



Former Gasoline
Service Stations
Kitchener, Ontario

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*Fig. 1—Contaminated soil removed
during remediation*

The Problem

A developer purchased a city block of properties for the purpose of residential redevelopment. At the time of purchase, the Site was zoned industrial/commercial. In order to redevelop the Site from industrial to residential use, a Record of Site Condition (RSC) was required as per Ontario Regulation 153/04, as amended (O.Reg.153/04); however, the cost and the schedule of the remediation would be significantly expensive and time-consuming. The combination of a Risk Assessment

(RA) and strategic remediation were required.

The Solution

Based on the Phase Two Environmental Site Assessment, the historical activities on the Site resulted in a large area that was contaminated with petroleum hydrocarbons, metals and inorganics. This required extensive and costly remediation in order to apply for the RSC. Our Project Team developed a cost effective combination of strategic remediation and RA.

The remediation involved the removal of petroleum hydrocarbon impacted soil from four distinct locations that could not be adequately managed within the RA. A total of 198.9 tonnes of soil was removed from all four remediation areas, combined. The contaminants in groundwater were remediated when the soil contamination was removed.

The removal of the contamination “hot spots” allowed the development of property specific standards for the remaining contaminants as part of a RA in accordance with O.Reg.153/04. By assessing the unique hydrogeological conditions at the Site and the proposed future land use, the Project Team was able to develop risk management measures (RMMs) that ensured human and ecological receptors would not be exposed to any of the remaining soil and groundwater contaminants. The RMMs included installing a hard cap across the Site, the use of soil vapour screening and ensuring groundwater from the Site cannot be used for potable purposes.

The RA combined with the strategic remediation allowed the developer to apply for a RSC without the prohibitive cost of removing all contaminated soils across the Site. This process allowed the developer to become an important part of revitalizing the downtown core.



*Fig. 2—Restoring the site after
remediation*