td>One unidentified bottle glass fragment, light green</td>
</tr>
<tr>
<td>.003</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>One coarse stoneware fragment, salt-glazed crock</td>
</tr>
<tr>
<td>.004</td>
<td>3</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE undecorated fragments</td>
</tr>
<tr>
<td>.005</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Ironstone, moulded, green transferprint fragment</td>
</tr>
<tr>
<td>.006</td>
<td>2</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Ironstone with brown transferprint fragments</td>
</tr>
<tr>
<td>.007</td>
<td>9</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Undecorated ironstone fragments</td>
</tr>
<tr>
<td>.008</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Ironstone base fragments. Partial maker's mark: &quot;...FRED MEAKIN&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;ENGLAND&quot; (Alfred Meaken: 1914+)</td>
</tr>
<tr>
<td>.009</td>
<td>2</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Undecorated porcelain body sherds</td>
</tr>
<tr>
<td>.010</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Moulded, floral design tea cup fragment</td>
</tr>
<tr>
<td>.011</td>
<td>2</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Semi-porcelain, turquoise transferprint. Partial maker's mark:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;DURAB...&quot; (durability)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;J.H.W. &amp; Sons&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;ENGLAND&quot; (1891+)</td>
</tr>
<tr>
<td>.012</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Porcelain base sherd with coat of arms. Partial maker's mark: &quot;Wood...&quot; (Wood &amp; Son, England: 1891-1907)</td>
</tr>
<tr>
<td>.013</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Porcelain base fragment. Partial maker's mark: with &quot;Limog...&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;France&quot; (Limoges, France: 1890s+)</td>
</tr>
</tbody>
</table>

Total: 26 artifacts
The 1878 Illustrated Historical Atlas of York County indicated that there was a homestead in the approximate location of H1. At that time this portion of land was listed as the Haines Estate. The 1860 Tremaine Map of York County did not show any structures in this location, but lists the owner as Raynes. Further research at the Archives of Ontario revealed that the entire Lot was initially granted to Joseph Hill in 1802. The Abstract Index to Deeds shows Samuel Haines as purchasing 50 acres in 1837, which he willed (as the SE ¼ of Lot 8) in 1874 to an unlisted person. The next time the southeast quarter of Lot 8 is mentioned is in 1900 when several people, including two people with the surname of Haines, sold it to Marvin Barker (see Appendix B).

Based on the late date of the surface finds (specifically based on the high proportion of ironstone, the thicker window glass and the maker’s marks dating from the 1890s to as late as 1914), the site is likely associated with the Barker occupation of the property. Further work is not recommended.

4.3: Previously Registered (Relocated) Historic Sites

Two previously registered historic sites, The McLeod site (BaGu-33) and The Temple Farm site (BaGu-57), were relocated. All artifacts were flagged and a sample of artifacts was collected from each.

The McLeod Site (BaGu-33), located in an agricultural field at the southwest corner of Mount Albert Road and Leslie Street, within the east half of Lot 11, Concession 2 consisted of a large surface scatter (see Figure 3) (UTM 17T 0624571, 4884528). A sample of artifacts was collected, including window glass, brick, earthenware and ceramic fragments, listed below in Table 5. These artifacts can be dated to an 1830-1850 timeframe, coinciding with ASI’s finds and conclusions that the site is likely associated with the family of Murdock McLeod. Further work will be necessary to confirm this association and to determine the proper extent of the site.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Quantity</th>
<th>Material</th>
<th>Class</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>.001</td>
<td>4</td>
<td>Glass</td>
<td>Architectural</td>
<td>Four window glass fragments, ranging from 0.7 to 1.4mm thick, clear and green tinted in colour</td>
</tr>
<tr>
<td>.002</td>
<td>1</td>
<td>Glass</td>
<td>Foodways</td>
<td>One unidentified glass rim fragment, dark blue</td>
</tr>
<tr>
<td>.003</td>
<td>2</td>
<td>Earthenware</td>
<td>Foodways</td>
<td>Two coarse red earthenware fragments, brown glaze</td>
</tr>
<tr>
<td>.004</td>
<td>2</td>
<td>Brick</td>
<td>Architectural</td>
<td>Two red brick fragments</td>
</tr>
<tr>
<td>.005</td>
<td>4</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Four RWE fragments - one possible creamware</td>
</tr>
<tr>
<td>.006</td>
<td>5</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Five RWE fragments with hand-painted, transfer-print and sponge designs, all in blue</td>
</tr>
<tr>
<td>.007</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>One yellowware fragment</td>
</tr>
</tbody>
</table>

Total: 19 artifacts

The Temple Farm Site (BaGu-57), located in an agricultural field west of the Sharon Temple lands, within the east half of Lot 10, Concession 2, consisted of a widely-spread surface scatter of only 20 artifacts (see Figure 3). All artifacts encountered were flagged and collected, including glass, brick, and ceramic fragments, listed below in Table 6. These artifacts can be roughly dated to the mid-nineteenth century, coinciding with ASI’s
finds and conclusions that the site is likely associated with John Willson, however, further work will be necessary to confirm this association and to determine the proper limits of the site.\(^2\)

**Table 6: Historic Artifact Inventory: Pedestrian survey: BaGu-57**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Quantity</th>
<th>Material</th>
<th>Class</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>.001</td>
<td>1</td>
<td>Glass</td>
<td>Architectural</td>
<td>window glass fragment, measuring 0.8mm in thickness, light green coloured</td>
</tr>
<tr>
<td>.002</td>
<td>1</td>
<td>Glass</td>
<td>Architectural</td>
<td>window glass fragment, measuring 1.8mm in thickness, rose tinted</td>
</tr>
<tr>
<td>.003</td>
<td>1</td>
<td>Brick</td>
<td>Architectural</td>
<td>red brick fragments</td>
</tr>
<tr>
<td>.004</td>
<td>3</td>
<td>Glass</td>
<td>Foodways</td>
<td>dark olive green, lighter green and rose tinted bottle glass fragments (three in total)</td>
</tr>
<tr>
<td>.005</td>
<td>6</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE fragments, no decoration</td>
</tr>
<tr>
<td>.006</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE body sherd with blue transferprint design</td>
</tr>
<tr>
<td>.007</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Ironstone rim sherd: moulded with leaf design</td>
</tr>
<tr>
<td>.008</td>
<td>3</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>One plain Ironstone base fragment, two plain ironstone body fragments</td>
</tr>
<tr>
<td>.009</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>yellowware body sherd</td>
</tr>
<tr>
<td>.010</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Semi-porcelain body fragment</td>
</tr>
<tr>
<td>.011</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>porcelain rim sherd fragment with embossed leaf pattern</td>
</tr>
</tbody>
</table>

*Total: 20 artifacts*

**4.4: Aboriginal Findspots (P1&P2)**

During the course of the Stage 2 pedestrian survey, two isolated precontact findspots were located, listed below in Table 7. As with the historic scatters, once artifacts were encountered, survey intervals were reduced to a half metre, for a radius of 15 metres, however, no further archaeological remains were encountered.

**P1**, registered as **BaGu-132**, consisted of a bifacially retouched piece of shatter made of Onondaga chert. As there were no other artifacts found within the vicinity of this piece, further archaeological investigations will not be necessary.

**P2**, registered as **BaGu-127**, consisted of a primary thinning flake with retouch, also made of Onondaga chert. As there were no other artifacts found within the vicinity of this flake, further work will not be necessary.

**Table 7: Aboriginal Findspots**

<table>
<thead>
<tr>
<th>Cat. #</th>
<th>Prov./Borden#</th>
<th>Freq.</th>
<th>Artifact Type</th>
<th>Location</th>
<th>Comments/Material/Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>.001</td>
<td>P1 – BaGu-132</td>
<td>1</td>
<td>Shatter</td>
<td>Located on gently rolling terrain, next to tributary of Rogers Reservoir, approximately 650m west of Leslie Street and 300m south of Mount Albert Road.</td>
<td>Onondaga chert Bifacially retouched: Dorsal surface: 23mm length Ventral surface:</td>
</tr>
</tbody>
</table>

\(^2\) The Temple Farm Site (BaGu-57) has been subjected to Stage 3 investigations and has been cleared from further archaeological concerns (see Conclusions and Recommendations).
<table>
<thead>
<tr>
<th>.002</th>
<th>P2 – BaGu-127</th>
<th>1</th>
<th>Primary thinning flake</th>
<th>Located on gently rolling terrain, approximately 900m west of Leslie Street and 725m south of Mount Albert Road.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>UTM: Easting 0623808</strong>&lt;br&gt;<strong>Northing 4883401</strong></td>
<td><strong>Onondaga chert</strong>&lt;br&gt;48mmx34mmx7mm (LxWxT)&lt;br&gt;Retouch (dorsal): 39mmx23mm</td>
</tr>
</tbody>
</table>
5) Conclusions and Recommendations

During the Stage 1-2 archaeological assessment of the Master Servicing Plan (MSP) Lands, located in the Town of East Gwillimbury, Regional Municipality of York, within part of Lots 8-12 and part of the original road allowance between Lots 10 and 11, Concession 2, one historic Euro-Canadian scatter (H1) and two isolated Aboriginal findspots (P1 & P2) were discovered. Additionally, two previously registered 19th century historic sites were relocated (BaGu-33 & BaGu-57). As a result of these findings, it is recommended that:

1. As historic site H1 (BaGu-125) dates to the late nineteenth century and represents little heritage value, further insight into the history of Sharon by way of additional archaeological investigations is unlikely. As such, this site should be cleared of further archaeological concern.

2. If the McLeod site (BaGu-33) cannot be protected from disturbance, further work should be undertaken in order to determine the site’s limits and function, to gather a larger sample of artifacts, and to confirm affiliation. Further investigations for this site should commence with a controlled surface collection (CSC) to determine the precise extent of the site. The CSC should be followed by the excavation of eight to ten 1x1 metre units, excavated to subsoil to identify the presence or absence of any structural features and to determine the extent of deposits in the ploughzone. The placement of these units should be based on the location and frequency of surface artifacts. The soil from these units should be screened through 6mm mesh to facilitate artifact recovery. Once these activities have been undertaken, this site should proceed immediately to a Stage 4. The Stage 4 investigation of Euro-Canadian sites should begin with the stripping of topsoil using a smooth-bucket backhoe or Gradall®, to investigate settlement pattern features. The stripping of topsoil should correspond to the artifact frequencies recovered during Stage 3 excavations. Should cultural features be encountered, they should be thoroughly documented and excavated by hand.

3. Immediately following the completion of our Stage 2 archaeological field assessment for the MSP Lands, further Stage 3 excavations were conducted for the Temple Farm site (BaGu-57), as noted in our Stage 3 report: Stage 3 Archaeological Resource Assessment (ARA) of: The Temple Farm Site: BaGu-57, Part of Lot 10, Concession 2, Town of East Gwillimbury, Regional Municipality of York, Ontario. Project Number: 015-5149-05, Licence/CIF#: P029-290-2006: October 2006. Since this investigation did not offer any evidence of an actual site of occupation, based on the lack of cultural features and extremely low artifact yields, it was concluded that this site did not represent a significant historical discovery and that it should be cleared of further archaeological concern.

4. Due to the isolated and non-diagnostic nature of findspots P1 (BaGu-132) and P2 (BaGu-127), additional archaeological investigations are unlikely to reveal any further information. As such, these findspots should be cleared of further archaeological concern.
Town of East Gwillimbury:

GLOSSARY OF TERMS:

Before Present (BP): Before present (where present is calculated to be 1951).

Biface:
A stone tool, which has been flaked from both sides.

Diagnostic:
An artifact is labeled "diagnostic" if it has a distinguishing characteristic that helps identify and date what it is. Projectile points, for example, are classified as "diagnostic" based on their shape and style, which are culturally distinct and, thus, classifiable.

Findspot:
Refers to three or less non-diagnostic artifact(s).

Precontact/Prehistoric:
Before written history. In Ontario, this term is used to define the time between the beginning of human settlement in the province (c. 9500 B.C.) and the period when the first contacts were made between native and non-native groups (c. 1650 A.D.).

Retouch:
Evidence of re-sharpening along the working face of a stone tool.

Site:
Refers to an area containing at least four artifacts, or an isolated formal tool/artifact that provides cultural or chronological information, such as a projectile point or decorated ceramic shard.
Plate 1: Looking at disturbed sand and gravel fill area just west of Leslie Street.

Plate 2: Looking at construction debris dumped within area just west of Leslie Street.
Plate 3: Looking at sand/gravel fill, clay drainage pipes and other debris within property just west of Leslie

Plate 4: Looking at wet area within study area
Plate 5: Test-pitting farm complex

Plate 6: Test-pitting herbaceous area and woodlot adjacent to water course
Plate 7: Test-pitting fallow area adjacent to water course

Plate 8: Pedestrian survey
Plate 9: Top artifact: P2, bottom artifact: P1

Plate 10: Sample collection of ceramic artifacts from H1
Plate 11: Sample collection of ceramics and window pane glass fragments from BaGu-33

Plate 12: Sample collection of ceramic fragments and one bottle glass fragment from BaGu-57
## APPENDIX B: Abstract Index to Deeds (H1)

<table>
<thead>
<tr>
<th>Number of Instrument</th>
<th>Instrument</th>
<th>Its Date</th>
<th>Date of Registry</th>
<th>Granter</th>
<th>Grantee</th>
<th>Consideration or Amount of Mortgage</th>
<th>Quantity of Land and Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patent</td>
<td>12 July 1802</td>
<td>528</td>
<td>Crown</td>
<td>Joseph Hill</td>
<td>Timothy Rogers</td>
<td>200 acres all</td>
<td>200 acres all</td>
</tr>
<tr>
<td>B&amp;S</td>
<td>6 Feb 1804</td>
<td>700</td>
<td>Joseph Hill et ux</td>
<td>Israel Lundy</td>
<td>Levi Hughes</td>
<td>40 acres pt W1/2</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>24 Dec 1805</td>
<td>2404</td>
<td>Timothy Rogers et ux</td>
<td>William Reid</td>
<td>Levi Hughes</td>
<td>25 acres middle pt S1/2</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>5 Oct 1812</td>
<td>2405</td>
<td>James Varney et ux</td>
<td>William Reid</td>
<td></td>
<td>80 acres NE pt</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>26 Mar 1813</td>
<td>3181</td>
<td>Timothy Rogers et ux</td>
<td>William Reid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>23 Mar 1809</td>
<td>4504</td>
<td>William Reid</td>
<td>William Harold</td>
<td></td>
<td>291 79 50 acres NE1/4 Discharge 6531</td>
<td></td>
</tr>
<tr>
<td>Mortgage</td>
<td>15 Mar 1822</td>
<td>6412</td>
<td>William Reid</td>
<td>John Reid</td>
<td></td>
<td>300 24 acres</td>
<td></td>
</tr>
<tr>
<td>B&amp;S</td>
<td>21 July 1828</td>
<td>6531</td>
<td>William Reid</td>
<td>William Reid</td>
<td></td>
<td>300 SW 4504</td>
<td></td>
</tr>
<tr>
<td>Dis. Mort.</td>
<td>14 Mar 1828</td>
<td>7089</td>
<td>William Reid</td>
<td>John Reid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B&amp;S</td>
<td>? Apr 1829</td>
<td>8546</td>
<td>William Reid</td>
<td>Alfred Wilson</td>
<td>David Willson</td>
<td>300? 1 acre NE corner</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>17 Aug 1831</td>
<td>9661</td>
<td>William Reid</td>
<td>John Reid</td>
<td>David Willson et ux</td>
<td></td>
<td>15 acres</td>
</tr>
<tr>
<td>Do</td>
<td>20 Feb 1833</td>
<td>12588</td>
<td>William Reid</td>
<td>John D. Willson et ux</td>
<td>James Varnie</td>
<td>225 80 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>20 Mar 1809</td>
<td>13255</td>
<td>William Reid</td>
<td>James Varnie</td>
<td></td>
<td></td>
<td>1 acre</td>
</tr>
<tr>
<td>Do</td>
<td>5 Apr 1836</td>
<td>13940</td>
<td>William Reid</td>
<td>Samuel Hains</td>
<td></td>
<td>1000 50 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>22 Sep 1835</td>
<td>18187</td>
<td>William Reid</td>
<td>Levi Hughes</td>
<td></td>
<td>100 40 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>18 Sep 1809</td>
<td>18196</td>
<td>William Reid</td>
<td>Levi Hughes</td>
<td></td>
<td>100 15 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>23 July 1841</td>
<td>29449</td>
<td>William Reid</td>
<td>David Willson</td>
<td></td>
<td>800 35 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>9 Apr 1842</td>
<td>37734</td>
<td>William Reid</td>
<td>Charles Doan</td>
<td></td>
<td>500 5 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>3 July 1835</td>
<td>40788</td>
<td>William Reid</td>
<td>Peter Lepard</td>
<td></td>
<td></td>
<td>40 acres</td>
</tr>
<tr>
<td>Release Dower</td>
<td>22 Mar 1850</td>
<td>40784</td>
<td>William Reid</td>
<td>Peter Lepard</td>
<td>Levi Hughes</td>
<td>36 98 1/2</td>
<td></td>
</tr>
<tr>
<td>B&amp;S</td>
<td>23 Mar 1850</td>
<td>41226</td>
<td>William Reid</td>
<td>Silas Lepard</td>
<td>David Ellerby</td>
<td>800 5 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>14 July 1851</td>
<td>41662</td>
<td>William Reid</td>
<td>Peter Lepard</td>
<td>Silas Lepard</td>
<td>400 3 1/2 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>14 May 1833</td>
<td>41960</td>
<td>William Reid</td>
<td>David Willson</td>
<td>Phillip Johnson</td>
<td>30 3 1/2 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>9 Oct 1851</td>
<td>49749</td>
<td>William Reid</td>
<td>David Ellerby et ux</td>
<td>Leubon Lundy</td>
<td>85 3 1/2 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>29 Sep 1852</td>
<td>54033</td>
<td>William Reid</td>
<td>David Ellerby et ux</td>
<td>Jacob Lundy</td>
<td>76 1 400 acres</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>3 Apr 1854</td>
<td>60581</td>
<td>William Reid</td>
<td>David Ellerby et ux</td>
<td>Jacob Lundy</td>
<td>3000 98 1/2 acres</td>
<td></td>
</tr>
<tr>
<td>Mortgage</td>
<td>1 Dec 1855</td>
<td>76765</td>
<td>William Reid</td>
<td>William M. Lepard et ux</td>
<td></td>
<td>370 35 3/4 rods?</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td>13 Apr 1859</td>
<td></td>
<td>Silas Lepard et ux</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stage 1-2 AA of MSP Lands, Town of East Gwillimbury, York Region
<table>
<thead>
<tr>
<th>Parcel</th>
<th>Date</th>
<th>Owner</th>
<th>Description</th>
<th>Acres</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>79982</td>
<td>23 Apr 1860</td>
<td>David Wilson</td>
<td>Charles Doan</td>
<td>1</td>
<td>* 35 acres crossing description ? 29669</td>
</tr>
<tr>
<td>90140</td>
<td>29 Mar 1860</td>
<td>B&amp;S</td>
<td>Agnes Stephenson</td>
<td>200</td>
<td>* 1 acre</td>
</tr>
<tr>
<td>82635</td>
<td>17 Apr 1861</td>
<td>Charles Doan et ux</td>
<td>William ?</td>
<td>100</td>
<td>* 1/2 acre</td>
</tr>
<tr>
<td>84190</td>
<td>22 June 1861</td>
<td>Silas Leoprd et ux</td>
<td>James Beatie</td>
<td>100</td>
<td>* 1/4 acre</td>
</tr>
<tr>
<td>84662</td>
<td>1 Apr 1861</td>
<td>William ? et ux</td>
<td>Amos H. Willson</td>
<td>300</td>
<td>* 35 3/4 ?</td>
</tr>
<tr>
<td>7554</td>
<td>15 Jan 1863</td>
<td>Charles Doan</td>
<td>Amos Wilson</td>
<td>100</td>
<td>* 1/2 acre</td>
</tr>
<tr>
<td>1010</td>
<td>31 Oct 1863</td>
<td>Charles Doan et ux</td>
<td>Pauline Proctor</td>
<td>200</td>
<td>* 3 roads? 35?</td>
</tr>
<tr>
<td>2272</td>
<td>Deed ?</td>
<td>Charles Doan et ux</td>
<td>Amos Wilson</td>
<td>1</td>
<td>* 1/2 acre</td>
</tr>
<tr>
<td>2395</td>
<td>17 Apr 1865</td>
<td>Amos H. Willson et ux</td>
<td>Joseph Ough</td>
<td>500</td>
<td>* 1/2 acre 35 3/4 SE rods?</td>
</tr>
<tr>
<td>2637</td>
<td>1 June 1865</td>
<td>Silas Lepard et ux</td>
<td>William Rowen</td>
<td>330</td>
<td>* 4 acres</td>
</tr>
<tr>
<td>2598</td>
<td>5 Sep 1865</td>
<td>Peter Rowen et ux</td>
<td>Charles Doan</td>
<td>600</td>
<td>* 33 acres pt of El/2 Disch. 1607?</td>
</tr>
<tr>
<td>2733</td>
<td>5 Sep 1865</td>
<td>Charles Doan et ux</td>
<td>Peter Rowen</td>
<td>2000</td>
<td>* 33 do</td>
</tr>
<tr>
<td>3346</td>
<td>21 Apr 1866</td>
<td>Agnes Stevenson et ux</td>
<td>Wm. H. Rowen</td>
<td>30</td>
<td>00 1 acre</td>
</tr>
<tr>
<td>4811</td>
<td>Mortgage</td>
<td>William Soules Jr.</td>
<td>David Evans</td>
<td>200</td>
<td>00 1/2 D7 pt of El/2 Disch. 1469</td>
</tr>
<tr>
<td>5493</td>
<td>B&amp;S</td>
<td>Joseph Ough et ux</td>
<td>John Rafferty</td>
<td>700</td>
<td>00 35 3/4 Sq.rods ? 1/2 acre</td>
</tr>
<tr>
<td>5638</td>
<td>Mortgage</td>
<td>William Soules</td>
<td>William Graham</td>
<td>100</td>
<td>00 ? 37 1/2 per. Pt of ?</td>
</tr>
<tr>
<td>99</td>
<td>B&amp;S</td>
<td>John Rafferty et ux</td>
<td>Amos H. Willson</td>
<td>500</td>
<td>* 1/2 acre 35 3/4 sq rods?</td>
</tr>
<tr>
<td>240</td>
<td>B&amp;S</td>
<td>Jacob Lundy</td>
<td>Chal ? E. Lundy</td>
<td>4000</td>
<td>* 98 1/2 acres</td>
</tr>
<tr>
<td>247</td>
<td>do</td>
<td>James D. Stevenson et ux</td>
<td>John Stevenson</td>
<td>5</td>
<td>* 1 acre</td>
</tr>
<tr>
<td>400</td>
<td>Dis. Mort.</td>
<td>William Graham</td>
<td>William Soules</td>
<td>See Mort. No. 5638</td>
<td>500* 1/2 acre</td>
</tr>
<tr>
<td>401</td>
<td>B&amp;S</td>
<td>Reuben S. Wilcox</td>
<td>William Dodds</td>
<td>375</td>
<td>* 1/2 acre ? 35 3/4 ?</td>
</tr>
<tr>
<td>569</td>
<td>do</td>
<td>Amos H. Willson et ux</td>
<td>William Graham</td>
<td>200</td>
<td>* 1/2 acres for Road</td>
</tr>
<tr>
<td>575</td>
<td>?</td>
<td>William Dodds et ux</td>
<td>Israel Willson</td>
<td>375</td>
<td>* 3/4 do do</td>
</tr>
<tr>
<td>767</td>
<td>B&amp;S</td>
<td>Charles E. Lundy</td>
<td>Corp. of E Gwillimbury</td>
<td>30</td>
<td>* 1 acre</td>
</tr>
<tr>
<td>967</td>
<td>do</td>
<td>Peter Rowen et ux</td>
<td>do do</td>
<td>50</td>
<td>* 1/2 do</td>
</tr>
<tr>
<td>968</td>
<td>do</td>
<td>John Stevenson et ux</td>
<td>William H. Rowen</td>
<td>300</td>
<td>SE1/4</td>
</tr>
<tr>
<td>1065</td>
<td>do</td>
<td>Reuben S. Wilcox</td>
<td>Daniel T? Lepard et ux</td>
<td>433</td>
<td>* 1/2 acre Disch. see 1h11?</td>
</tr>
<tr>
<td>1244</td>
<td>Will</td>
<td>Samuel Haines</td>
<td>Abner N? Reid et ux</td>
<td>433</td>
<td>See Mort. No. 4811</td>
</tr>
<tr>
<td>1469</td>
<td>Dis. Mort.</td>
<td>1 Jan 1871</td>
<td>Israel Willson et ux</td>
<td>375</td>
<td>33 acres pt El/2 (frontal)?</td>
</tr>
<tr>
<td>1695</td>
<td>B&amp;S</td>
<td>12 April 1872</td>
<td>Catharine Dodds</td>
<td>4000</td>
<td>? road allowance</td>
</tr>
<tr>
<td>1541</td>
<td>do</td>
<td>20 May 1875</td>
<td>Richard Rowen et ux et al</td>
<td>437</td>
<td>* 1/2 acre &amp; 35 3/4 sq. rods</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
<td>Name</td>
<td>Acres</td>
<td>Remarks</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------</td>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>3 Sep 1875</td>
<td>3 Sep 1875</td>
<td>Reuben Lundy et ux</td>
<td>500</td>
<td>8 acres pt W1/2</td>
<td></td>
</tr>
<tr>
<td>4 Nov 1875</td>
<td>24 Nov 1875</td>
<td>Charles E. Lundy et ux</td>
<td>2700</td>
<td>* 50 do</td>
<td></td>
</tr>
<tr>
<td>29 Jan 1870</td>
<td>24 Nov 1875</td>
<td>Charles Doan</td>
<td>750</td>
<td>* 1/2 acre</td>
<td></td>
</tr>
<tr>
<td>4 Dec 1875</td>
<td>6 Dec 1875</td>
<td>A. N. &amp; D. M? Reid</td>
<td>250</td>
<td>* 1/2 do Disch. 3096</td>
<td></td>
</tr>
<tr>
<td>4 Dec 1875</td>
<td>8 Dec 1875</td>
<td>Daniel T? Lepad et ux</td>
<td>100</td>
<td>* 2/5 do pt E1/2</td>
<td></td>
</tr>
<tr>
<td>31 May 1877</td>
<td>1 June 1876</td>
<td>Daniel T? Lepad et ux</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Jan 1876</td>
<td>6 Feb 1877</td>
<td>William H. Rowen</td>
<td>160</td>
<td>00 1/2 acre</td>
<td></td>
</tr>
<tr>
<td>19 May 1877</td>
<td>22 Jan 1878</td>
<td>Harriet Soules</td>
<td>437</td>
<td>00 1/2 acre &amp; 35 3/4 sq rods</td>
<td></td>
</tr>
<tr>
<td>20 Nov 1877</td>
<td>7 May 1878</td>
<td>Marsha Mead et al</td>
<td>350</td>
<td>00 1/2 do &amp; 35 3/4 do</td>
<td></td>
</tr>
<tr>
<td>7 Feb 1878</td>
<td>7 May 1878</td>
<td>Jesse Mean et al</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 June 1878</td>
<td>7 June 1878</td>
<td>Mary Mead &amp; husb.</td>
<td>690</td>
<td>00 1/2 acre</td>
<td></td>
</tr>
<tr>
<td>1 Apr 1878</td>
<td>2 Apr 1879</td>
<td>William H. Rowen et al</td>
<td>7000</td>
<td>00 90 acres E1/2 of W1/2 &amp; pt NE1/4</td>
<td></td>
</tr>
<tr>
<td>1 Apr 1878</td>
<td>2 Apr 1879</td>
<td>Christopher Oxtoby et ux</td>
<td>1500</td>
<td>00 do do Disch. ? 4235</td>
<td></td>
</tr>
<tr>
<td>6 Oct 1880</td>
<td>6 Oct 1880</td>
<td>Alpheus Lepad</td>
<td>350</td>
<td>00 115 3/4 sq rods in two parcels?</td>
<td></td>
</tr>
<tr>
<td>28 Oct 1880</td>
<td>29 Oct 1880</td>
<td>Thomas W. Allen et ux</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 June 1878</td>
<td>2 Nov 1880</td>
<td>Elisha Allen</td>
<td>290</td>
<td>00 1/2 acre</td>
<td></td>
</tr>
<tr>
<td>2 Nov 1880</td>
<td>2 Nov 1880</td>
<td>Alpheus Lepad</td>
<td>800</td>
<td>00 1/2 acre</td>
<td></td>
</tr>
<tr>
<td>8 Nov 1880</td>
<td>8 Nov 1880</td>
<td>Christopher Oxtoby et ux</td>
<td>500</td>
<td>00 90 acres Disch. 3644</td>
<td></td>
</tr>
<tr>
<td>23 Dec 1880</td>
<td>20 Jan 1881</td>
<td>Sarah Robinson &amp; husb.</td>
<td>90</td>
<td>00 2/5 acre pt E1/2</td>
<td></td>
</tr>
<tr>
<td>4 Jan 1881</td>
<td>18 Feb 1881</td>
<td>Maria Mead et al</td>
<td>75</td>
<td>00 35 3/4 ? 1/2 acre two parcels</td>
<td></td>
</tr>
<tr>
<td>8 Nov 1882</td>
<td>8 Nov 1882</td>
<td>John Allen</td>
<td>100</td>
<td>00 1/2 acre</td>
<td></td>
</tr>
<tr>
<td>15 Nov 1882</td>
<td>5 Dec 1882</td>
<td>Christopher Oxtoby et ux</td>
<td>1</td>
<td>00 do, See Mort. No. 2630</td>
<td></td>
</tr>
<tr>
<td>17 Nov 1882</td>
<td>5 Dec 1882</td>
<td>William H. Rowen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Jan 1883</td>
<td>3 Jan 1883</td>
<td>Thomas? H. Travis et ux</td>
<td>850</td>
<td>00 1 1/3 acres</td>
<td></td>
</tr>
<tr>
<td>6 Jan 1883</td>
<td>6 Jan 1883</td>
<td>William Graham</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 April 1884</td>
<td>9 April 1884</td>
<td>Jesse Doan et ux</td>
<td>875</td>
<td>00 97 Acres</td>
<td></td>
</tr>
<tr>
<td>14 Mar 1885</td>
<td>14 Mar 1885</td>
<td>William H. Rowen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Mar 1885</td>
<td>27 Mar 1885</td>
<td>Christopher Oxtoby</td>
<td>3000</td>
<td>00 50 acres less road?</td>
<td></td>
</tr>
<tr>
<td>20 Nov 1890</td>
<td>28 Feb 1891</td>
<td>Fanny Hamer &amp; husb. et al</td>
<td>70</td>
<td>00 1/4 acre pt E1</td>
<td></td>
</tr>
<tr>
<td>21 Feb 1891</td>
<td>11 Mar 1891</td>
<td>Joseph Purdy</td>
<td>58</td>
<td>00 part of Lot</td>
<td></td>
</tr>
<tr>
<td>10 Oct 1891</td>
<td>10 Oct 1891</td>
<td>Hannah Oxtoby &amp; husb.</td>
<td>300</td>
<td>00 9/10 acre Disch. 6276</td>
<td></td>
</tr>
<tr>
<td>10 Oct 1892</td>
<td>20 Jan 1893</td>
<td>Hannah Oxtoby &amp; husb.</td>
<td>600</td>
<td>00 9/10 do</td>
<td></td>
</tr>
<tr>
<td>10 Oct 1893</td>
<td>14 Oct 1893</td>
<td>Francis P. Doan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Jan 1898</td>
<td>5 Feb 1898</td>
<td>Lucinda J. Doan</td>
<td>3000</td>
<td>00 part of lot (?)</td>
<td></td>
</tr>
<tr>
<td>? ? Claim</td>
<td>10 June 1899</td>
<td>Charles Doan</td>
<td></td>
<td>00 do (do)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Date 1</td>
<td>Date 2</td>
<td>Name 1</td>
<td>Name 2</td>
<td>Name 3</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>B&amp;S</td>
<td>2 April 1900</td>
<td>3 April 1900</td>
<td>Christopher Oxtoby</td>
<td>Ellis E. M. Long</td>
<td>2250</td>
</tr>
<tr>
<td>Mortgage</td>
<td>2 April 1900</td>
<td>7 April 1900</td>
<td>Ellis E. M. Long et ux</td>
<td>Christopher Oxtoby</td>
<td>2000</td>
</tr>
<tr>
<td>B&amp;S</td>
<td>8 Feb 1898</td>
<td>17 Dec 1900</td>
<td>? Haines, ? Haines</td>
<td>Marvin W. Barker</td>
<td>700</td>
</tr>
</tbody>
</table>
Stage 3 Archaeological Resource Assessment (ARA) of:
The Temple Farm Site: BaGu-57
Part of Lot 10, Concession 2
Town of East Gwillimbury
Regional Municipality of York
Ontario

Project Number: 015-5149-05
Licence/CIF#: P029-290-2006

October 2006

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Katie Bryant
Contents

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Appendix A: Plates 1-3
Introduction

Archeoworks Inc. was retained by Marshall Macklin Monaghan, of Markham, Ontario, to conduct a Stage 1-2 archaeological resource assessment (ARA) of what is currently referred to as the Master Servicing Plan Lands (MSP), located in the Town of East Gwillimbury, Regional Municipality of York, within part of Lots 6 to 12 and part of the original road allowance between Lots 10 and 11, Concession 2, to facilitate the development of individual landowners properties (see Figure 1). While the Stage 2 survey of these ±500 acres is currently ongoing, recommendations for a Stage 3 ARA of the Temple Farm site (BaGu-57), presently located within the Delmark Investments Limited property, were made in an interim report submitted to Marshall Macklin Monaghan in July of 2006 shortly after it was discovered that this site, originally encountered in 1989 while undertaking a Master Plan study of archaeological resources for the Town of East Gwillimbury, and falling within our study area limits, was recommended for further work.

The purpose of this report is, thus, to document the findings resulting from the previous Stage 2 and current Stage 3 investigations. The Stage 3 ARA of the Temple Farm site (see Figure 1) was conducted under the project and field direction of Ms. Kim Slocki on September 20th and 21st, 2006. The weather during the Stage 3 ARA was overcast with temperatures averaging 18°. This study was conducted in accordance with the Ontario Heritage Act (1990) under an archaeological consulting licence (P029) issued to Kim Slocki.

Figure 1: 1:50,000 Map Identifying Temple Farm Site within Stage 1-2 Study Area (Newmarket 31 D/3)

Stage 3 ARA of the Temple Farm Site, Part of Lot 10, Concession 2, East Gwillimbury
1) Summary of Stage 1-2 Archaeological Resource Assessments

The Temple Farm site (BaGu-57), located in the east half of Lot 10, Concession 2 in an agricultural field just west of the Sharon Temple lands was originally documented by Archaeological Services Inc. (ASI), in their 1990 “Final Report on Phases 2 & 3 of the Master Plan of Archaeological Resources for the Town of East Gwillimbury, Ontario”. The site consisted of seven ceramic fragments scattered over an area of 1200 square metres, and dated to the mid-nineteenth century. Archival research revealed that the patent for this 200-acre Lot was originally granted in 1805 to David Willson, who was responsible for the construction of the Sharon Temple and a meeting place for the religious society known as the Children of Peace, which he founded. In 1851, Willson sold 65 acres of the east half of Lot 10 to his son John. The 1851-2 census listed John D. Willson, aged 55, his wife Mariah, aged 33, and their son Job, aged 22, as living in a one-storey frame house. Two families were listed as occupying this house. David Willson and his wife Phoebe Titus are also listed with a one storey frame house, as well as one house built for meeting (The Sharon Temple) and one place of worship for the Children of Peace (The Meeting House). The 1881 census lists John D. Willson as occupying a two-storey frame house, again with one other family, although no structures were illustrated on the 1860 Tremaine map of York County. The 1878 Illustrated Historical Atlas of York County does not show any homesteads, only two places of worship and commercial storefronts (see Figure 2). Census info suggests that both David and John Willson occupied the Lot, each living with another family. It is not clear if these are two separate houses (the second family is not listed), or one and the same. Further work was recommended for BaGu-57 if the site could not be protected from development, and it was suggested that it may correspond to John Willson’s house.

The Temple Farm site was relocated during a pedestrian survey conducted by Archeoworks Inc., in the spring of 2006 and documented in the interim report titled “Stage 1-2 Archaeological Assessment (AA) of: The Master Servicing Plan (MSP) Lands, Part of Lots 6-12 and Part of Original Road Allowance Between Lots 10 and 11, Concession 2, Town of East Gwillimbury, Regional Municipality of York, Ontario”. An intense survey at intervals of 50 centimetres, for a radius of 60 metres, uncovered a surface collection of only 20 artifacts including glass, brick and ceramic fragments, which were all collected and analyzed (see Table 1). These artifacts, roughly dating to the mid-nineteenth century, coincided with ASI’s finds and conclusions that the site could be associated with John Willson, however, further work was still recommended to confirm this association and to determine the extent of the site.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Quantity</th>
<th>Material</th>
<th>Class</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>.001</td>
<td>2</td>
<td>Glass</td>
<td>Architectural</td>
<td>Two window glass fragments, measuring 0.8 and 1.6mm thick, rose tinted and green tinted in colour</td>
</tr>
<tr>
<td>.002</td>
<td>4</td>
<td>Glass</td>
<td>Foodways</td>
<td>One brown, one green and one rose tinted glass fragments. One white glass rimsherd with embossed leaf pattern.</td>
</tr>
<tr>
<td>.003</td>
<td>1</td>
<td>Brick</td>
<td>Architectural</td>
<td>One red brick fragments</td>
</tr>
<tr>
<td>.004</td>
<td>10</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Ten RWE fragments, no decoration</td>
</tr>
<tr>
<td>.005</td>
<td>2</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>One yellowware fragment, one RWE with blue decoration.</td>
</tr>
</tbody>
</table>

Table 1: Stage 2 Historic Artifact Inventory (2006): BaGu-57

Stage 3 ARA of the Temple Farm Site, Part of Lot 10, Concession 2, East Gwillimbury 2
Figure 2: 1878 Historical Map of Temple Farm Site within Stage 1-2 Study Area
2) Stage 3 Archaeological Resource Assessment: Temple Farm Site (BaGu-57)

Upon return to the site, a 60 x 60 metre area surrounding the previously encountered historic scatter was again reviewed by pedestrian survey, at survey intervals of 50 centimetres, to relocate the flags that were left following the Stage 2 survey and to locate any additional historic remains. Visibility was poor due to crop cover, however, two flags from the Stage 2 survey were relocated and two additional historic artifacts were encountered on the surface; these two artifacts each applied to corresponding unit counts. Following this activity, a datum (300-500 stake) was established and a grid system superimposed over the area (UTM Reading 17T: Easting 0624453 Northing 4883956). Due to poor surface visibility and the low counts encountered during the site relocation, a controlled surface collection (CSC) was not undertaken. In lieu of the CSC, numerous one-metre by one-metre units, which were placed over the newly located surface artifacts and in and around the site flags, were excavated (see Figure 3, Plates 1 to 2). In total, eleven units were excavated over the site area. The soil fills were screened through six-millimetre wire mesh to facilitate artifact recovery and all units were excavated to sterile subsoil. Details of the screening are listed below.

A total material culture assemblage of nine artifacts was recovered from the excavation of the eleven one-metre units (Plate 3). The stratigraphy of all excavated units consisted of a loamy plough zone, ranging from 20-27 centimetres in depth, overlying clay subsoil. All artifacts were distributed throughout the topsoil layer. Artifact frequencies ranged from zero to two artifacts (Table 1) and all artifacts encountered were collected. No cultural features were encountered at the floor level of any of the excavated units. A catalogue of these finds, and a brief analysis, is located in the material culture analysis section below.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>DEPTH</th>
<th>ARTIFACTS</th>
<th>UNIT SIZE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>299-507</td>
<td>25cm</td>
<td>1</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>287-502</td>
<td>28cm</td>
<td>1</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>300-485</td>
<td>24cm</td>
<td>0</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>309-500</td>
<td>20cm</td>
<td>0</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>309-490</td>
<td>24cm</td>
<td>0</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>290-509</td>
<td>20cm</td>
<td>2</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>290-489</td>
<td>24cm</td>
<td>0</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>284-509</td>
<td>20cm</td>
<td>1</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>294-514</td>
<td>22cm</td>
<td>2</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>289-515</td>
<td>27cm</td>
<td>1</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
<tr>
<td>300-515</td>
<td>20cm</td>
<td>1</td>
<td>1m</td>
<td>Screened through 6mm mesh</td>
</tr>
</tbody>
</table>
Sharon - Temple Farm

Figure 3: Stage 3 Archaeological Assessment

Archeoworks Inc.
3) Material Culture Analysis: Temple Farm Site (BaGu-57)

Stage 3 archaeological fieldwork was conducted on the Temple Farm site, a historic Euro-Canadian site, during the month of September, 2006. A total of only nine highly fragmented artifacts were encountered and collected during the excavation of eleven one-metre by one-metre units (Plate 3). A description of each of these artifacts is listed below in Table 3.

**Table 3: Stage 3 Historic Artifact Inventory**

<table>
<thead>
<tr>
<th>UNIT</th>
<th>QUANTITY</th>
<th>MATERIAL</th>
<th>CLASS</th>
<th>OBJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>294-514</td>
<td>1</td>
<td>Nail</td>
<td>Architectural</td>
<td>Incomplete wrought nail</td>
</tr>
<tr>
<td>294-514</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE fragment, undecorated</td>
</tr>
<tr>
<td>299-507</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE fragment, undecorated</td>
</tr>
<tr>
<td>287-502</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE fragment, undecorated</td>
</tr>
<tr>
<td>284-509</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE fragment, undecorated</td>
</tr>
<tr>
<td>300-515</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>RWE fragment, light blue decoration</td>
</tr>
<tr>
<td>289-515</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Ironstone base fragment, undecorated</td>
</tr>
<tr>
<td>290-509</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Ironstone body sherd, undecorated</td>
</tr>
<tr>
<td>290-509</td>
<td>1</td>
<td>Ceramic</td>
<td>Foodways</td>
<td>Porcelain fragment</td>
</tr>
</tbody>
</table>

*Total: 9 artifacts*

The Parks Canada Database Artifact Inventory Guide was used during the cataloguing phase of the analysis. All artifacts were classified according to specific functional classes. These classes are intended to reflect related activities. The “Foodways” class, for example, includes all aspects of food preparation, storage and consumption. Likewise, the “Architectural” class is a catch-all category for items such as brick, nails, window pane glass, etc. By classifying archaeological material in this manner, general trends on how an area was used may be discernible. Unfortunately, due to the yields of the Stage 3 assessment, the artifact assemblage does not provide enough information to draw any new conclusions.

**FOODWAYS CLASS**

The Foodways Class is, in general, one of the largest, and most temporally diagnostic artifact classes in the material culture assemblage recovered from a domestic site. This class includes all aspects of food preparation, storage and consumption. It can be divided into a number of groups, and, in the case of the ceramics, into a number of ware types, a technological classification that is loosely tied to function. The only group represented here is the ceramics group.

**The Ceramic Assemblage**

The ceramic assemblage makes up most of the Stage 3 collection. Though each artifact contributes to the dating of a site’s occupation, the ceramic assemblage is generally the most significant temporal indicator on domestic sites.

The earliest 19th century “white” ware types, creamware (1760-1849) and pearlware (1780-1840) are not present in the Stage 3 collection. By the 1830s, these early “whitewares”, especially creamware, were rapidly falling out of fashion, being replaced
by the more popular refined white earthenware which dominates the assemblage. Most of the sherds found here were made of refined white earthenware, popular from the 1830s up until the present.

Additionally, two vitrified white earthenware fragments, or ironstone, and one porcelain sherd were found. The more durable ironstone ceramic began to supplant refined white earthenware in terms of popularity during the 1860s, and became the most popular tableware in many Ontario households by the 1870s. Unlike other ware types, however, it took several decades to capture a significant place in the Ontario market. Despite being more durable, it was rather plain looking beside the more colourful wares of the mid 19th century and expensive too, costing about the same as printed. The cost of porcelain was also expensive. Nevertheless, these ceramic bodies became the principal types used at the turn of the century with three examples seen in this collection.

ARCHITECTURAL CLASS

The Architectural Class for the Stage 3 excavations was represented by only one artifact from the “Nails” group. Though incomplete, it is identifiable as being of the earlier wrought nail variety (c.17th century to early 19th century). Due in large part to a change in technology which allowed for nails to be mass produced, machine cut nails replaced hand wrought iron nails during the period 1820-1830, and these were in turn replaced with wire nails. The earliest wire nails, appearing c.1850s, were only available in very small sizes, for picture frames, etc. Larger sizes were not widely available or used in building construction until the last third of the 19th century.
4) Conclusions and Recommendations

During the Stage 3 Archaeological Resource Assessment of the Temple Farm site (BaGu-57), located within part of Lot 10, Concession 2, Town of East Gwillimbury, Regional Municipality of York, only nine historic Euro-Canadian artifacts were collected. Based on the low artifact yields encountered during both the 1989 and 2006 Stage 2 pedestrian surveys, and the Stage 3 pedestrian and test-unit investigations, this site most likely represents an isolated, one-time dumping event. The proper site, corresponding to the location of the original homestead structure and associated out buildings relating to John Willsons’ occupation of the land, is most likely located further east, closer to the Temple structure, within the existing woodlot. Thus, as the investigations did not offer any evidence of an actual site of occupation, no cultural features were encountered and the artifact yields were extremely low, it can be concluded that this site does not represent a significant historical discovery. Further insight into the history of the village of Sharon by way of additional archaeological investigations is unlikely. It is, thus, recommended that:

1. the Temple Farm site (BaGu-57) be cleared of further archaeological concern.

2. In the event that deeply buried archaeological remains are encountered during construction, the office of the Regulatory & Operations Group, Ministry of Culture (416-314-7143) should be contacted immediately.

3. In the event that human remains are encountered during land development, both the Ministry of Culture (416-314-7143), and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Business Services (416-326-8404) should be contacted immediately.

Under Section 6 of Regulation 881 of the Ontario Heritage Act, Archeoworks Inc. will, “keep in safekeeping all objects of archaeological significance that are found and all field records that are made.”

5) Bibliography

Archaeological Services Inc.

Archeoworks Inc.
2006 Stage 1-2 Archaeological Assessment (AA) of: The Sharon Lands, Part of Lots 6-12 and Part of Original Road Allowance Between Lots 10 and 12, Concession 2, Town of East Gwillimbury, Regional Municipality of York, Ontario. Newmarket.

Ontario Ministry of Citizenship, Culture and Recreation (MCzCR)
APPENDIX A: Plates

Plate 1: Stage 3 archaeological assessment – excavating units and screening for artifacts

Plate 2: Stage 3 archaeological assessment – excavating units and screening for artifacts
Plate 3: Collection of historic artifacts from Stage 3 ARA