

Phase II Environmental Site Assessment - 182 Townsend Street and 219 Wolfe Street, Peterborough, ON



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Prepared for:
Sierra Planning & Management

Cambium Reference: 22916-001

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Executive Summary

Sierra Planning & Management (Client) retained Cambium Inc. (Cambium) to complete a Phase II Environmental Site Assessment (ESA) at 182 Townsend Street and 219 Wolfe Street (Site) in Peterborough, Ontario. The Site consists of a municipal transit bus depot (182 Townsend Street) and a vacant parking lot (219 Wolfe Street). The Site may be redeveloped with an events centre on the Townsend Street property with associated parking on the Wolfe Street property.

Cambium reviewed a Phase I ESA completed in 2019 for a larger property that included the Site, as well as several environmental reports associated with 182 Townsend Street. The reports identified current and/or historical potential environmental concerns both on-site and off-site, as well as confirmed impacts at 182 Townsend Street.

A Phase II ESA work program was developed to investigate the following contaminants of potential concern (COPCs) identified from previous investigations and provide further delineation of known impacts at 182 Townsend Street: volatile organic compounds (VOCs), benzene, toluene, ethylbenzene, and xylenes (BTEX), petroleum hydrocarbons (PHCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), metals, and other regulated parameters (ORPs) in soil and groundwater.

The Phase II ESA included 30 boreholes, 11 of which were instrumented with groundwater monitoring wells. Soil and groundwater samples collected from each sampling location were submitted for laboratory analysis of select COPCs. Additionally, Cambium incorporated soil and groundwater analysis results from previous investigations completed at 182 Townsend Street.

The laboratory analysis results indicated that soil and groundwater concentrations exceeded the applicable standards over much of the Site, including petroleum- and fill-related impacts at 182 Townsend Street. Petroleum impacts were generally identified in soil and groundwater in the west and northeast portions of 182 Townsend Street, as well as near the south-central site perimeter. Lower-level petroleum impacts in soil were also present in the central and southeast portions the property. Additionally, possible non-aqueous phase liquid (NAPL) associated with



petroleum impacts (e.g., free product, globules/droplets, and/or sheen) was observed in the west and northeast portions of the Site.

Based on the results of the Phase II ESA and previous investigations, Cambium has provided recommendations herein to support redevelopment of the Site with an events centre.

Recommendations include the following:

- During decommissioning of the transit depot, remove subsurface infrastructure associated with possible contamination (tanks, oil/water separators, hoists, trench drains, etc.) and pipes or related infrastructure that may contribute to off-site discharge from 182 Townsend Street.
- Except for free product associated with petroleum impacts, site contamination can likely be managed in place using various risk management measures (RMMs), including a hard or fill cap barrier and a vapour mitigation system for any enclosed building. As such, free product should be addressed as part of site decommissioning. This remedial program may include bulk soil removal, contaminant oxidation, and/or infrastructure removal.
- Resample select wells to further assess identified impacts.