



December 17, 2019

Reference No. 11201680

Ms. Leah Axt
Barrie Lakeshore Developments
3200 Highway 7
Vaughan, Ontario
L4K 5Z5

Dear Ms. Axt:

**Re: Management of Environmental Conditions
51, 55, and 75 Bradford Street, Barrie, Ontario (Site)**

1. Introduction

GHD Limited has been retained by Barrie Lakeshore Developments to prepare this letter outlining the proposed approach to manage environmental conditions in support of the proposed redevelopment of the above referenced Site. GHD has completed a Phase One Environmental Site Assessment (ESA), which has been provided to City of Barrie under separate cover. GHD has also reviewed existing soil and groundwater investigation reports, and initiated the completion of a Phase Two ESA for the Site.

An initial review of the soil and groundwater data at the Site indicates that impacted fill material is present on the Site, which is inferred to be related to the historic placement of fill material. A layer of peat material is located beneath the fill material, which the City would prefer to maintain on Site. Volatile organic compound (VOC) impacted groundwater has also been identified on the Site.

GHD understands that the proposed development of the Site will include residential uses, which requires the filing of one or more Records of Site Condition (RSC) to the Ontario Ministry of Environment, Conservation and Park (MECP) for the Site. GHD also understands that the development will generally not include any below grade parking garages or basements. GHD has been retained by the property owner to complete the necessary environmental consulting services to support the RSC process, and to file RSCs for all portions of the Site. GHD's team includes several staff designed as Qualified Persons (QP) under Ontario Regulation 153/04 (O. Reg. 153) for Environmental Site Assessment (QP_{ESA}), as well as QPs for Risk Assessment (QP_{RA}).

Due to the location of a Bunker's Creek on the southwestern portion of the Site, as well as proximity to areas identified on the City of Barrie's Official Plan as "Natural Heritage Resources", portions of the Site would be considered environmental sensitive under the O. Reg. 153/04. GHD has considered these natural heritage resources in the management of environmental conditions.



2. Preliminary Environmental Management Approaches

GHD has completed a Phase One ESA and initiated a Phase Two ESA. Based on the results of investigations completed to date and the proposed development approach, the Remediation Plan for the Site will include the following key components:

Risk Assessment

GHD has proposed the completion of one or more Risk Assessments (RA) under O. Reg. 153/04 as the primary remedial approach. The RA will include the development of Property Specific Standards, and will identify appropriate Risk Management Measures (RMMs), where appropriate. The RA process will develop separate approaches for areas that are considered environmentally sensitive, and for areas that are not considered environmentally sensitive. The RA will be submitted to the MECP for review and approval. MECP Barrie District office staff will also be involved in the review of the Risk Management Plan (RMP) prepared as part of the RA.

Based on an initial review of the analytical data, all soil and groundwater at the Site can likely be managed under the RA process, subject to the implementation of appropriate RMMs. This means that any soil being removed from the Site would be removed due to construction needs, rather than specific remediation requirements.

Soil and Groundwater Management

The foundation and construction details for the Site have not yet been finalized. However, it is anticipated that excess soil will be generated during the construction activities. Excess soil will likely be generated from the following processes:

- Drilling of caissons to support the building.
- Excavation of shallow trenches for utilities, foundation elements, etc.
- Removal of surficial organic material that is unsuitable to support sidewalks, driveways, etc.
- Removal of impacted shallow fill that cannot be managed on Site unless it is under a barrier to Site soils that is approved under the RA.
- General Site grading to align with the design drawings.

It is expected that in some areas, impacted soil will be excavated and will require off-Site disposal. Where impacted soil requires off-Site disposal, soil samples will be collected and analyzed following the Toxicity Characteristic Leaching Procedure (TCLP) to support waste characterization under O. Reg. 347, as amended.

If excess soil is generated that is considered suitable for reuse at an off-Site location, additional soil sampling may be required to document the quality of the soil. The MECP has proposed an Excess Soil Regulatory framework, that may be in effect by the time construction commences. If this is the case, the sampling, tracking, and movement of excess soil would need to follow the new Regulatory requirements.



Due to relatively shallow groundwater at the Site, groundwater will likely be encountered during construction activities, and construction water takings will likely be required. A hydrogeological assessment is currently being completed, which is documented under separate cover. Depending on the depth of foundations and construction methodology a MECP construction water taking Environmental Activity and Sector Registration (EASR) or Permit to Take Water (PTTW) may be required for the construction activities. The hydrogeological assessment will consider both the quality and quantity of water that may be generated during construction activities. If any water is proposed to be discharged to the municipal sewer system, approval from the City of Barrie will be required. Additionally, groundwater treatment may be required prior to any discharge to the sewer system.

We trust that the foregoing information is satisfactory for your present needs. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

We look forward to working with you on this assignment.

Sincerely,

GHD

A handwritten signature in blue ink, appearing to read "W. Croft". The signature is fluid and cursive.

Warren Croft, P. Eng.

WC/cc/2

cc: Greg Brooks, GHD
Aditya Khandekar, GHD
Phil Smart, GHD