



October 21, 2019

Via: Email

Mr. Koryun Shahbikian
Associate
Schaeffer and Associates Limited
6 Ronrose Drive
Concord ON L4K 4R3

Dear Mr. Shahbikian:

Re: Groundwater Levels at Infiltration Cell - Di Poce Lands, Barrie
Project No.: 300041886.0000

R.J. Burnside & Associates Limited (Burnside) has been asked to provide comments on the established groundwater levels at the proposed infiltration cell in SWM Pond H on the Di Poce Lands in Barrie. Burnside conducted a hydrogeological study of the lands and has been undertaking groundwater monitoring since May of 2018. We are also aware of previous monitoring that was conducted by Terraprobe between February 2018 and May 2019. The Terraprobe monitoring included monitoring wells BH121 and BH130 that are in the area of the proposed SWM Pond; and note that BH130 is within the footprint of the infiltration cell. The locations of all monitoring wells completed by Terraprobe are shown on the attached Figure A-1.

BH130 was drilled to a depth of 7.8 m deep and screened at an elevation between 284.8 m above sea level (masl) and 287.8 masl in a silty sand (see borehole log attached). Groundwater level observations by Terraprobe between February 2018 and May of 2019 indicated that the well was dry on all occasions. This is interpreted to indicate that the groundwater elevation in the area is below the elevation of the bottom of the well (284.8 masl).

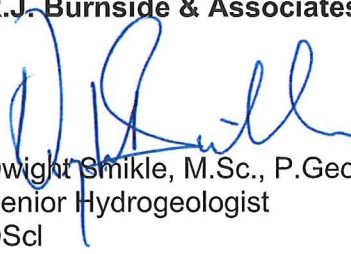
BH121 was drilled to a depth of 7.8 m and was also screened in silty sand at an elevation between 287.7 masl and 290.7 masl. This well was monitored by Terraprobe between February 2018 and May 2019 by Terraprobe and was found to be seasonally dry with occasional periods of water being found in this well. This is further interpreted as confirmation that groundwater elevation in the area of the proposed SWM Pond and infiltration cell is generally below an elevation of 287 masl but that it may rise above this level during recharge events.

The hydrogeological study completed by Burnside in 2018 indicated that the local water supply aquifer was located at depths of up to 25 m below surface in this area and that there may be local perched water table conditions in near surface sediments where sand and gravel overlies low permeability clay. However, as these local systems are perched, the overall hydrogeological condition is one where the near surface sediments are unsaturated and the regional water table is only encountered at depth. Based on these observations and our interpretation of the local site-specific geology we are of the opinion that additional wells are not

required within the footprint of the proposed infiltration cell as the existing information provides adequate insight into groundwater occurrence and behavior in this area.

Yours truly,

R.J. Burnside & Associates Limited


Dwight Smikle, M.Sc., P.Geo.
Senior Hydrogeologist
DScl




Stephanie Charity, B.Sc., P.Geo.
Hydrogeologist

Enclosure(s) Figure A1 – Location of Infiltration Cell

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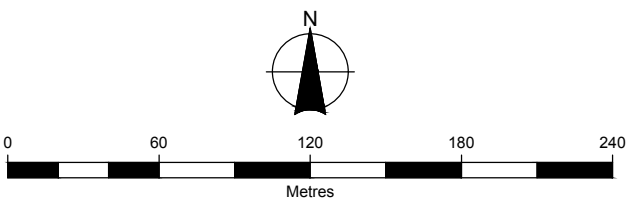
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LEGEND

- SUBJECT LANDS
- WATERCOURSE
- MONITORING WELL (TERRAPROBE, 2011)
- MONITORING WELL (TERRAPROBE, 2018)
- PROPOSED STORMWATER MANAGEMENT POND LOCATION
- PROPOSED INFILTRATION BED LOCATION



Client / Report

DI POCE MANAGEMENT INC,
BARRIE, ONTARIO

*HYDROGEOLOGICAL ASSESSMENT
IN SUPPORT OF DRAFT PLAN*

Figure Title

**LOCATION OF
INFILTRATION CELL**

Drawn SK	Checked SC	Date OCTOBER 2019
Scale 1:3,000	Project No. 300041886	

Figure No.

A1