



BRUCE A. BROWN ASSOCIATES LIMITED

Consultants in the Environmental and Applied Earth Sciences

101-102 Aerodrome Crescent

Toronto, Ontario, Canada M4G 4J4

Tel: (416) 424-3355 Email bruce@brownassociates.ca

September 24, 2019

Project 08*3368

Attn: Mr Ghazwan Yousif

City of Mississauga Transportation and Works

201 City Centre Drive, Suite 800

Mississauga, ON

Ghazwan.Yousif@mississauga.ca

Dear Mr. Yousif,

Re: City Files OZ-18-3 and T-18-002

Central by City Park Homes Inc.

1357 Wealthy Place, and 2116 + 2122 Dixie Road,

City of Mississauga

Brown Associates conducted subsurface investigations using soil boring equipment to refusal on bedrock, and a large-capacity hydraulic backhoe to extend test pits to the water table on the now vacant parcel at 2116 Dixie Road, and confirmed water table to be perched in coarse to medium sand on top of shale bedrock.

To confirm discussions from the meeting which took place the morning of September 11, I confirm there is no evidence of the water table rising seasonally; however, it is good practice to design so that footing drains are clear of the water table, so there is no day-to-day reliance on the sump pump system.

Maintaining 0.75m between established groundwater levels and underside of footings will ensure there is no regular reliance on the sump pumps for new dwellings. They would be required only in the unlikely event the water table were to rise seasonally through a combination of unusual circumstances.

At present, groundwater perched on top of shale bedrock ranges from greater than 3m depth below present grades in the north and central areas to 2.75m below grade at the storm manhole in the Wealthy Place cul-de-sac. The final grading plan will have grades slightly built-up relative to existing, so that basements extended to a maximum of 2.25m below grade will have at least 0.75m clearance from water table.

I am satisfied that the redevelopment and infill will retain the existing depths to water table within the zone of influence, and that there will not be any change to the hydraulic regime which would result in increased demands on existing sump pumps in the immediately contiguous residential community. Since main floor elevations on surrounding residences are generally 600 to 900mm above surrounding grade, basement slabs are no more than 1.8m below grade, and therefore at least 1.2m above the water table. If existing sump pumps are seasonally active, the most likely cause is recirculation of the same water, which can be mitigated by discharging both roof leaders and sump outfalls to grade farther from residential perimeters.

Yours very truly,

BRUCE A. BROWN ASSOCIATES LIMITED



Bruce A. Brown, Ph.D., RPP, P.Eng., QP(ESA)

cc: Mr. Chris Zeppa, City Park Homes c/o Ms Monass mmonass@cityparkhomes.ca
Mr. Jim Levac jiml@gsai.com