



Niagara Region

Niagara Escarpment Crossing
Comprehensive Environmental
Assessment
Proposed Terms of Reference

Appendix G
Contaminated Property
Work Plan

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1 Introduction

This document outlines the proposed work plan that will be carried out during the Niagara Escarpment Crossing Environmental Assessment (EA) to generate a more detailed description and understanding of the environment from a contaminated property perspective. Further, this document describes how that information will be used to assess the effects of the alternatives and proposed project on the environment through evaluation criteria and indicators. This work plan forms **Appendix G** to the proposed Niagara Escarpment Crossing Comprehensive EA Terms of Reference (ToR) and should be read in conjunction with it.

The ToR presently provides a preliminary description of the environment to gain a general understanding of the potential effects that should be examined in the Niagara Escarpment Crossing EA based on the range of alternatives to the project currently anticipated. This description reflects all components included within the Ontario *Environmental Assessment Act* (EA Act) definition of the environment: natural, social, built, economic, and cultural.

Several investigative studies are proposed as part of the Niagara Escarpment Crossing EA to expand on this preliminary description, including, but not limited to the following:

- Air Quality
- Agricultural
- Archaeology
- Built Heritage and Cultural Heritage Landscapes
- Contaminated Property
- Groundwater
- Land Use
- Natural Heritage
- Noise and Vibration
- Surface Water
- Visual Impact

The details associated with the contamination property investigation are provided in this document while details of the other investigative studies are provided as separate work plans. In addition to the investigative studies, the proposed ToR includes three other work plans: Traffic, Operations and Safety, Transportation Planning and Engineering, and Financial all of which are included as separate appendices.

2 Establishment of Property Contamination Conditions

2.1 Confirmation of the Preliminary Study Area

The preliminary study area provided in the ToR will be utilized as a starting point for establishing existing and future environmental conditions (**Figure 2-1**). This preliminary study area will be finalized during preparation of the Niagara Escarpment Crossing EA when more detailed information has been obtained, the alternatives to the project have been confirmed, and the potential environmental effects are better understood.

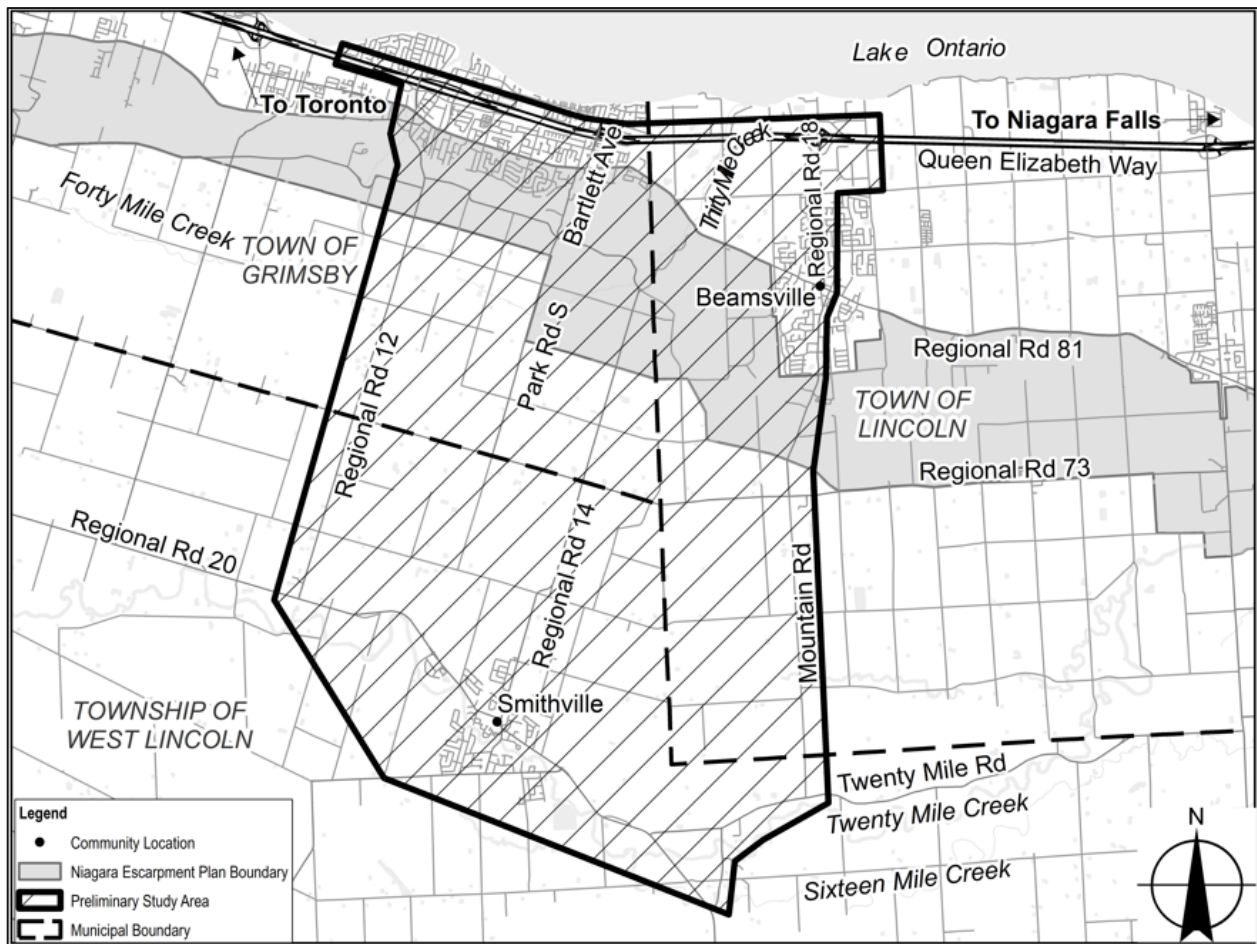


Figure 2-1: Preliminary Study Area

2.2 Review of Available Existing Information Sources

Available existing sources of information will be collected and reviewed to determine existing and future environmental conditions, including any data gaps that need to be addressed through subsequent work (e.g., field investigations, modelling, etc.). With this in mind, a Contamination Overview Study (COS) will be carried out to establish existing property contamination conditions in the final study area including properties/areas with the potential for contamination.

A COS is a broad-level assessment of potential sources of contamination to the natural environment (e.g., soil, groundwater, sediment, etc.) done through the identification of Potential Contaminating Activities (PCA) within and surrounding a study area and identifying associated Areas of Potential Environmental Concern (APEC) within a study area.

The PCA and APEC are identified thorough the completion of an assessment of the study area by way of a records review, a site visit, and an evaluation of information and reporting (Sections 2.2 and 2.3). The assessment is based on known and former land uses and activities with no sample collection or intrusive investigation.

A COS is not a full Environmental Site Assessment (ESA) and does not constitute a Phase I ESA as defined by the Canadian Standards Association (CSA Z768-01) and Ontario Regulation 153/04 (O.Reg 153/04), as amended.

Presently, the list of existing information sources that will be collected and reviewed as part of the proposed COS includes, but may not be limited to, the following:

- Historical and regulatory documents;
- Geological and topographic maps;
- Landfill Management Strategy and Former Industrial Sites (Intera, 1988) listings;
- Technical Standards and Safety Authority (TSSA) database search of storage tanks and spills;
- Fire insurance records as provided by ERIS;
- Freedom of Information (FOI) with the MECP;
- Municipal directories;
- Aerial photographs at a maximum of 10-year intervals, as available;
- ERIS Report that includes searches of various federal, provincial and private databases for the property and the final study area;

- Utility plans to identify existing infrastructure (municipal and other) as it relates to the potential of contaminate migration, if available; and
- Previous environmental and/or geotechnical reports within the final study area.

In addition, documentation prepared during the Niagara Escarpment Crossing EA from the other proposed work plans (e.g., Land Use, etc.) will also be considered, as appropriate, along with the preceding existing information sources.

2.3 Proposed Field Investigations

Field investigations are proposed to supplement and enhance available existing sources of information so that additional data is generated to assess each alternative (i.e., identifying potential environmental effects, developing appropriate impact management measures for addressing potential adverse environmental effects, and describing net effects). The need for field investigations will be based on the level of detail associated with the existing information sources collected and reviewed, accessibility of the final study area, and comments received from review agencies, Indigenous communities, and the public.

The need for an increased level of detail and collection of field data is expected as the Niagara Escarpment Crossing EA progresses. While the assessment of alternative(s) to the project can be completed based on existing source data, the assessment of alternative methods of carrying out the project will be based on more site-specific information generated through subsequent work (e.g., field investigations, modelling, etc.).

The following field investigation is currently proposed as part of the COS:

- A site reconnaissance will be inclusive of a “windshield-level” assessment from roadways and publicly accessible areas to identify land use and potential contaminating activities within the final study area.

Documentation

The results of reviewing available existing information sources and the proposed field investigation will be documented in a COS Report (Baseline Conditions Report). Specifically, all properties and/or areas that have the potential for site contamination will be identified in the COS Report. In addition, the potential for soil and groundwater contamination for the properties within the final study area will be qualitatively ranked and recommendations will be made in the COS Report for properties that require further assessment (e.g., intrusive investigation to assess soil and/or groundwater quality).

3 Assessment of the Alternatives

3.1 Alternatives To the Project

Following confirmation of the preliminary list of alternatives to the project, they will be assessed and comparatively evaluated leading to a recommended alternative(s) to the project. The recommended alternative(s) will be presented to review agencies, Indigenous Communities, and the public for a defined period to receive comments, following which a preferred alternative(s) will be identified. The assessment of the alternatives to the project (through the application of evaluation criteria) will be based on available existing information sources contained in the Baseline Conditions Reports.

3.1.1 Preliminary Criteria and Indicators

The preliminary evaluation criteria and indicators that will be used for assessing the alternatives to the project from a property contamination perspective include, but may not be limited to, those set out in **Table 3-1**. The preliminary evaluation criteria and indicators will be finalized based on comments received during the Niagara Escarpment Crossing EA and documented in the EA Report.

Table 3-1: Preliminary Criteria and Indicators for Assessing the Alternatives To the Project

Category	Criterion	Indicator
Built Environment	- Effect on potentially contaminated property	- Extent of potentially contaminated properties affected

3.2 Alternative Methods of Carrying Out the Project

Following the identification of the preferred alternative(s) to the project, alternative methods of carrying out the project will be generated, possibly screened, assessed, and comparatively evaluated leading to a recommended method(s). The recommended method(s) will be presented to review agencies, Indigenous communities, and the public for a defined period to receive comments, following which a preferred method(s) will be identified.

The generation and possible screening of the alternative methods will be based on available existing information sources contained in the Baseline Conditions Reports.

The assessment of the alternative methods of carrying out the project (through the application of evaluation criteria) will be based more on the information provided through subsequent work (e.g., field investigations, modelling, etc.) contained in the Baseline Conditions Reports, as appropriate.

3.2.1 Preliminary Criteria and Indicators

The preliminary evaluation criteria and indicators that will be used for assessing the alternative methods of carrying out the project from a property contamination perspective include, but may not be limited to, those set out in **Table 3-2**. The preliminary evaluation criteria and indicators will be finalized based on comments received during the Niagara Escarpment Crossing EA and documented in the EA Report.

Table 3-2: Preliminary Criteria and Indicators for Assessing the Alternative Methods of Carrying Out the Project

Category	Criterion	Indicator
Built Environment	- Effect on the proposed transportation corridor from potential soil and groundwater contamination	- Proximity of the proposed transportation corridor to property of potential environmental concern

4 Impact Assessment of the Proposed Project

Once selected, the preferred method(s) of carrying out the project (i.e., proposed project) will be further developed at a preliminary design level of detail so that the potential environmental effects can be identified with more certainty, more site-specific impact management measures (i.e., avoidance, mitigation, and compensation measures) can be developed for application, net environmental effects can be identified with more certainty, appropriate monitoring requirements can be clearly defined, and specific approval/permitting requirements for constructing the proposed project can be identified. Excess soils generated as part of the project will be handled in accordance with the Excess Soils Regulation (O.Reg 406/19) at the detailed design stage.

In concert with preparing the preliminary design level of detail, it may be necessary to undertake additional work (e.g., field investigations, modelling, etc.) at the impact assessment stage of the Niagara Escarpment Crossing EA. The additional work proposed as part of the Contaminated Property Work Plan could include the following subject to preparation of the EA:

- A Phase I Environmental Site Assessment (ESA)

Typically, a Phase I ESA is a broad review of a single property to determine the potential for contamination. It is generally completed for a property that is likely to be impacted by road construction and some or all the property must be acquired by the proponent, and for an adjacent property that has the potential for contaminant migration onto the proponent's lands (e.g., gas station, industrial facility, etc.).

With this in mind, the Phase I ESA is broadly defined as follows:

- The study area would be composed of the property(ies) identified as a result of the COS.
- The site records for the property(ies) identified would be collected and reviewed
- The property(ies) identified would be subject to a site walk.
- The property(ies) identified would be assessed for potential contamination, and the potential contamination would be described.

Documentation

The results of the impact assessment will be documented in an Impact Assessment Report along with any additional work including the results of any potential Phase I ESA(s) that are prepared for individual properties.

5 Documentation

The results of implementing this work plan will be documented in two reports during the Niagara Escarpment Crossing EA:

- **Baseline Conditions (Contamination Overview Study) Report** – will document the results of collecting and reviewing available existing sources of information and the proposed field investigation.
- **Impact Assessment Report (Phase I ESA(s))** – will document the results of the impact assessment of the proposed project including the results of any Phase I ESAs.

Upon completion, each report will be made available during the Niagara Escarpment Crossing EA to review agencies, Indigenous Communities, and the public for their information via the project website and upon request and will become either a reference or supporting document to the submitted EA Report. The EA Report will be based on and reflect the information contained in the two reports.