



Infrastructure and Engineering Services Department

Environmental Site Assessment Requirements

Phase One and Phase Two Environmental Site Assessments

Phase One and Phase Two Environmental Site Assessments (ESA) 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 ESA and Phase Two ESA include the completion of reports documenting the study results.

A Phase One ESA is an assessment of the property conducted in accordance with the regulations, by or under the supervision of a qualified person, to determine the likelihood that one or more contaminants have affected any land or water on, in or under the property.

A Phase One ESA requires the qualified person to:

- Identify potentially contaminating activities in the Phase One Study Area, including the Phase One Property
- Identify Areas of Potential Environmental Concern on the Phase One Property
- Determine if a Phase Two ESA is needed (for some types of property uses and circumstances, a Phase Two ESA is mandatory)
- Provide a 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 conduct of follow-up studies.

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

A Phase Two ESA requires the qualified person to:

- Determine the location and concentration of one or more contaminants on the land or water on, in or under the property
- Take actions to reduce the concentration of contaminants if a standard has been exceeded and/or complete 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, including the requirements of Schedule E of the Regulation.

A Record of Site Condition is a formal submission of ESA reports along with all supporting documentation 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 ESA, remediation program or other investigations prepared in response to an 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.

A qualified person as listed in Ontario Regulation 153/04 Part II “Defined Persons” (see section on “what other resources are available”) must complete a Phase One and/or Phase Two ESA.

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.

The Environmental Site Screening Questionnaire, Phase One ESA, Two ESA and a Record of Site Condition are intended to:

- Provide a history of past uses on the site
- Provide information regarding potential contamination on the site
- Determine if contamination is present on the site
- Determine if a proposed land use is suitable for the site
- Determine if site remediation / cleanup is required
- Assess if risk assessment would be needed
- Assist staff with their analysis and report preparation.

An Environmental Site Assessment should at a minimum contain:

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

Proposal Description and Context

- A description of the proposal, development statistics (e.g., number of units, site area), type of the proposed development, height, parking areas, access points, location of

- amenity areas, proposed phasing
- A description of the existing on-site conditions as well as surrounding areas, roads, natural areas, buildings, parking areas
- Concept Plan for the development, including building location, parking, access, amenity areas, grading, natural features and natural hazards

Investigation/Evaluation

Phase One 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.
- **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 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.

Recommendations

- Summarize and provide conclusions of the studies and how they support the development and any special considerations or conditions that should be imposed
- Provide recommendations or conditions that should form part of a decision on the matter.

Drawings and Supporting Information

Phase One ESA

- Site Location Map
- Plan of Survey
- Topographic Map (Ontario Base Map series)
- Photographs of Subject Property and Surrounding Area
- Environmental Database Records
- Historical Aerial Imagery
- Fire Insurance Plans
- Chain of Title Records
- City Directories Records
- Environmental Reports
- Regulatory and/or Site Operating Records
- Conceptual Site Model
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Phase Two 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 TOR 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.

Additional Information:

- Please note that a “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, any Phase One or Two ESA reports submitted for land dedications that exceed 20 months will not be accepted, unless a Record of Site Condition has been filed for the property based on the report(s) on the Environmental Site Registry. For lands that will not be dedicated to the municipality, Phase One and Two ESA reports older than 5 years will not be accepted.
- 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.
- A Record of Site Condition may require completion of a Risk Assessment in accordance with O. Reg. 153/04, as amended.

Other Resources:

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](#)

<https://www.ontario.ca/laws/regulation/040153>

Professional Engineers of Ontario – Environmental Site Assessment, Remediation and Management Guideline

<https://www.peo.on.ca/sites/default/files/2020-07/EnviroSiteAssess2020.pdf>

Professional Geoscientists Ontario

<https://www.pgo.ca/>

Ministry of the Environment, Conservation and Parks – Guide for completing phase one environmental site assessments under Ontario Regulation 153/04

<https://www.ontario.ca/page/guide-completing-phase-one-environmental-site-assessments-under-ontario-regulation-15304>

Ministry of the Environment, Conservation and Parks – Guide for completing phase two environmental site assessments under Ontario Regulation 153/04

<https://www.ontario.ca/page/guide-completing-phase-two-environmental-site-assessments-under-ontario-regulation-15304>

Ministry of the Environment, Conservation and Parks – Submitting a record of site condition

<https://www.ontario.ca/page/submitting-record-site-condition>

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