



MTE Consultants

520 Bingham Centre Drive, Kitchener, Ontario N2B 3X9

March 26, 2020

MTE File No.: C42212-100

Lindsay Sulatycki
Senior Development Planner
Planning and Building Services, City of Guelph
1 Carden Street
Guelph, Ontario N1H 3A1

Dear Ms. Sulatycki:

**RE: 816 Woolwich Street, Guelph
Response to Engineering Comments**

Further to your correspondence as it relates to the above mentioned project, we offer the following response. For ease of reference the engineering comments have been incorporated within this letter and MTE's corresponding responses in *italics* thereafter:

City of Guelph, Environmental Planning

Hydrogeological Investigation

- The data collected for the report only extends from June to October of 2018 and therefore missed the typical seasonal high groundwater elevation. Subject to the requirements of Development Engineering comments, it is anticipated that the data will be collected for a minimum of one year to support infiltration gallery, basement and servicing design and dewatering recommendations.
 - Continuous groundwater monitoring has occurred on the site since the initial hydrogeological investigation and the additional collected data is summarized in the revised Hydrogeological report prepared by MTE.

FSR/SWM Report

- Drawing C2.2 displays as storm sewer connection between CBMH6 and the infiltration gallery that flows towards the gallery. It is assumed that this is meant to be the overflow for the infiltration gallery and should flow towards the catchbasin. Confirm and note that the current arrangement is not acceptable as it directs parking lot stormwater to the infiltration gallery.
 - *This storm sewer is intended as the overflow connection for the gallery and has been labelled as such on the revised conceptual servicing plan.*

City of Guelph, Development Engineering

Storm Water Management & Servicing

- The proposed infiltration Galleries are one of the major component of this development, though we agree with the general approach we ask the Engineer to provide full details of the infiltration galleries with the subsequent submission.
 - *The proposed infiltration gallery will be an ADS Stormtech arched system. The gallery has been sized accordingly, however the details will be finalized at detailed design stage with associated inverts.*
- Please be advised that the proposed infiltration gallery, infiltrates runoff from the drive-aisle and parking area, which is not permitted we ask the consultant to provide an alternative to ensure only clean water is infiltrated.
 - *The infiltration gallery infiltrates only rooftop runoff. An overflow connection is proposed to the on-site storm sewer. This storm sewer has been labelled as a reverse slope pipe on the revised conceptual servicing plan.*
- The groundwater elevation shown in the FSR is 337.5, based on the finding on geotechnical report it appears that a seasonal high elevation has not been obtained. Please confirm if continuous groundwater monitoring has occurred on site?
 - *Continuous groundwater monitoring has occurred on the site and the additional collected data is summarized in the Hydrogeological report prepared by MTE.*
- The FSR states that the infiltration gallery has a 1.0m separation from the groundwater table; however, seasonal high has not been determined. We ask the Engineer to investigate groundwater mounding and if it is occurred during the seasonal high will the separation be maintained?
 - *The groundwater monitoring data for the monitoring well installed in the location of the proposed gallery demonstrates that the well has been dry with no indication of groundwater present in this location. The proposed gallery is not significantly deep and therefore we do not anticipate groundwater mounding occurring.*
- Please note, a minimum of one on-site infiltration test shall be conducted at the proposed bottom elevation of each infiltration BMP. In addition, one on-site infiltration test shall be conducted at every other soil horizon encountered within 1.5 meters below the proposed bottom elevation. One of the following methods are to be used to determine the field saturated hydraulic conductivity (Ks):
Guelph Permeameter method (constant head well permeameter method); and/or constant head double-ring infiltrometer method.
 - *Please refer to Appendix F of the Hydrogeological report prepared by MTE describing the infiltration test completed on the site.*

- The annual water balance results are not acceptable, site-specific monthly water balance calculations shall be completed using the water balance method developed by Thornthwaite and Mather (1957) as documented in the MECP Stormwater Management Planning and Design Manual (2003), as updated from time to time. In addition, we ask that the (digital) excel sheet be provided for the monthly water balance with the subsequent submission.
 - *The water balance has been revised to be a monthly balance using the Thornthwaite and Mather method. Refer to the revised FSSWM report for details.*
- Stormwater management will be further examined and comments will be provided once the stormwater management design has been updated.
 - *The stormwater management design has been revised.*

Grand River Conservation Authority

Engineering Comments

- Where OGS Units are the only source of stormwater quality control, particularly where Enhanced Level of quality control is required, GRCA recommends that it be an ETV Certified unit. The proposed Stormceptor 5000 and Stormceptor 750 are not ETV Canada Certified.
 - *The OGS units have been revised to be ETV certified units. The sizing reports for both units are included in the revised FSSWM report. Please note that the ETV certified units can only achieve a maximum TSS removal rate of 60%.*

Yours Truly,

MTE Consultants Inc.



Paul Douglas, C.E.T.

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cc: Mr. Pete Graham, GWD Developments
Mr. Dave Aston, MHBC Planning

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