

Environmental Site Assessments - Phase One and Two

An Environmental Site Assessments (ESA) - Phase One and Two involve the study of a property to determine if contaminants are present and, if so, the locations and concentrations of these contaminants. In addition, Phase One ESAs and Phase Two ESAs include the completion of reports documenting the study results.

A Phase One ESA is an assessment of the property conducted in accordance with Ontario Regulation 153/04 (as amended), by or under the supervision of a Qualified Person (QP), to determine the likelihood that one or more contaminants have affected any land or water on, in or under the subject property.

A Phase One ESA requires the qualified person to:

- › Identify potentially contaminating activities (PCAs) in the Phase One Study Area, including the subject property
- › Identify Areas of Potential Environmental Concern (APECs) on the subject property
- › Confirm if a Phase Two ESA is required (for some types of property uses and circumstances, a Phase Two ESA is mandatory)
- › Provide the basis for carrying out a Phase Two ESA
- › Provide adequate preliminary information about environmental conditions of the land or water on, in or under the Phase One Property for the conducting of follow-up studies.

A Phase One ESA needs to meet all requirements of O. Reg. 153/04 (as amended), including the requirements of Schedule D of the Regulation.

A Phase Two ESA requires the qualified person to:

- › Evaluate the presence or absence of contaminants of concern on, in or under the subject property
- › Where contamination is found in excess of the applicable standards, delineate the extent of contamination present on, in or under the subject property
- › Propose next steps to address the identified contamination if a standard has been exceeded through either remediation or completion of a risk assessment to develop property specific standards that are safe for the intended use
- › Confirm that the site meets the applicable site condition standard or a standard specified in a risk assessment.

A Phase Two ESA needs to meet all requirements of O. Reg. 153/04 (as amended), including the requirements of Schedule E of the Regulation.

A Record of Site Condition (RSC) is a formal submission to the Ministry of the Environment, Conservation and Parks (MECP) by a qualified person, indicating the environmental conditions of the site and its suitability for a proposed use.

Each Record of Site Condition:

- › Is based on the results of one or more ESAs, remediation programs or other investigations prepared in response to an order or request of the MECP (as applicable)
- › Is conducted by a qualified person
- › May involve the completion of a risk assessment and the development of property specific standards
- › Is certified by a qualified person that the property meets the applicable site condition standard or a standard specified in a risk assessment for the intended use
- › Be submitted for filing in a form acceptable to the Director
- › Is filed to the Environmental Site Registry once regulatory requirements are met.

Required by Legislation

The Environmental Protection Act, R.S.O. 1990, c. E.19

Ontario Regulation 153/04 (as amended)

The Planning Act, R.S.O. 1990, c. P.13

Who should prepare this assessment?

A Qualified Person for Environmental Site Assessments (QPESA) is defined under Section 5 of O. Reg. 153/04 (as amended) of the Environmental Protection Act as someone:

- › Who holds a licence, limited licence or temporary licence under the Professional Engineers Act (P. Eng), or
- › Who holds a certificate of registration under the Professional Geoscientists Act, 2000, and is a practicing member, temporary member or limited member of the Association of Professional Geoscientists of Ontario (P. Geo).

The QPESA shall also maintain insurance coverage as described in Section 7 of O. Reg. 153/04 (as amended).

All Phase One and Two ESA reports that are submitted for review must be completed by, or under the supervision of, a QPESA.

Why do we need this assessment?

The Environmental Site Assessment process is a staged approach intended to assess whether potential environmental concerns exist, to investigate whether significant concerns result in actual on-site contamination, and to address (through remediation or risk assessment) any areas of confirmed contamination. The primary objective of these studies is to determine if site remediation or cleanup is required and ensure that contaminated land /water is restored to an environmental condition suitable for the proposed land use so that water resources, human health, and ecological health are protected.

Environmental reports and supporting documents (Environmental Site Screening Questionnaire, Phase One ESA, Phase Two ESA and RSC) are required by municipalities in the planning and development process to ensure that the future landowners and tenants are protected, and to reduce environmental liabilities when the municipality is acquiring lands.

How should this assessment be prepared?

An Environmental Site Assessment should at a minimum contain the following:

Introduction

- › Address and legal description of the subject property
 - › Site location of the subject property
 - › Project name (if applicable)
 - › Applicant and owner's contact information
 - › Author name, title, qualifications, company name and appropriate stamp
 - › Brief description of the proposed development
 - › Overview of the study area
 - › Purpose of the study
 - › Location and context map (generally referenced as an Appendix).
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Proposal Description and Context

- › Description of the proposal, development stats (e.g., number of units, site area) type of development proposed, height, parking areas, access points, location of amenity areas, proposed phasing
 - › Description of the existing on-site conditions as well as surrounding areas, buildings, structures, roads, active transportation facilities, parks, natural areas, buildings, parking areas
 - › Concept Plan for the development including building location, parking, access, amenity areas, grading and natural features and any natural hazards.
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How should this study be prepared? (continued)

Investigation/Evaluation

PHASE ONE Environmental Site Assessment (ESA)

- › **Criteria and Method:** Follow records' review, interviews, site reconnaissance and reporting requirements for Phase One Environmental Site Assessments as prescribed by Part VII and Schedule D of O. Reg. 153/04
- › **Assessment/Analysis:** Identify all PCA and APEC based on former and current land uses within the study area of the subject property. Include a Phase One Conceptual Site Model, as prescribed in O. Reg. 153/04 and function and assess the market competition
- › **Conclusions:** Make a determination and provide supporting documentation and rationale by Qualified Person on whether a Phase Two ESA is required or whether a Record of Site Condition can be filed based on the findings of the Phase One ESA.

PHASE TWO Environmental Site Assessment (ESA)

- › Provide a summary of the Phase One ESA findings and any previous environmental investigations
- › **Criteria and Method:** Follow site investigation and reporting requirements for Phase Two Environmental Site Assessments as prescribed by Part VIII and Schedule E of O. Reg. 153/04
- › **Assessment/Analysis:** Compare laboratory data of each Contaminant of Concern (COC) from all collected soil and groundwater samples (and other media, where applicable) from each APEC on the subject property against the applicable Site Condition Standards for the intended use and assess whether all COCs have been effectively delineated both horizontally and vertically. Include a Phase Two Conceptual Site Model, as prescribed under O. Reg. 153/04. If remedial activities were undertaken, then summarize the remedial actions and sampling performed
- › **Conclusions:** Provide a summary of the location and concentration of COCs in comparison to the applicable Site Condition Standard(s) for the intended use(s). The Qualified Person makes a determination whether or not the subject property meets the applicable Site Condition Standards as of the certification date of the report. Where it does not, further delineation of COCs on the subject property may be recommended and/or off-site, proceeding with the development of a remedial action plan to properly assess contaminated material.

Impacts and Mitigation Measures

- › If a Phase Two ESA report indicates that contaminants are present on the property that exceed the applicable site condition standards, then a Qualified Person will need to prepare a Remedial Action Plan to properly address the contamination to meet the applicable standards. A Remedial Action Plan may include the use of a Risk Assessment either as an alternative to, or in combination with, physical remediation methods to remove and/or treat contamination in soil and/or groundwater.

Drawings and Supporting Information

PHASE ONE Environmental Site Assessment (ESA)

- › Site Location Map
 - › Topographic Map (Ontario Base Map series)
 - › Environmental Database Records
 - › Fire Insurance plans
 - › City Directories Records
 - › Regulatory and/or Site Operating Records
 - › Plan of Survey
 - › Photographs of Subject Property and Surrounding Area
 - › Historical Aerial Imagery
 - › Chain of Title Records
 - › Environmental Reports
 - › Conceptual Site Model.
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How should this study be prepared? (continued)

Drawings and Supporting Information (continued)

PHASE TWO Environmental Site Assessment (ESA)

- › Sampling and Analysis Plan
- › Survey Plan of Phase Two Property
- › Grain Size Analysis results (as applicable)
- › Field Logs (boreholes, monitoring wells, test pits, sediment sampling, soil vapour, etc.)
- › Laboratory Analytical Results and Chain of Custody
- › Residue Management.

OTHER

- › Remediation Report and Records (where remedial activities undertaken)
 - › Where this Terms of Reference differs from applicable legislations, the legislation prevails. Furthermore, the legislation may be amended/updated from time to time. The applicants need to ensure the most updated legislation is followed.
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What else should we know?

The scope of work should be discussed with the community planner, urban designer and or other staff or agencies as part of the pre-consultation process.

- › Please note that “Phase One” and “Phase Two ESAs” that are prepared following the Canadian Standards Association (CSA) standards Z768-01 (R2022) and standard Z769-01 (R2023), are not regulated under provincial legislation, cannot be used to file a Record of Site Condition and will not be accepted for a land dedication
 - › All Phase One and Two ESA reports submitted to the municipality must be accompanied by an Environmental Clearance and Letter of Reliance to the satisfaction of the municipality
 - › **For applications where Phase One and Two ESA reports are required by the Region for land dedications on a Regional road, York Region will not accept reports that exceed 24 months** as of the date title to the Conveyance Lands is transferred to the Region. In such cases, the Phase One ESA will need to be either updated or a new Phase One ESA submitted to York Region. Additional requirements may be requested by York Region based on the finding of the submitted reports
 - › **For applications where Phase One ESA and Phase Two ESA reports are required by the local municipality,** the maximum timeframe within which the Phase 1 and Phase 2 ESA must be completed to be considered valid varies between municipalities and should be confirmed with municipal staff. Phase One and Two ESA reports submitted that are older than the maximum acceptable timeframe may not be accepted and an updated report may be required
 - › A Building permit may indicate that a Record of Site Condition is required due to a change in land use to a more sensitive use. In such cases, a Phase One ESA will be required as a first step towards filing a Record of Site Condition. As well, local municipalities may have contaminated sites policies which require RSCs in other scenarios, such as if there is contamination requiring remediation. Record of Site Condition may require completion of a Risk Assessment in accordance with O. Reg. 153/04, as amended.
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Additional Terms

To be identified by the local municipality where proposed development is located.

Study Submission Instructions

To be identified by the local municipality where proposed development is located.

What other resources are there?

[O. Reg. 153/04: Records of Site Condition - PART XV.1 of the Act under Environmental Protection Act, R.S.O. 1990, c. E.19](#)

[Professional Engineers of Ontario – Environmental Site Assessment, Remediation and Management Guideline](#)

Ontario Professional Planners Institute (OPPI)

[Professional Geoscientists Ontario](#)

Ministry of the Environment, Conservation and Parks –

[Guide for completing phase one environmental site assessments under Ontario Regulation 153/04](#)

Ministry of the Environment, Conservation and Parks –

[Guide for completing phase two environmental site assessments under Ontario Regulation 153/04](#)

Ministry of the Environment, Conservation and Parks – [Submitting a record of site condition](#)

About these Terms of Reference

These Terms of Reference were developed as a joint effort with participation by representatives from all York Region municipalities and the Region. The Terms of Reference are in widespread use across the Region, with local requirements added as prescribed by each municipality at the pre-consultation stage.

The need and scope for this study will be decided by a municipality during initial pre-consultation process with input from partner agencies. This pre-consultation process may include:

- Determination if this study is applicable
 - Confirmation of criteria within these Terms of Reference that are appropriate for your development project
 - Identification of specific technical components that need to be addressed
 - Identification of detailed standards to be met
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Notes:

If the proposed development is revised, the study/report shall reflect the revisions by an updated report or letter from the author indicating the changes and whether or not the recommendations and conclusions are the same (Note: this is subject to the extent of the revisions).

A peer review may be required. The cost of the peer review will be borne by the applicant.

If the submitted study is incomplete, is authored by an unqualified individual or does not contain adequate analysis, the applications will be considered incomplete and returned to the applicant.