

SITE REDEVELOPMENT INCLUDING PHASE I AND II ENVIRONMENTAL SITE ASSESSMENTS, AND REMEDIAL EXCAVATION ACTIVITIES

Project Duration
5 years

Project Cost
\$ 1,200,000



Project Description

Terrapex was contracted to assist in a re-development of a former industrial property comprising approximately 60 hectares. The property had historically been used as a quarry and later for numerous industrial purposes including those related to asphalt production, petro-chemical manufacturing, automotive repair, and construction associated uses. Portions of the former quarry were filled with over 1.5 million m³ of uncompacted material including approximately 200,000 m³ of flyash.



Terrapex completed a Phase I ESA of the subject property which included a review of over 40 previous reports and correspondence relating to historical investigations at the site. Based on the preliminary results of the Phase I ESA, further work at the site was completed. This included Phase II intrusive investigations, remedial excavations, soil management during earthworks for redevelopment, and consultation regarding regulatory requirements and waste management.

Phase II assessment work included drilling of 45 boreholes to depths between 2.9 and 6.2 m below grade and installation of groundwater monitoring wells in 29 of the boreholes. A total of 66 test pits were also excavated at the site to depths of up to 5.8 m below grade. Results of the ESAs indicated approximately 90,000 m³ of petroleum hydrocarbon and metal-impacted soil. In addition, the 200,000 m³ of flyash material was also impacted with metals. Over 140 soil and groundwater samples were collected for assessment of various chemical parameters including petroleum hydrocarbons, metals, inorganics, VOCs and PAHs.



In order to achieve remediation of the site for residential development, a multi-disciplinary project team was assembled to address the various civil, geo-technical, environmental and construction issues involved. Terrapex provided guidance with respect to several aspects of this project including components of stormwater management, remedial excavation, and material screening and segregation.

Over 750 field screening and confirmatory samples from remedial excavation and earth moving activities were submitted for laboratory analysis.

