Socio-Economic Work Plan

St. Marys Future Solid Waste Disposal Needs Environmental Assessment

Town of St. Marys

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1.0 Introduction

The Town of St. Marys is conducting an Individual Environmental Assessment under the *Environmental Assessment Act* to review alternative means to managing solid waste in the Town over a forty year planning period. The existing St. Marys landfill site (the "Site"), Environmental Compliance Approval (ECA) Number A150203, is located at 1221 Water St. South, St. Marys, Ontario. The 37 ha Site was part of a former clay borrow pit that was used by St. Marys Cement in cement manufacturing and contains an approved fill area of 8 ha. The landfill is nearing its approved fill capacity and a new means to manage post-diversion solid waste is required. The location of the existing landfill is illustrated on Figure 1.

Terms of Reference (TOR) were approved by the Minister of Environment and Climate Change on December 29, 2014. The TOR laid out a strategy for completing the EA. The TOR also included a summary of pre-planning work which had been done to eliminate a number of *Alternatives to the Undertaking*. Those *Alternatives* which were eliminated due to a variety of technical, financial and environmental criteria included:

- Do Nothing;
- Energy From Waste;
- Enhanced waste diversion, and,
- Constructing a new landfill site at a new location in the Town.

A further assessment is currently being conducted to evaluate transporting waste to a landfill in another jurisdiction or expanding the current landfill site. This assessment is not yet complete.

Included in the TOR was a requirement to develop Work Plans should Expansion of the Existing Landfill be identified as the preferable *Alternative To the Undertaking*. Work Plans are to provide a detailed methodology for completing the evaluation of *Alternative Methods for Carrying Out the Undertaking*, the next step in the EA process. Work Plans are to be prepared for a variety of disciplines, including:

- Terrestrial and Aquatic Ecology;
- Hydrogeology;
- Archaeological and Cultural Heritage;
- Air Quality; and,
- Others.

This Work Plan provides the framework for evaluating the *Alternative Methods for Carrying Out the Undertaking* based on factors associated with the socio-economic environment.

A preferred *Alternative To the Undertaking* has not yet been identified (i.e., whether waste will be transported to another landfill or whether the St. Marys site will be expanded). The work outlined in this work plan will only be required if the landfill expansion option is selected.

2.0 Study Parameters

The Study will be completed using the parameters described in the following sections.

2.1 Study Purpose

The Undertaking is defined as:

> *The expansion of the St. Marys landfill in order to provide the necessary capacity to fulfill the Town's post-diversion solid waste disposal needs for the next 40 years.*

The purpose of this study is, therefore:

> *To evaluate a variety of Alternative Methods for expanding the St. Marys landfill in order to fulfill the Town's post-diversion solid waste disposal needs for the next 40 years.*

2.2 Alternatives to be Assessed

Alternative Methods are technically, economically and environmentally feasible ways of doing, or implementing, the same activity. Assuming that the preferred *Alternative to the Undertaking* is to expand the existing landfill, the *Alternative Methods* will include various design options associated with the expansion. Increased waste diversion will be considered for the preferred Alternative Method but will not constitute part of the undertaking.

Therefore, the *Alternative Methods* to be reviewed will include those identified in Table 1.

Table 1: *Alternative Methods* for Carrying Out the Undertaking

Method		**Description**
1	Vertical Expansion of the Existing Landfill	This *Method* involves an expansion in the vertical direction within the existing footprint of the landfill.
2	Horizontal Expansion of the Existing Landfill	This involves an expansion outside of the existing landfill footprint. There may be a number of options as to the direction of the horizontal expansion (i.e., expansion could occur to the north, west or east.).

Method		Description
3	A Combination of Vertical and Horizontal Expansion	This *Method* would involve partial vertical expansion along with some horizontal expansion of the landfill footprint, basically a mixture of Methods 1 and 2.
4	Other Options Which May be Identified During the EA Process	Other *Methods* may be identified during public, Aboriginal and agency consultation.

2.3 Study Area

Two specific Study Areas have been identified which will be used as the basis for defining and characterizing the natural environment which may be potentially affected by the expansion.

The Study Areas are as follows:

- On-site Study Area - includes all lands associated with the existing St. Marys landfill, the 37 ha site located as 1221 Water St. South, St. Marys; and,
- Study Area Vicinity - all lands within a 1,000 m radius of the on-site Study Area.

Both Study Areas are shown on Figure 2.

2.4 Study Timeframe

The EA will consider the potential effects on various environmental components over two time periods:

- Construction and operation of the expanded landfill:
  - Construction is currently anticipated to commence in 2018[1]; and,
  - Operations would then occur over a 40 year period, ending in year 2058.
- Closure and post-closure of the landfill.

2.5 Features of the Socio-Economic Environment to be Studied

Section 1(1) of the *EA Act* broadly defines the environment as:

> *(a) air, land or water,*
> *(b) plant and animal life, including human life,*
> *(c) the social, economic and cultural conditions that influence the life of humans or a community,*
> *(d) any building, structure, machine or other device or thing made by humans,*

[1] This timeframe is preliminary and will be updated to consider EA study results and subsequent approval requirements.

> *(e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or*
> *(f) any part or combination of the foregoing and the interrelationships between any two or more of them.*

This portion of the study will focus primarily on (c), particularly the social and economic conditions that influence the life of humans or a community. We note that the cultural component of the environment, including archaeological and cultural heritage resources will be addressed in separate reports in accordance with Ministry of Culture, Tourism and Sport guidelines. Those separate efforts are described in the *Archaeological and Cultural Heritage Work Plan*. They will not be addressed in this report.

Table 2 lists issues relating to the socio-economic environment which were identified during preparation of the Terms of Reference[2]. The corresponding Environmental Component will be studied through the EA process.

Table 2: Concerns Identified during the Terms of Reference

Concern	Environmental Component (see corresponding indicators/measures in Table 4)
Increased truck traffic could result in effects on human health (MOECC, Dec. 14, 2012)	Residential and Agricultural Properties
Land use planning policies need to be in place to ensure that sensitive land uses do not encroach into adjacent areas. (MOECC, Dec. 24, 2012)	Land Use Planning Controls
There is an active aggregate resources licence in effect on part of the landfill property. Completion of license requirements or license surrender will be necessary. Significant mineral aggregate resources must be protected from development. (MNR, Nov. 29, 2013)	Aggregate Resources
Land use compatibility with the Provincial Policy Statement and MOECC's Land Use Planning Guideline D-4 must be considered. (MOE, April 6, 2010)	Land Use Planning Controls
Odour, particularly effect on farm gate sales as they deter customers. (site neighbour, Dec., 5, 2013)	Agricultural Properties
Presence of Aboriginal Treaty lands, Traditional Territories and interests in the land. (Various First Nations, 2013)	Aboriginal Treaties, Rights and Interests

[2] Terms of Reference Table 5.4.

3.0 Methodology

The study will be carried out in a number of steps, as follows:

- Step 1: Review and compile background information from existing data sources;
- Step 2: Assess the advantages and disadvantages of each Alternative;
- Step 3: Identify the Potential Impacts and Mitigation for the Preferred Alternative.

Each step is described in the following sections.

3.1 Step 1: Background Data Collection

The background data collection will include a review of publicly available data. Information requests will also be made to specific agencies and communities in order to obtain information not publicly available.

3.1.1 Publicly Available Data

A number of secondary source data sets will be reviewed in order to compile all known information about the On-Site Study Area and Study Area Vicinity. A number of sources provide data at a broader scale such as the Town or County level. In these cases, data will be reported at the level it is provided. Data sources to be reviewed are identified in Table 3. Where available, updated (more recent) data may be utilized in place of the information identified in Table 3.

Table 3: Data Sources

Database	Website
Demographics and Economic Statistics	
Town of St. Marys Community Based Strategic Plan (2010)	http://www.townofstmarys.com/uploadedFiles/Business_in_St_Marys/Economic_Development/St.%20Marys%20Final%20Report%20-%20Community%20Based%20Strategic%20Plan.pdf
County of Perth, Town of St. Marys and City of Stratford Economic Development Strategy and Action Plan: 2010-2014 (2010)	http://www.townofstmarys.com/uploadedFiles/Business_in_St_Marys/Economic_Development/Perth%20St%20Marys%20Stratford%20Economic%20Plan%20Final.pdf
Town of St. Marys Community Profiles (2011)	http://www.townofstmarys.com/business/business.aspx?id=4762
Official Plans	
Town of St. Marys Official Plan	http://www.townofstmarys.com/uploadedFiles/Town_Services/Permits_and_Zoning/OfficialPlan.pdf
Perth County Official Plan	http://www.perthcounty.ca/Official_Plan_Sechdules_of_Detailed_Maps

Database	Website
Thames River Background Documents	
The Thames River Watershed: A Background Study for Nomination under the Canadian Heritage Rivers System (1998)	http://thamesriver.on.ca/wp-content/uploads//Publications/Thames-CHRS-BackgroundStudy.pdf
The Thames Strategy: Managing the Thames as a Canadian Heritage River (2000)	http://thamesriver.on.ca/wp-content/uploads//Publications/Thames-Strategy-2000.pdf
The Thames River, Ontario Canadian Heritage Rivers System Ten Year Monitoring Report 2000-2012	http://thamesriver.on.ca/wp-content/uploads/Publications/CHRS-10YearReport.pdf

3.1.2 Data Requests

Data requests will be made to a number of agencies to obtain information that is not publicly available.

Data will be requested from the Town and will include:

- Number of people employed at the landfill;
- Average wages earned by people employed at the landfill;
- Operational plans/protocols (e.g., landfill cover, bird/vermin control etc.);
- Number and type of complaints related to the landfill;
- Location of those making complaints;
- Number of days in which noise, odour, etc. have been out of compliance over the last five years;
- Any monitoring results over the last five years which would have an impact on recreation, enjoyment of private property, aesthetics; and,
- Any monitoring results over the last five years which would impact neighbouring businesses, including agricultural and quarrying industries.

Data will also be requested form St. Marys Cement, including:

- Information regarding the aggregate resources license associated with the property;
- Information regarding truck traffic and potential conflicts associated with truck traffic; and,
- Aggregate resources in the area and any potential for any disruption to operations or loss of ability to extract potential resources as a result of the landfill expansion.

Consultation with the public, agencies, Aboriginal communities and other stakeholders will also be ongoing throughout the EA process. Additional input regarding the

socio-economic environment obtained through the consultation process will also be documented and addressed in the report.

3.2 Step 2: Assess the advantages and disadvantages of each Alternative;

Each *Alternative Method* for undertaking the landfill expansion will be assessed based on its advantages and disadvantages for various components of the socio-economic environment in the Study Area and Study Area Vicinity. Table 4 lists the Environmental Components to be assessed along with indicators which will be used to identify advantages and disadvantages. In the case of the socio-economic environment, many concerns relate to other components of the environment which will be studied under separate cover. Table 4 also identifies where information from other disciplines will be used to assist in determining impacts.

Table 4: Environmental Components, Indicators and Data Sources

Socio-Economic Environment Component	Indicator/Measure	Data Source (Other than those listed in Table 3)
Employment rates at the landfill and/or within the Public Works Department	Changes in employment levels at the landfill site, including short term (construction) jobs and long term (operational) jobs	Town of St. Marys
Residential Property	Potential for changes in the use and enjoyment due to increased noise, odour and dust.	Air, Noise and Vibration Report to be prepared based on the approved Work Plan.
	Potential for changes in the use and enjoyment due to aesthetics concerns.	Terrestrial and Aquatic Ecology Report to be prepared based on the approved Work Plan.
	Potential for changes in the use and enjoyment due to increased presence of disease vectors and vermin and gulls.	Terrestrial and Aquatic Ecology Report to be prepared based on the approved Work Plan.
Agricultural Properties	Potential for disruption of agricultural activities due to soil/groundwater quality concerns.	Hydrogeologic Report to be prepared based on the approved Work Plan.
	Potential for disruption of agricultural activities due to traffic-related conflicts.	Traffic data and assessment to be prepared as part of the EA.

Socio-Economic Environment Component	Indicator/Measure	Data Source (Other than those listed in Table 3)
	Potential for disruption of farming activities, farmgate sales etc. due to odour.	Air, Noise and Vibration Report to be prepared based on the approved Work Plan.
Aggregate Resources	Quantity and quality of the aggregate resource to be lost due to surrender of license.	License details to be supplied from St. Marys Cement.
	Potential for disruption of aggregate extraction activities due to traffic-related conflicts.	Traffic data and assessment to be prepared as part of the EA.
Recreational Opportunities	Potential for changes in the use and enjoyment of the Thames River for recreation due to water quality, aesthetics, noise, odour, dust.	Hydrogeologic Report Terrestrial and Aquatic Ecology Report Air, Noise and Vibration Report
	Potential for changes in the use and enjoyment of park land to the north (baseball diamonds, Baseball Hall of Fame, tennis courts, quarry swimming area, etc.) due to water quality, aesthetics, noise, odour, dust.	Hydrogeologic Report Terrestrial and Aquatic Ecology Report Air, Noise and Vibration Report
Land Use Planning Controls	Compatibility of the landfill site with the Town's Official Plan and MOE's Land Use Planning Guideline D-4.	Official Plan MOE's Land Use Planning Guideline D-4
Aboriginal Treaties, Rights and Interests	Potential for disruption in the use of resources for Aboriginal people / communities for traditional purposes.	Affected/interested Aboriginal communities
	Compatibility with any existing treaty rights.	
	Compatibility of the project with Aboriginal Interests.	

3.3 Step 3: Evaluate Alternatives and Assess Potential Impacts

3.3.1 Evaluation of Alternative Methods for Landfill Expansion

Socio-economic data will be used in the evaluation of alternative methods for landfill expansion. The advantages and disadvantages of the various alternatives, described in Section 2.2 will be determined based on their potential impact on socio-economic features and characteristics in the Study Area and Study Area Vicinity.

An overall preferred alternative will be determined based on a review of the advantages and disadvantages of a broader set of criteria, including factors associated with the natural, cultural, social, economic and built environments.

3.3.2 Impacts and Mitigation

Once the preferred alternative is selected, a comprehensive list of potential impacts and proposed mitigation specific to that alternative will be described.

Effects will be evaluated primarily using a qualitative assessment, using professional judgment. Input from agencies, stakeholders and First Nations will also be documented and considered. The following questions will be used as the basis for determining impacts:

- What are the significance, sensitivity and resilience of the features present?
- What is the quantity of any direct losses (area of land, quantity of aggregate resource, etc.)?
- What are the magnitude, duration and reversibility of potential impacts?
- Are impacts predictable or are effects not well known or understood?
- Can impacts be mitigated?
- Are there net effects that cannot be mitigated?
- Is enhancement of previously degraded areas possible?

A list of mitigation measures will be provided to eliminate or minimize potential effects. Any net effects will be documented.

4.0 Public and First Nation Input

It is recognized that local landowners and First Nation communities may have specific knowledge of the site and surrounding area. Local and Aboriginal knowledge can positively contribute to studies such as this by adding observations and historical information which may not be included in public records. Public and First Nation input will be obtained in the following manner:

- The Work Plan will be posted to the Town's website for public comment prior to initiating the assessment;

- The Work Plan will be sent to First Nations who have expressed an interest in the project for comment prior to initiating the assessment; and,
- Input will be solicited from the public during Public Information Centres.

5.0 Conclusions

The preferred method for managing solid waste disposal within the Town of St. Marys will be determined through an evaluation of a number of social, environmental, technical and financial criteria. Potential impacts to the socio-economic environment are an important component of the overall evaluation of alternatives. This Work Plan has outlined how the assessment of the socio-economic environment will be conducted and how any concerns will be addressed.

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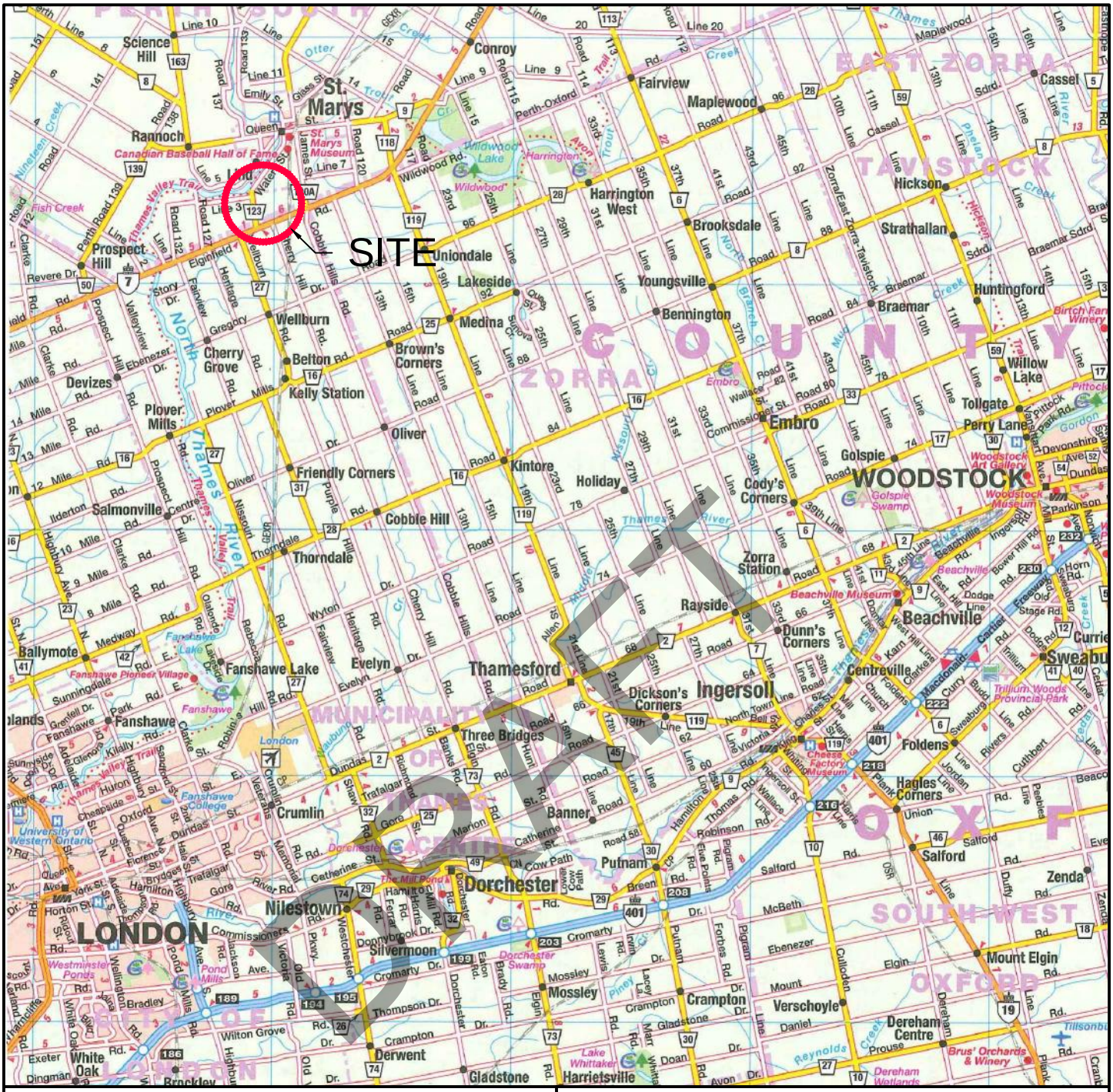
[THE DIFFERENCE IS OUR PEOPLE]

Figures



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THE CORPORATION OF THE TOWN OF ST. MARYS

Figure Title

SITE LOCATION

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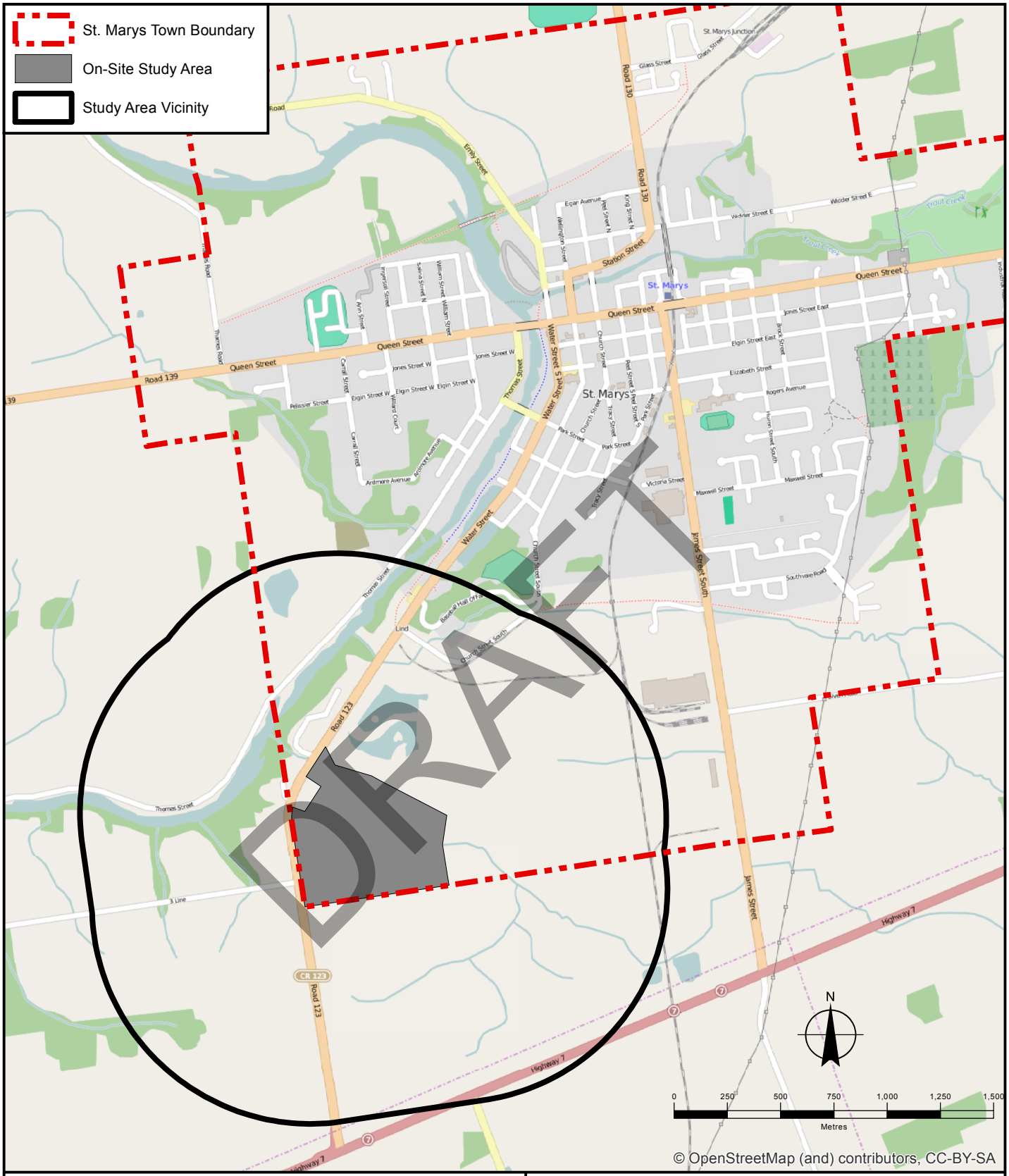

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Map Title

STUDY AREA

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THE CORPORATION OF THE TOWN OF ST. MARYS

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