



CASE STUDY

ENVIRONMENTAL LANDS

Phase I and II Environmental Site Assessment and DSS for Site Plan Control Application

OVERVIEW

CM3 Environmental (CM3) was retained to complete a Phase I Environmental Site Assessment (ESA), geotechnical assessment, and designated substance survey (DSS) in support of a Site Plan Control application and the re-development of a residential property. The Site Plan Control is a City of Ottawa requirement for site development, ensuring that land use is safe, functional, and orderly.



KEY CHALLENGES

The subject property consisted of four residential properties with buildings and two vacant properties. The primary challenge was determining whether historical or current activities had resulted in environmental contamination. The Phase I ESA, identified five on-site and six off-site potentially contaminating activities (PCAs). Four of the on-site PCAs were considered significant enough to warrant the identification of four areas of potential environmental concern (APECs), primarily related to petroleum product storage and use. The contaminants of concern (COCs) included benzene, toluene, ethylbenzene, xylenes (BTEX), and petroleum hydrocarbons (PHCs) in the F1-F4 fractions. The off-site PCAs were determined not to represent APECs on the subject property.



OUR APPROACH

Following the Phase I ESA, CM3 recommended and conducted a Phase II ESA to assess soil and groundwater quality at the four APECs. This involved advancing boreholes at each APEC, logging soil conditions, and collecting soil samples. Monitoring wells were installed to evaluate groundwater conditions and obtain groundwater samples. The analytical results of all soil and groundwater samples were non-detectable for BTEX and PHCs, confirming compliance with the Ontario Regulation (O.Reg) 153/04 Table 3 site condition standards (SCS). No environmental concerns were identified on the property.

A geotechnical study was also undertaken to assess soil properties and subsurface conditions for the design and construction of the proposed re-development. The boreholes advanced during the Phase II ESA were utilized

by a geotechnical engineer for geotechnical testing as a value-added service. CM3 subcontracted this study to their preferred subtrade.

Additionally, CM3 conducted a pre-demolition DSS of the buildings on the four residential properties in May 2023 to meet the requirements of Section 30 of the Ontario Occupational Health and Safety Act (OHSA) and O.Reg. 278/05, which regulates asbestos in construction projects. The DSS included sampling suspected asbestos-containing materials (ACMs) and lead-based paints (LBP). Designated substances, including ACMs and LBP, were identified in all four buildings. CM3 provided a detailed designated substance report (DSR) with recommendations for the safe removal and disposal of all identified substances.



RECOMMENDATIONS

With CM3 fulfilling all environmental requirements of the Site Plan Control, the reports were forwarded to the client's planner, who submitted the Site Plan Control Application. As a result, the re-development of the subject property commenced.

CM3 recommended ongoing environmental monitoring to ensure compliance with regulatory standards throughout the development process. Additionally, early-stage environmental assessments and proactive planning for hazardous materials management were advised for future projects to streamline regulatory approvals and maintain site safety.

If you're in need of a Phase I and II Environmental Site Assessment and Designated Substance Survey for your property in Eastern Ontario, look no further than the experts at CM3.

We'll tailor our approach to suit your unique project needs and provide peace of mind when it comes to environmental health and safety.

CONTACT US TODAY